Consolidating address data and geo-coding in SEER*DMS

Parsing and consolidating addresses;

setting latitude, longitude, census tract, and other geo-spatial data items.

Overview

- Address data are received at the registry in record data. This includes:
  - Current Address
  - Address at DX
- Data from the record are copied to a Patient Set:
  - If it is a new Patient Set, the record's value is copied.
  - If the Patient Set already has a value, the "best" address is consolidated into the patient set.
- SEER*DMS tries to set several variables including:
  - Latitude and Longitude values for the Address at DX
  - County at DX
  - County for the Current Address
  - Census Tracts – Census Tract 2010, 2000,1990 (as required for the DX Year)
  - Other geo-spatial data items (this list varies by registry).   These are listed in the Census Tract polisher documentation on the Polishers Help page.

Parsing Addresses in Record Data

- Census tracts, latitude, longitude, and other fields can be determined based on address.

- It is easier to process an address that is broken into its natural parts (street number, street name, type, etc). But addresses are stored in a single field in NAACCR import files.

- SEER*DMS tries to parse the address into its parts.   This takes place during the auto-coding task.

- The audit log below shows an address in a NAACCR Abstract record. It was successfully parsed during the auto-coding step. SEER*DMS set street number, street name, street type, and county at dx.

Auto-Coding by seerdms   6 changes   0 filtered   02-02-2010 09:48:38AM

Op	Field	Old	New
Mod [p]	NPI Physician Primary Surgeon		▬▬▬▬▬
Mod [p]	NPI Physician Follow-Up		▬▬▬▬▬
Mod [p]	Addr at DX Street Type		AVE
Mod [p]	County at DX (Code)		033
Mod [p]	Addr at DX Street Name	600 4TH AVE	4TH
Mod [p]	Addr at DX Street Number		600

- The Polisher Help page in SEER*DMS has documentation for your registry's auto-coding polishers. Select the auto-coding polisher group and search for address.

Geocoding Addresses

- When a Patient Set address is changed, SEER*DMS will submit the address to the NAACCR geo-coder.
    - If a single perfect match is found:
        - "Address Found" will be displayed.
        - Census tracts, latitude, longitude, county at dx, and other fields will be set.
        - In many cases, this will be fully automated (as shown in the screen shot below).

- A user will need to manually edit or review addresses when:
    - The address could not be found by the geo-coder; or the geo-coder finds a possible match that needs review.
    - A different Address at DX is sent on a new record – consolidation may be required.
    - And in some registries, consolidation is required if a new Current Address is received on a record.

Consolidating Addresses

- SEER*DMS will attempt to auto-consolidate address data per registry rules.
  - Most registries only have rules to auto-consolidate Current Address.
  - Registry auto-consolidation rules are documented on the Auto-consolidation Help page.
- A registry coder can use the following tools to manually consolidate, edit, and review address data:
  - Multi-page icon
  - search link
  - Address Reviewed Flag

Tools for editing Address Data

Multi-page Icon: View all addresses in record and Patient Set fields.

Search for the address in geocoder data. Confirm that it is a valid address; if not found then review addresses that are similar. Census tract and other fields will be set for an address that is found.

Address at Diagnosis 🗐 search review results

Num 600   Dir ___   Street 4TH   Type AVE   Dir ___

Suppl ___

City SEATTLE   State WA   Zip 98124

County 033   CSS County 17   Country USA   Addr Rev 0

Address Review Flag - indicates whether an address has been manually reviewed.

Summary Address Info

Summary Address Info

Show Records as Linked

	Addr Dt	Type	Src	Address	Cnty	Cntry	User	Facility	Captured Dt	Action
Patient										
Current		Curr		WA		093				copy
CTC										
	03-01-2010	DX		600 4TH AVE; SEATTLE, WA 98124	033	093				
Linked Records										
REC-5000208575 ⓘ	03-01-2010 ⓘ	Curr	NA	WA				FAC-0426 ⓘ	03-09-2010 ⓘ	copy
REC-5000208575 ⓘ	03-01-2010 ⓘ	DX	NA	600 4TH AVE; SEATTLE, WA 98124	033			FAC-0426 ⓘ	03-09-2010 ⓘ	copy

[Close]

- This popup is displayed when you click the multi-page icon next to an address in SEER*DMS.

- It is a summary of all address data in the patient set.

- Record and patient set address fields are shown and can be copied.

Search Geocoding Database

- Click search to submit the address to the NAACCR Geocoding system. Use this when you want to:
  - Confirm that it is a valid street address for the city and zip
  - Parse an address into its parts.
  - Review results returned by the geocoder. The "review results" icon is displayed when the geocoder does not find a single perfect match.
  - Do not change an address unless you are certain that your change is accurate.
  - Your registry may have policies regarding address modifications.   Refer to your registry coding guidelines.

Census Tract Reviewed Flag

- Census tract values are required for some CTCs.
  - Census Tract 2010 is required for certain years of diagnosis. Census Tract 1990, 2000 are required for other years.
  - SEER reportability, local reportability, and other factors determine whether a tract is required. These rules vary by registry.
- An edit will fail if census tract is required and the value is blank, 9-filled (unknown), or 0-filled (not tracted).
- The Census Rev Flag can be used to over-ride SEER*DMS and registry edits that fail when a census tract is required.
- Do not set this flag unless authorized by registry management.
- The Census Tract Review flag is automatically reset if the address is modified.

Address Reviewed Flag

- Address Reviewed flag simply means that a person manually reviewed the address.
- SEER*DMS sets it to "needs review" if the geocoder does not find a perfect match for the CTC address.
- The flag is automatically set if a person selects an address from the geocode search results.
- No impact on census tract edits (see Census Tract reviewed Flag)

Using Zip Centroid Values

- A census tract based on a complete address is the most precise.
  - Census tract certainty: 1 = based on complete and valid address of residence
- Some registries do not allow SEER*DMS to automatically set census tract if the certainty is not as precise.
  - The address is manually reviewed;
  - Other data sources are checked.
- If a better address cannot be identified, "use zip centroid" will assign a census tract with certainty of 2-5.
  - The "use zip centroid" link is restricted to users with the pat_census system permission.
  - In some registries, a zip centroid census tract is auto-assigned. The registry reviews all addresses with certainty = 2-5. A configuration setting determines whether the review takes place when each address is first set; or later.