

8/10/16

Notes on SHR completion model

The visualization in SHR_completeness_v02.pdf was created using the methodology below:

- 1) The categories within the SHR v02 xl file were nested under related categories found within the SHR v01 doc (Patient ID, patient support, current health and care plan, health history, social/environmental factors, behavior). For example, the categories “vitals” and “exam” found within the SHR v02 xl file are similar to the category “current health and care plan” found within the SHR v01 document.
- 2) The total cell rows were counted for each category within the SHR v02 xl file. This represents the relative number of data elements (fields) for that category.
- 3) Percentages for each category were found by dividing the total cell row counts within each category, divided by the total cell row count for the entire xl file.
- 4) The final percentages were used to visualize the relative area of each category in the grid visualization found in SHR_completeness_v02.pdf.

Data organization:

Category (ID, vitals, exam, emergency)

- Entry type (patient name, DoB)
 - o Field (given name(s), family name, suffix)
 - Data type (enum, text)
 - Value sets (preferred, legal, alias)
 - o Metadata (entry time, entered by, log)

Categories (based on MITRE XL file):

Identification (~47 data elements. 7%)

Emergency (~137 data elements. 20%)

Participants (~27 data elements. 4%)

Background (~63 data elements. 9%)

Vitals (~35 data elements. 5%)

Exam (~101 data elements. 15%)

Behavior (~53 data elements. 8%)

Environment (~49 data elements. 7%)

Encounters (~16 data elements. 2%)

Care plan (~41 data elements. 6%)

Medications (~15 data elements. 2%)

Immunizations (~32 data elements. 5%)

Allergies (~11 data elements. 2%)

Problems (~17 data elements. 2%)

Tests (~27 data elements. 4%)

Family (~22 data elements. 3%)

(~693 data elements)

Macro category organization (based on SHR v0.1 doc):

Patient identification (~110 data elements. 16%)

- Identification (7%)
- Background (9%)

Patient support (~27 data elements. 4%)

- Participants (4%)

Current health and care plan (~247 data elements. 36%)

- Vitals (5%)
- Exam (15%)
- Care plan (6%)
- Medications (2%)
 - o Medication information
 - Last review or update
 - Datetime
 - Reviewed by
 - Text
 - o Patient | provider

- Medication adherence
 - Enum
 - Never take it | miss more than half prescribed doses | miss about half the prescribed doses | miss less than half the prescribed doses | rarely miss a dose
- Non-adherence reason
 - Enum+
 - Forget to tke it | can't take it when supposed to | difficult to administer | experienced side effects | worried about potential side effects | worried about drug-drug interactions | can't afford medication | can't store medication | don't have necessary supplies | already taking too many other medication | too busy | depressed | text
- Non-adherence detail
 - Text
- Dose change
 - Effective date
 - Date
 - Dose before change
 - Dosage
 - Dose after change
 - Dosage
 - Reason for change
 - text
- Allergies (2%)
- Problems (2%)
- Tests (4%)

Health history (~70 data elements. 10%)

- Encounters (2%)
- Immunizations (5%)
- Family (3%)

Social/environmental factors (~49 data elements. 7%)

- Environment

Behavior (~53 data elements. 8%)

- Behavior

Emergency (~135 data elements. 19%. unclear where this should go. It's a unique category. Maybe it's a mode toggle)