MINI-SENTINEL DISTRIBUTED DATABASE

YEAR 1 SUMMARY REPORT

Version 1.0

Prepared by Mini-Sentinel Data Core

November 2011

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OVERVIEW

The *Mini-Sentinel Distributed Database Summary Report* presents a high-level summary of the Mini-Sentinel Distributed Database (MSDD) and represents one component of the data quality assurance and characterization process. To generate the data found in this report, the Mini-Sentinel Operations Center (MSOC) developed and distributed standard programs that Data Partners ran on their local implementation of the Mini-Sentinel Common Data Model (MSCDM). Results from the programs were returned to the MSOC for review (and pending acceptance), aggregation and reporting. The *MSDD Summary Report* is based on a standard report template and represents the data found in the MSDD at the time the programs were executed. The report will be updated periodically. The report is one of many tools actively used by the MSOC, the Data Partners (DPs), and FDA to characterize the data available in the MSDD. The purpose of this report is to provide the FDA and MS communities with a summary of descriptive characteristics of the MSDD at a given point in time.

The data presented in this report are from the first data extract of the MSDD conducted in the Summer and Fall of 2010; therefore, some identified data issues are uncorrected. Data quality assurance is an ongoing and collaborative process. Issues identified in the first data extract (presented here) have been addressed in subsequent extracts and updates of the MSDD.

This report includes data from all Mini-Sentinel data partners that have contributed data to the first extract of the MSDD: HealthCore, the HMO Research Network (7 sites), Humana, and Kaiser Permanente (6 sites).

The *Mini-Sentinel Distributed Database Summary Report* summarizes each data table in the MSDD. A brief summary of each table and the data presented follows. Please note that the report reflects the MSDD "as-is" and does not account for different data extract windows across the data partners. The data reflect the addition of data partners with different data start dates and the inclusion of partial data for 2010 by some data partners. The number of data partners by year is noted in the relevant tables.

The **Enrollment Table** contains records for all individuals who were health plan members during the period included in the data extract, and includes one record for each member enrollment period. The table is used to identify enrollment periods. As of the first data extract, the Enrollment Table includes information from January 2000 through September 2010. These enrollment periods reflect more than 60 million unique person identifiers and represent more than 2 billion person-months with medical and drug coverage (Table 1, Figure 1). Differences in medical and drug coverage counts are a reflection of the inclusion of drug-only and medical-only policies sold by some data partners. Three-fourths of the enrollment periods in the MSDD include both medical and drug coverage (Figure 3). The enrollment table is often used to restrict assessment of exposures and outcomes to periods of enrollment. The drop in enrollment records in 2010 reflects the number of data partners contributing data.

The **Demographic Table** includes sex, birth date, race, and ethnicity. Some Mini-Sentinel Data Partners provide care to individuals who are not health plan members (e.g., in ambulatory clinics and hospitals) and information for these non-members are included in this table but not in the Enrollment Table. Therefore, everyone in the Enrollment Table should be in the Demographic Table, but not everyone in the Demographic table will be in the Enrollment Table. A subset of DPs collects race and ethnicity information. As of the first data extract, approximately two-thirds of individuals are between the ages

of 20 and 64 (Figure 4) and the sex distribution is approximately equal (Figure 5). Race and ethnicity are unknown or frequently missing at most data partners (Figure 6, Table 2).

The **Dispensing Table** represents outpatient pharmacy dispensings captured by the DPs. The MSCDM requires that the DPs process source data to remove rollback (negative) transactions (e.g., restocking of prescription fills that were not picked up) and other adjustments before populating the table. Infused medications, vaccinations, and injections provided directly by medical providers are captured in the Procedures Table using the appropriate procedure codes.   There were about 2 billion dispensings and over 47 million unique patients in the dispensing file. Very few dispensings have days supplied outside the expected range (Table 3), and the majority of dispensings are for between 21 and 33 days supply (Figure 8). The drop in dispensing records in 2010 reflects the number of data partners contributing data.

A record is entered into the **Encounter Table** each time a person sees a provider in an ambulatory or inpatient setting. The Encounter Table includes dates of service, provider identifiers, and the setting in which care was provided. The first data extract identified an increase in the number of encounters per patient (Table 4, Figure 9). Further investigation revealed an error in one DP's definition of an encounter. *The error has been corrected in a subsequent data extract, but the uncorrected data are presented here, representing the information from extract 1. No Mini-sentinel analyses were impacted by this error*. The drop in records in 2010 reflects the number of data partners contributing data.

The **Death Table** records enrollee death dates along with the imputation method if the exact date is not known. Many DPs link to state death registries to update the death status of their members, but these updates are performed relatively infrequently. A 2-year lag in death data is not uncommon. As of the first extract, there were approximately 4 million unique patient identifiers included in the Death Table (Table 7). State Death Files were the source of information for about one-third of records (Figure 10). The **Cause of Death Table** records diagnosis codes reflecting the underlying condition that contributed to the death. There were 1.6 million unique patient identifiers in the Cause of Death Table after the first extract. State Death Files were the source of the information in nearly 80% of records (Figure 14). The drop in records towards the end of the period reflects the number of data partners contributing data and variation in data availability (data lag) data across partners. The proportion of deaths captured by the data partners is unknown, as is the frequency of imputing the date of death. The death tables have not yet been thoroughly reviewed or tested for use within Mini-Sentinel.

GLOSSARY

Age - defined as (Refresh Date – Date of Birth)

Amount Supplied - number of units (e.g., pills, tablets, vials, mL, etc.) dispensed. Net amount per NDC per dispensing.

Confidence - all linkages to external data sources have some level of uncertainty, and many linkage algorithms include an assessment of the confidence of the match. Reported as Excellent, Fair or Poor
- *Death Records* - captures the confidence in the certainty that the member drawn from the Source data represents the actual member
- *Cause of Death (COD) Records* - confidence in the accuracy of the COD based on source, match, number of reporting sources, discrepancies, etc.

Days Supplied - number of days that the medication supports as reported by the pharmacist on the dispensing.

Data Partners – refers to Mini-Sentinel collaborating partners who have created the Mini-Sentinel Distributed Database using their administrative, claims, and electronic health record data. Each data partner was assigned a random ID for the purposes of this report.

Encounter ID - arbitrary encounter-level identifier. Used to link the Encounter, Diagnosis, and Procedure tables.

Encounter Type
- *Inpatient Hospital Stay* - Includes all inpatient stays, same-day hospital discharges, hospital transfers, and acute hospital care where the discharge is after the admission date.
- *Non-Acute Institutional Stay* - Includes hospice, skilled nursing facility (SNF), rehab center, nursing home, residential, overnight non-hospital dialysis, and other non-hospital stays.
- *Emergency Department* - Includes ED encounters that became inpatient stays (in which case inpatient stay would be a separate encounter). Excludes urgent care visits. ED encounters should be identified before hospital stays to insure that ED with subsequent admission won't be incorporated into the hospital event.
- *Ambulatory Visit* - Includes visits at outpatient clinics, same day surgeries, urgent care visits, and other same-day ambulatory hospital encounters, but excludes emergency department encounters.
- *Other Ambulatory Visit* - Includes other non-overnight AV encounters such as hospice visits, home health visits, skilled nursing facility visits, other non-hospital visits, as well as telemedicine, telephone, and email consultations.

Enrollment Period - defined as Enrollment End Date – Enrollment Start Date. A member may have multiple enrollment periods.

Hispanic - person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. Use local rules for federal reporting of Hispanic origin when available (defined by Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity from the Office of Management and Budget (OMB), http://www.census.gov/population/www/socdemo/race/Ombdir15.html)

Patient ID (PatID) - pseudoidentifier that has a crosswalk to the true identifier that is retained by the data partner. For analytical data sets requiring patient-level data, only the pseudoidentifier will be used to link across all information belonging to a patient. New enrollment period generates a new record, however the same person should have the same PatID on subsequent enrollment records.

Race - definitions for Race are based on the Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity from the Office of Management and Budget (OMB), http://www.census.gov/population/www/socdemo/race/Ombdir15.html.
- *American Indian* - a person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.
- *Asian* - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- *Black/African American* - a person having origins in any of the black racial groups of Africa.
- *Native Hawaiian or Other Pacific Islander* - a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- *White* - a person having origins in any of the original peoples of Europe, the Middle East, or North Africa

Refresh Date – date data is refreshed, defined by Data Partner

Sex - have values of Male, Female, Ambiguous (transgender/hermaphrodite) or Unknown

Source of Death Records - source of the mortality information, which can come from state or national records, tumor registries, or from locally defined sources

MSDD AT A GLANCE

After Extract 1

The Mini-Sentinel Distributed Database was comprised of quality-checked data held by 15 partner organizations.

- **62 million individuals**

  - 230 million person-years of observation time from 2000 through 2010

  - 31 million individuals currently enrolled, accumulating new data

  - 19 million individuals have over 3 years of data

- 2 billion dispensings

- Accumulating over 30 million dispensings per month

- 1.7 billion unique encounters, including 54 million acute inpatient stays

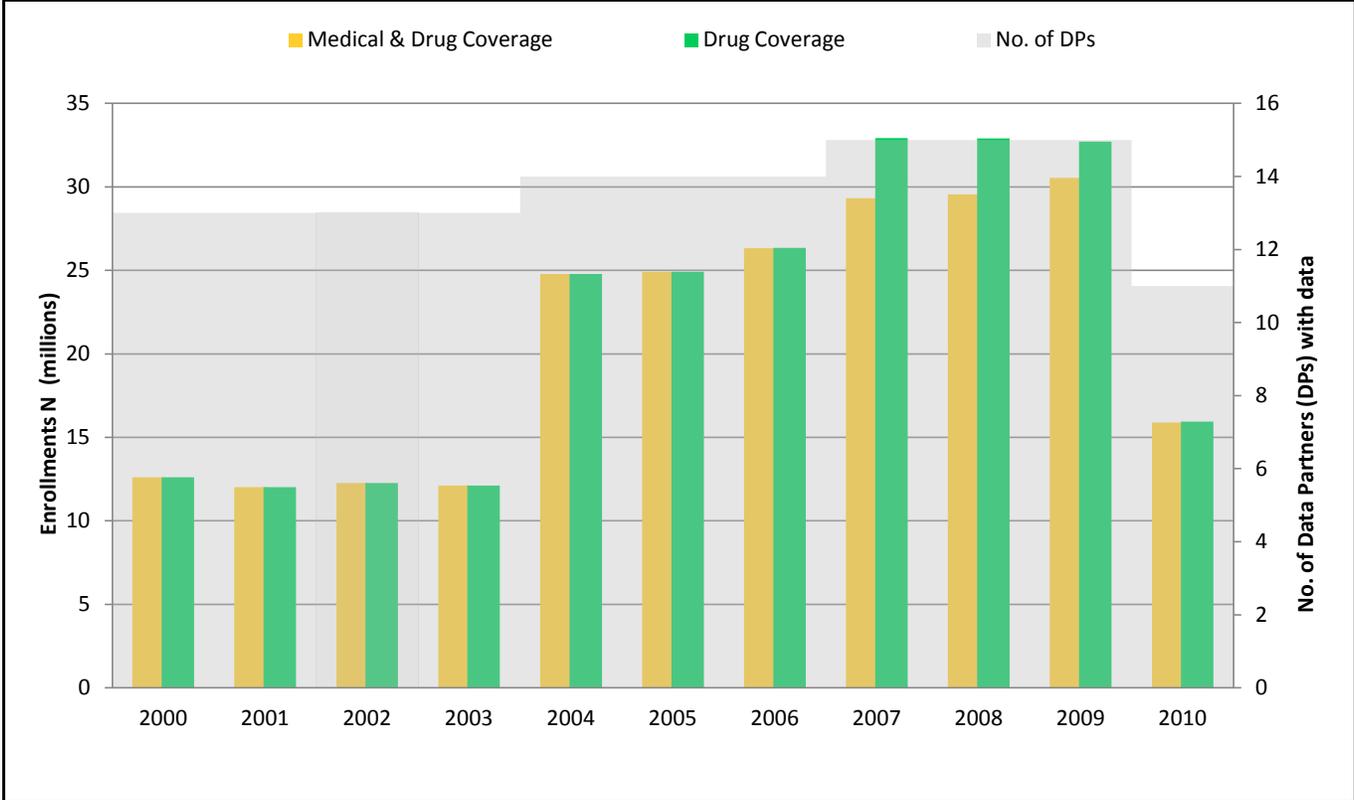- Accumulating over 30 million encounters per month

MSDD TABLES AND FIGURES

Table 1. Snapshot of the Mini-Sentinel Distributed Database Enrollment Table in Extract 1 (Unique Members = 62,704,250)
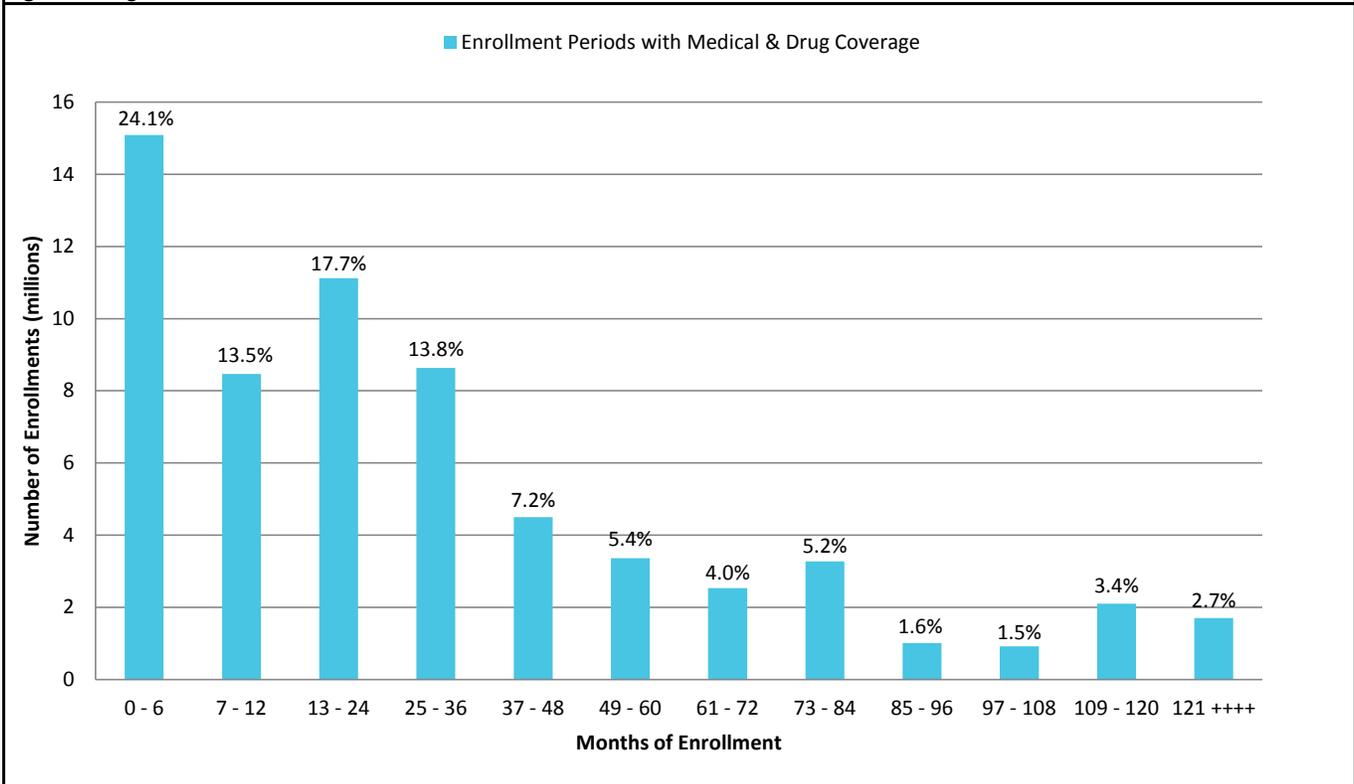
	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	Total
Number of enrollment periods per person	3	1.2	3.1	3.4	1.8	1	1.9	2.3	4	3.6	3.8	3.8	1.5	2.5	1.7	2
Records with *only* medical coverage	6.3%	9.2%	0.0%	10.2%	11.4%	1.5%	6.0%	4.2%	0.0%	10.0%	12.3%	37.7%	0.0%	51.3%	5.0%	15.1%
Records with *only* drug coverage	0.0%	0.3%	0.0%	0.0%	0.0%	43.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%
Records with medical + unknown drug coverage	16.4%	0.0%	87.7%	0.0%	0.0%	0.0%	0.0%	0.0%	52.5%	14.3%	35.2%	0.0%	0.0%	0.0%	0.0%	6.4%
Records with *both* medical and drug coverage	77.3%	90.4%	12.3%	89.8%	88.6%	54.9%	94.0%	95.8%	47.5%	75.6%	52.5%	62.3%	100.0%	48.7%	95.0%	75.2%
Length of enrollment:																
Statistics (months):																
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	---
P1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	---
P5	0	2	0	0	0	0	2	0	0	2	1	1	3	0	2	---
P25	7	9	0	8	9	0	11	7	9	16	11	12	12	0	13	---
Median	24	21	0	22	24	3	28	23	30	47	32	36	32	21	36	---
P75	61	38	8	48	53	18	67	60	84	99	77	87	54	57	72	---
P95	120	73	121	112	125	30	127	122	129	120	126	126	114	126	110	---
P99	120	73	124	122	125	30	127	123	129	120	126	128	120	129	111	---
Max	120	134	182	185	128	32	133	312	135	120	126	163	174	137	113	---
Distribution (months):																
0 - 6	23.8%	19.3%	74.6%	21.8%	20.6%	55.3%	15.3%	23.3%	20.9%	11.8%	17.6%	17.1%	9.6%	34.4%	13.0%	24.1%
12-Jul	13.0%	15.6%	2.1%	15.1%	12.6%	14.3%	14.4%	13.3%	10.8%	8.9%	11.4%	9.2%	18.9%	7.1%	12.0%	13.5%
13 - 24	14.7%	21.8%	3.4%	17.9%	19.0%	14.1%	16.7%	16.0%	13.9%	12.9%	14.4%	13.9%	16.4%	11.7%	15.9%	17.7%
25 - 36	10.4%	16.4%	2.8%	12.0%	11.9%	16.2%	10.8%	10.3%	8.9%	9.5%	10.1%	9.9%	8.4%	9.4%	10.1%	13.8%
37 - 48	7.6%	8.8%	2.2%	8.3%	8.6%	0.0%	8.0%	7.3%	6.8%	7.9%	7.8%	8.1%	8.5%	7.7%	9.3%	7.2%
49 - 60	5.4%	5.9%	2.0%	6.2%	6.3%	0.0%	6.5%	5.4%	5.3%	6.7%	6.5%	6.4%	19.6%	6.1%	7.8%	5.4%
61 - 72	4.4%	4.4%	1.7%	4.2%	4.4%	0.0%	5.5%	4.2%	4.5%	5.8%	5.5%	5.1%	6.1%	5.0%	7.1%	4.0%
73 - 84	3.6%	7.7%	1.7%	4.2%	3.4%	0.0%	4.2%	3.7%	4.0%	5.3%	4.6%	4.4%	3.4%	4.9%	5.1%	5.2%
85 - 96	3.1%	0.0%	1.3%	2.8%	2.7%	0.0%	3.5%	3.3%	3.7%	5.2%	4.0%	4.0%	1.9%	3.6%	5.9%	1.6%
97 - 108	3.8%	0.0%	1.6%	1.8%	2.5%	0.0%	3.2%	3.2%	3.4%	4.8%	3.9%	3.7%	1.6%	2.4%	3.8%	1.5%
109 - 120	10.2%	0.0%	1.5%	3.0%	2.0%	0.0%	2.6%	4.3%	3.9%	21.0%	3.5%	3.6%	5.5%	2.0%	10.1%	3.4%
120 & Up	0.0%	0.0%	5.0%	2.5%	6.0%	0.0%	9.1%	5.7%	13.9%	0.0%	10.7%	14.6%	0.1%	5.6%	0.0%	2.7%

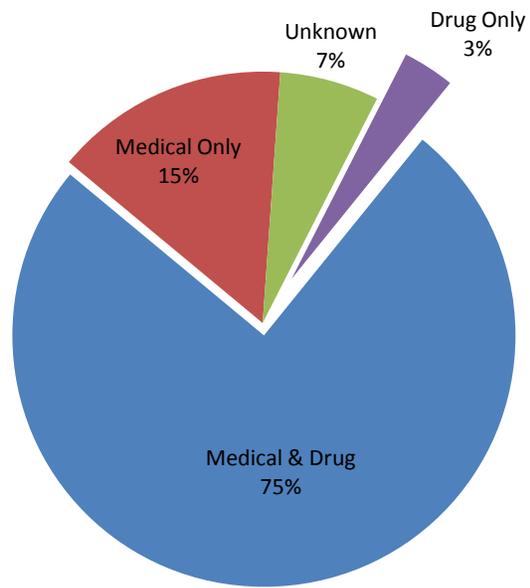**Figure 1.** Number of Unique Members (in Millions), by Data Partner

Source: Mini-Sentinel Year One Data Quality Report; File: Enr_L3_EnrMD_Y

Figure 2. Length of Enrollment Periods

Source: Mini-Sentinel Year One Data Quality Report; File: Enr_L3_Dist_EnrMD

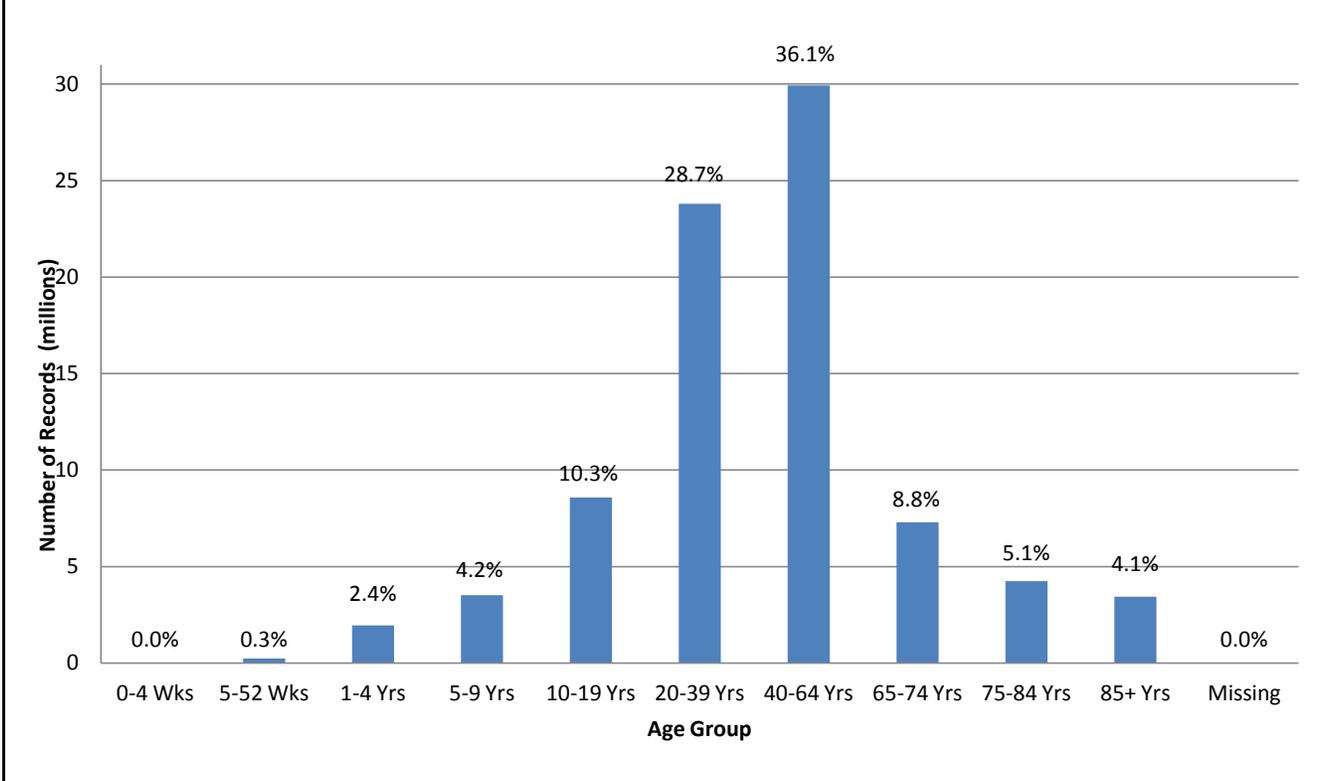**Figure 3.** Distribution of Enrollment by Coverage Type

Source: Mini-Sentinel Year One Data Quality Report; File: Enr_L3_MedDrugCov Table [N = 15]

Table 2. Snapshot of the Mini-Sentinel Distributed Database Demographic Table in Extract 1 (Unique Individuals = 83,003,100)
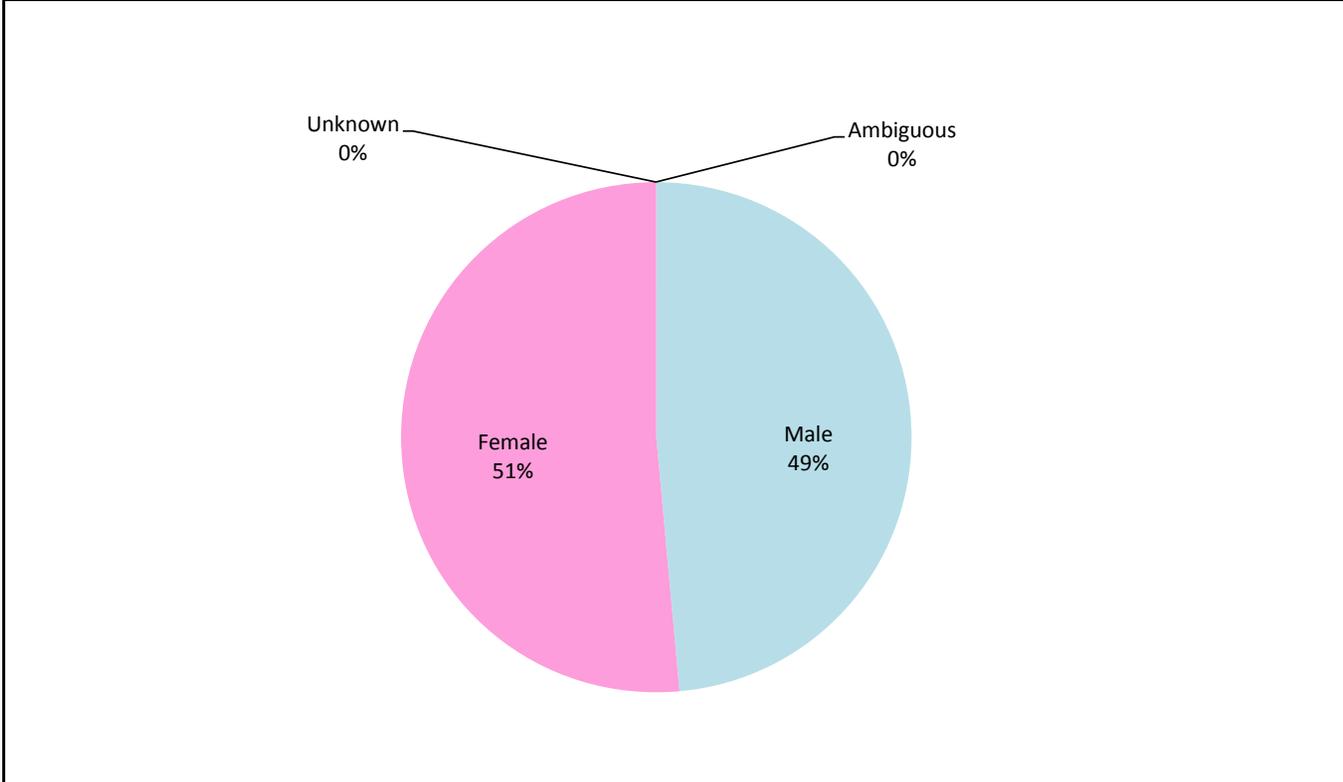
	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	Total
Race																
Unknown	90.0%	100.0%	16.5%	91.8%	86.2%	36.7%	81.5%	89.3%	84.1%	67.3%	79.8%	72.4%	100.0%	100.0%	93.0%	79.6%
American Indian / Alaska Native	0.2%	0.0%	0.4%	0.0%	0.1%	0.3%	0.1%	0.0%	0.3%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.1%
Asian	0.6%	0.0%	3.2%	0.4%	0.8%	0.9%	0.7%	0.5%	5.9%	5.4%	0.8%	3.0%	0.0%	0.0%	0.0%	1.7%
African American	0.4%	0.0%	30.7%	0.6%	1.6%	6.1%	1.2%	4.5%	0.4%	3.4%	0.7%	4.3%	0.0%	0.0%	0.0%	2.6%
Native Hawaiian / Other Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.1%	0.0%	3.9%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%
White	8.7%	0.0%	49.3%	7.2%	11.3%	55.0%	16.4%	5.7%	5.5%	23.5%	18.5%	20.3%	0.0%	0.0%	7.0%	15.9%
Sex																
Male	47.4%	49.3%	46.4%	48.3%	48.9%	44.0%	48.1%	47.9%	49.9%	49.6%	48.5%	49.7%	46.6%	48.1%	49.2%	48.6%
Female	52.4%	50.7%	53.6%	51.7%	50.9%	56.0%	51.9%	52.1%	49.9%	50.4%	51.4%	50.3%	53.4%	51.9%	50.8%	51.4%
Ambiguous	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	0.1%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Hispanic																
Yes	0.3%	0.0%	1.6%	0.4%	0.4%	1.5%	3.4%	0.6%	1.3%	8.6%	0.8%	14.9%	42.7%	0.0%	0.0%	4.4%
No	5.7%	0.0%	0.0%	7.9%	0.0%	63.3%	14.0%	6.6%	10.7%	0.0%	10.1%	18.4%	51.5%	0.0%	7.1%	11.6%
Unknown	94.0%	100.0%	98.4%	91.7%	99.6%	35.3%	82.6%	92.8%	88.0%	91.4%	89.1%	66.7%	5.9%	100.0%	92.9%	84.1%
Age																
Statistics																
Mean	43.7	36.8	44.6	37.3	40.2	58.8	41.9	37.8	47.1	47.2	46.1	41.6	35.8	48.1	41.9	---
STD	194.4	535.7	134.3	167.6	230.1	356	155.4	113.3	127.2	408.4	175.5	360.1	102.1	84.4	77.3	---
Min	-1	-2290	2	-2	-7889	-1	-1	-1	-1	0	-38	-1	0	-1	1	---
Max	210	232	257	128	169	170	161	127	164	150	141	210	136	204	114	---
Distribution																
0 - 4 wks	0.1%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%	0.2%	0.0%	0.0%
5 - 52 wks	0.3%	0.3%	0.0%	0.4%	0.4%	0.2%	0.3%	0.3%	0.2%	0.2%	0.2%	0.3%	0.6%	0.6%	0.0%	0.3%
1 - 4 yrs	1.6%	3.2%	1.4%	2.8%	2.8%	1.6%	2.0%	1.9%	1.3%	1.7%	1.5%	1.9%	4.2%	3.1%	1.6%	2.4%
5 - 9 yrs	2.7%	6.1%	4.5%	5.5%	4.6%	2.3%	3.7%	3.8%	2.3%	2.9%	2.8%	3.3%	6.6%	4.6%	4.6%	4.2%
10 - 19 yrs	10.0%	12.6%	10.7%	13.3%	11.5%	4.8%	10.4%	12.8%	6.7%	8.0%	8.6%	10.7%	17.4%	11.3%	12.4%	10.3%
20 - 39 yrs	29.3%	33.3%	27.3%	31.1%	30.6%	13.2%	29.8%	34.4%	26.9%	25.7%	27.9%	31.2%	29.9%	23.6%	28.6%	28.7%
40 - 64 yrs	40.2%	35.6%	35.5%	37.9%	37.8%	22.5%	40.0%	39.3%	42.9%	40.1%	39.6%	38.7%	29.5%	27.4%	36.9%	36.1%
65 - 74 yrs	7.3%	5.4%	8.1%	5.5%	5.6%	27.4%	6.8%	4.7%	8.2%	8.5%	7.9%	6.7%	5.9%	7.8%	6.8%	8.8%
75 - 84 yrs	3.8%	2.1%	6.8%	2.1%	2.9%	18.7%	3.8%	2.0%	5.2%	5.4%	4.6%	3.8%	3.3%	7.3%	5.0%	5.1%
85 + yrs	4.7%	1.2%	5.8%	1.0%	3.7%	9.3%	3.1%	0.8%	6.2%	7.5%	6.8%	3.3%	2.4%	14.3%	4.1%	4.1%

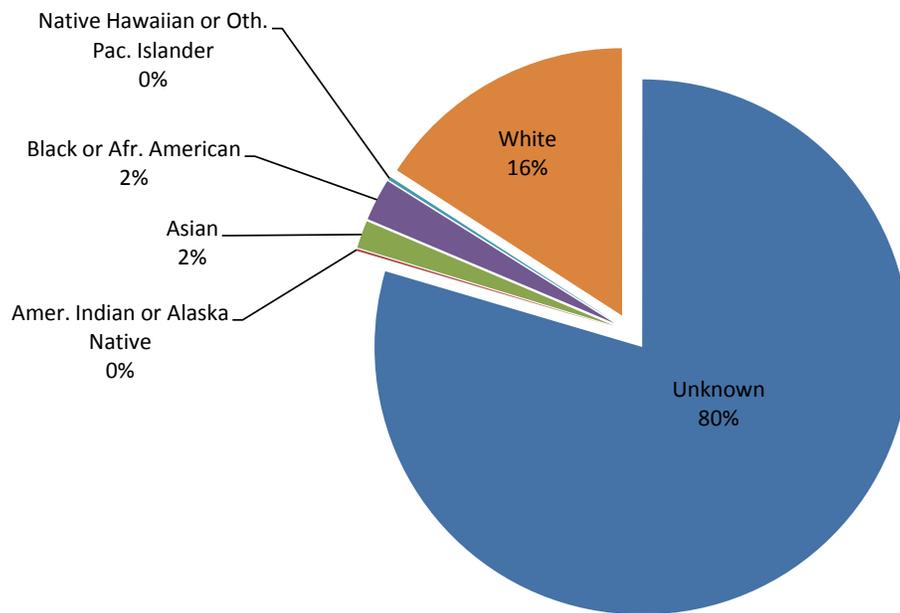**Figure 4.** Demographic Table: Distribution of Age Group

Source: Mini-Sentinel Year One Data Quality Report; File:Dem_L3_AgeYrsDist2 [N = 15]

Figure 5. Demographic Table: Distribution of Sex

Source: Mini-Sentinel Year One Data Quality Report; File: Dem_L3_SexDist [N = 15]

Figure 6. Demographic Table: Distribution of Race

Native Hawaiian or Oth.
Pac. Islander
0%

Black or Afr. American
2%

Asian
2%

Amer. Indian or Alaska
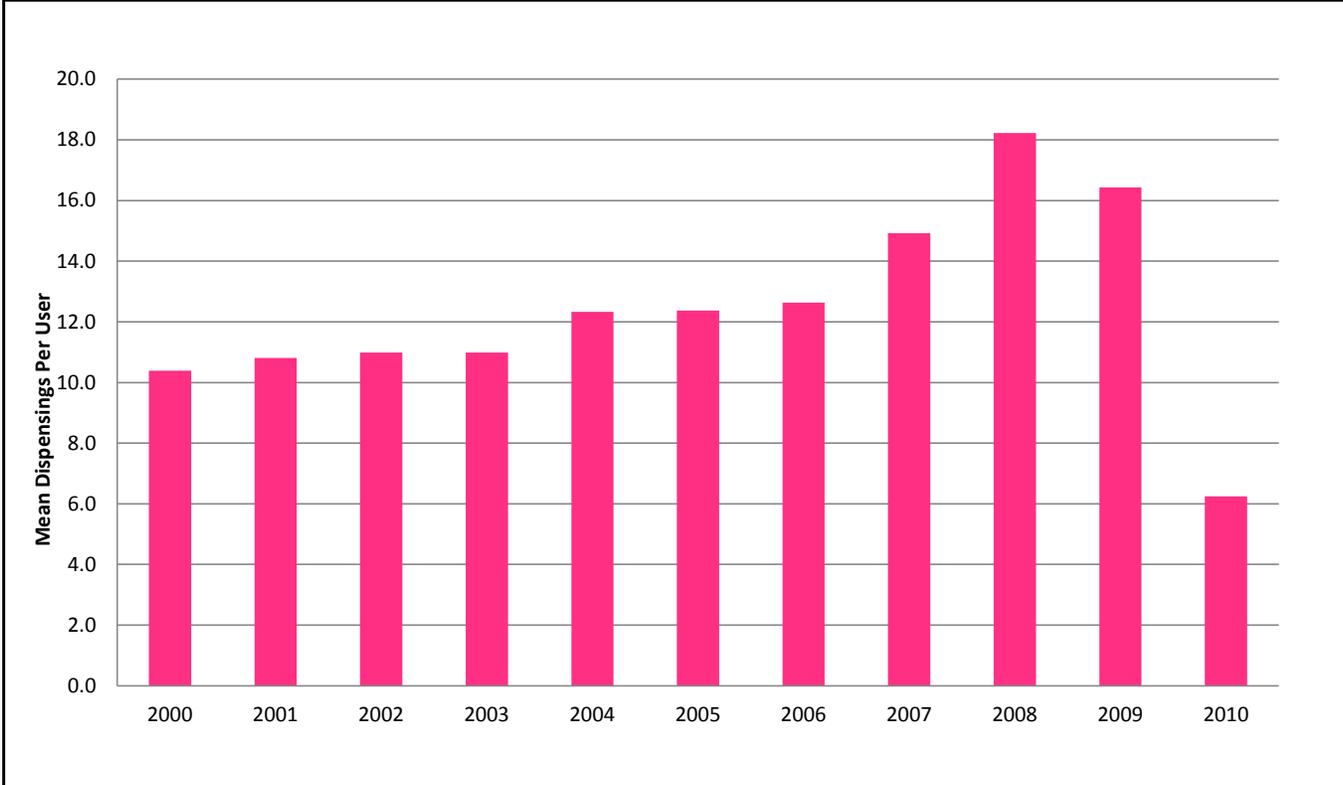Native
0%

White
16%

Unknown
80%

Source: Mini-Sentinel Year One Data Quality Report; File:Dem_L3_RaceDist [N = 15]

Table 3. Snapshot of the Mini-Sentinel Distributed Database Dispensing Table in Extract 1 (Unique patients = 47,026,303)
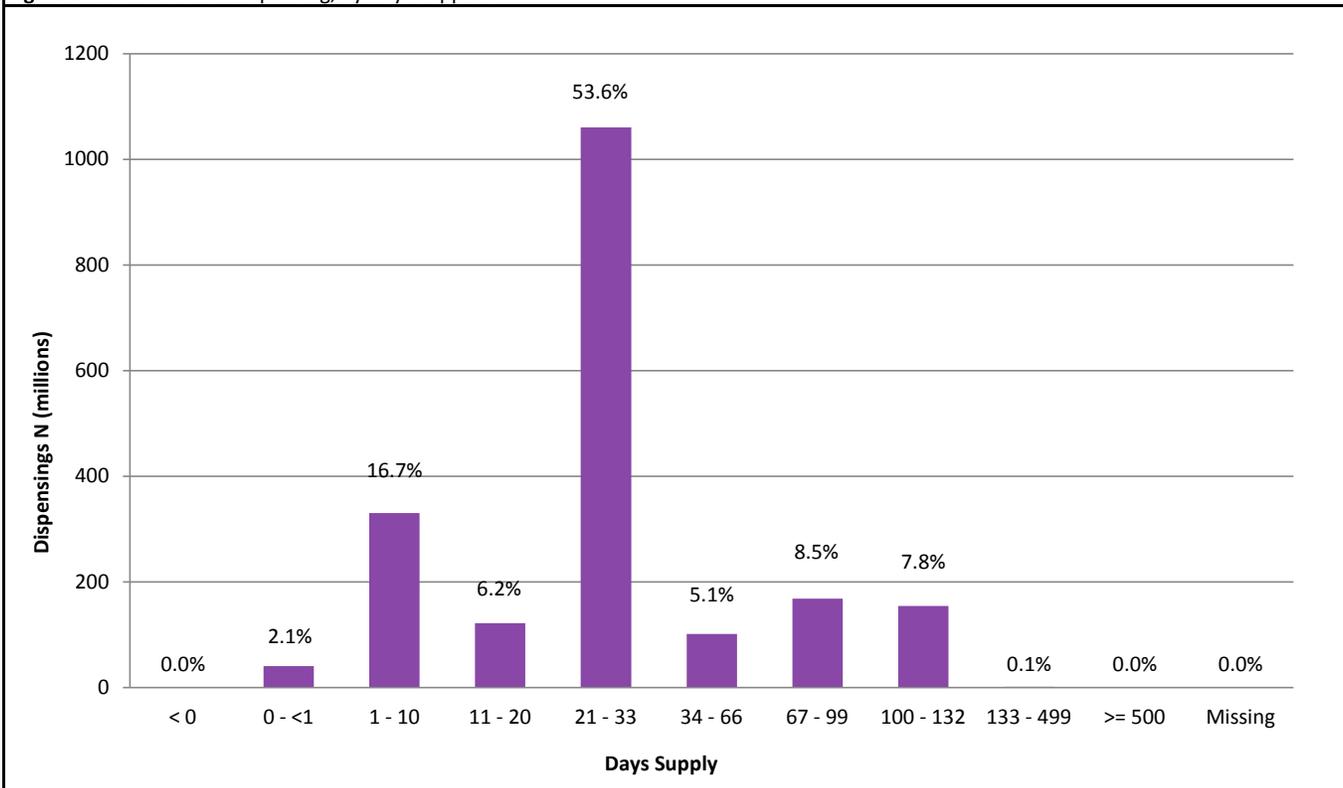
	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	Total
Distribution of:																
Days Supplied																
MISSING	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
< 0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	0.0%	6.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	2.1%
> 0 - 33	75.0%	85.4%	72.7%	92.0%	82.3%	89.7%	45.4%	84.3%	72.7%	51.8%	70.3%	49.1%	92.0%	81.7%	89.5%	76.4%
34 - 66	5.5%	1.5%	12.9%	1.0%	3.7%	1.6%	45.5%	4.1%	5.0%	12.1%	4.2%	9.6%	1.7%	4.7%	2.9%	5.1%
67 - 99	17.2%	7.0%	8.0%	7.1%	13.6%	8.6%	8.4%	11.2%	21.9%	5.4%	23.2%	8.1%	6.2%	11.7%	7.1%	8.5%
100 - 499	2.3%	0.1%	6.2%	0.0%	0.3%	0.0%	0.8%	0.3%	0.4%	30.7%	1.8%	33.1%	0.0%	1.8%	0.5%	7.9%
>= 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Figure 7. Dispensings per User, by Year

Source: Mini-Sentinel Year One Data Quality Report; File:Dem_L3_AgeYrsDist2 [N = 15]

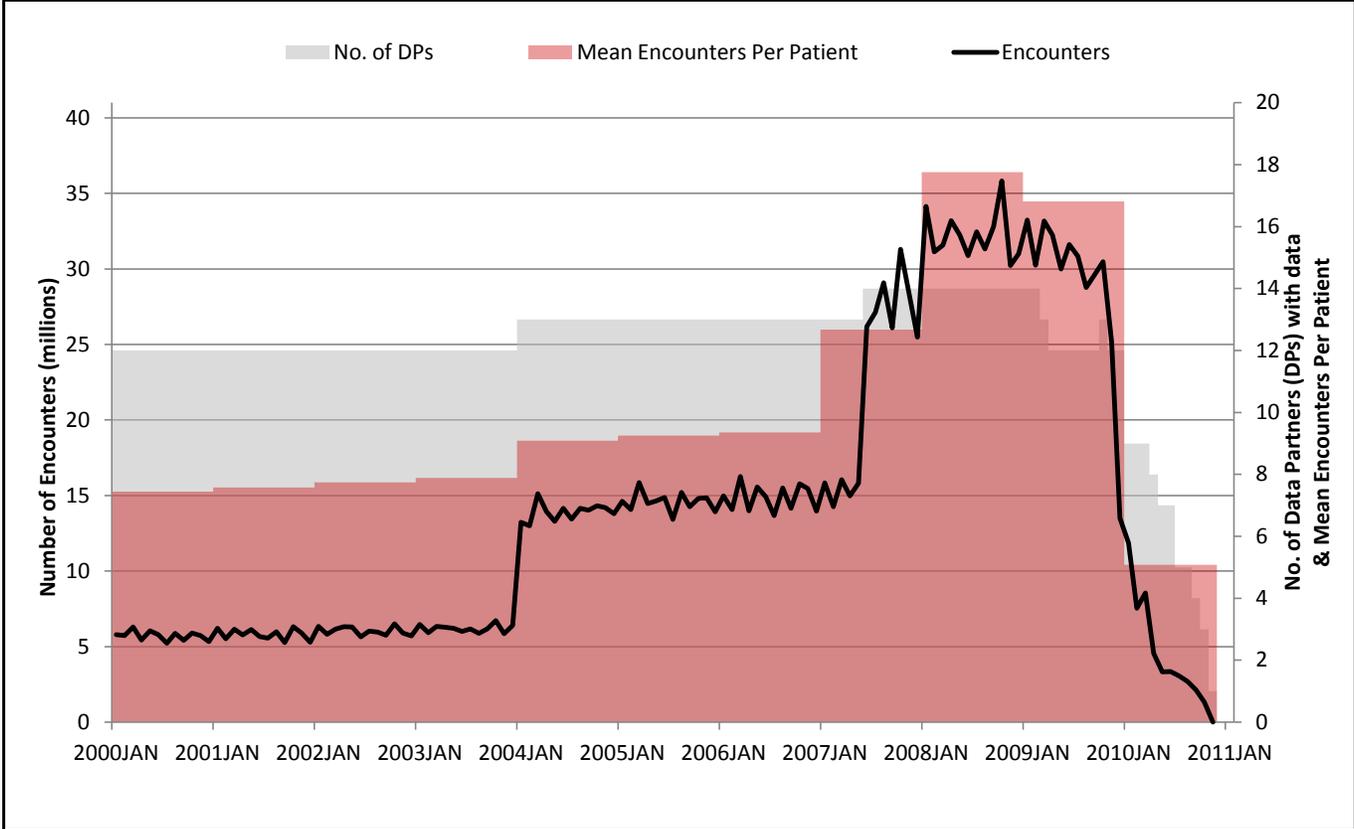**Figure 8.** Distribution of Dispensing, by Days Supplied

Source:Mini-Sentinel Year One Data Quality Report; File: Dis_L3_RxSup [N = 15]

Table 4. Snapshot of the Mini-Sentinel Distributed Database Encounter Table in Extract 1 (Unique patients = 49,872,825)

	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	Total
Mean Number of Encounters per Patient (All Years)	39.8	26.5	13.8	34.5	32.3	70	34.3	17.1	36.5	33.9	56.2	30.9	27.8	94.5	44.7	33.7
2000	5.49	-	4.74	5.11	6.77	-	4.52	3.49	8.07	-	5.84	4.99	-	6.14	10.9	5.4
2001	5.56	-	4.81	5.38	6.92	-	4.36	3.38	8.12	-	6.03	5.08	-	6.29	9.98	5.49
2002	5.85	-	4.77	5.56	7.08	-	5.13	3.27	8.29	-	6.24	5.17	-	6.42	10.43	5.67
2003	5.65	-	4.77	5.59	7.31	-	5.09	3.33	8.18	-	6.36	5.34	-	6.68	9.92	5.75
2004	5.94	6.09	4.76	5.69	7.57	-	5.09	3.19	8.17	-	6.41	5.89	-	6.83	7.36	6.06
2005	5.99	6.02	4.65	5.78	7.76	-	5.03	3.18	9.34	-	6.39	5.94	-	6.97	8.87	6.05
2006	6.06	6.11	4.77	5.97	7.95	-	5.03	3.14	5.99	-	6.31	5.56	-	7.93	8.44	6.03
2007	6.16	6.27	4.83	5.8	8.13	21.26	5.19	3.21	3.87	-	6.71	5.28	-	8.5	9.25	8.2
2008	6.28	6.37	4.29	5.94	8.26	34.26	5.22	3.45	3.97	-	7.13	6.51	-	8.73	10.4	11.55
2009	6.22	6.43	2.09	6.11	7.75	31.26	5.31	4.37	4.2	-	7.49	5.21	-	8.16	3.43	10.88
2010	4.5	2.67	-	-	-	6.44	-	2.77	3.7	-	5.38	4.7	-	6.84	-	3.84
Encounter Type																
Inpatient Hospital Stay	1.4%	1.2%	4.3%	0.8%	1.1%	7.2%	1.7%	3.6%	1.1%	1.4%	0.7%	2.6%	---	2.0%	4.4%	2.9%
Non-Acute Institutional Stay	0.5%	0.9%	0.0%	0.2%	0.1%	37.3%	0.4%	0.1%	0.0%	0.1%	0.1%	1.1%	---	0.0%	0.4%	9.8%
Emergency Department	3.1%	3.8%	5.4%	2.7%	1.9%	3.9%	2.4%	2.6%	0.7%	3.6%	1.7%	4.7%	---	3.3%	2.0%	3.6%
Ambulatory Visit	73.5%	77.3%	90.0%	78.2%	96.9%	37.9%	60.0%	83.8%	84.7%	81.3%	47.4%	91.6%	---	76.8%	89.6%	69.2%
Other Ambulatory Visit	21.5%	16.7%	0.3%	18.2%	0.0%	13.8%	35.5%	9.8%	13.4%	13.6%	50.1%	0.0%	---	17.9%	3.6%	14.5%

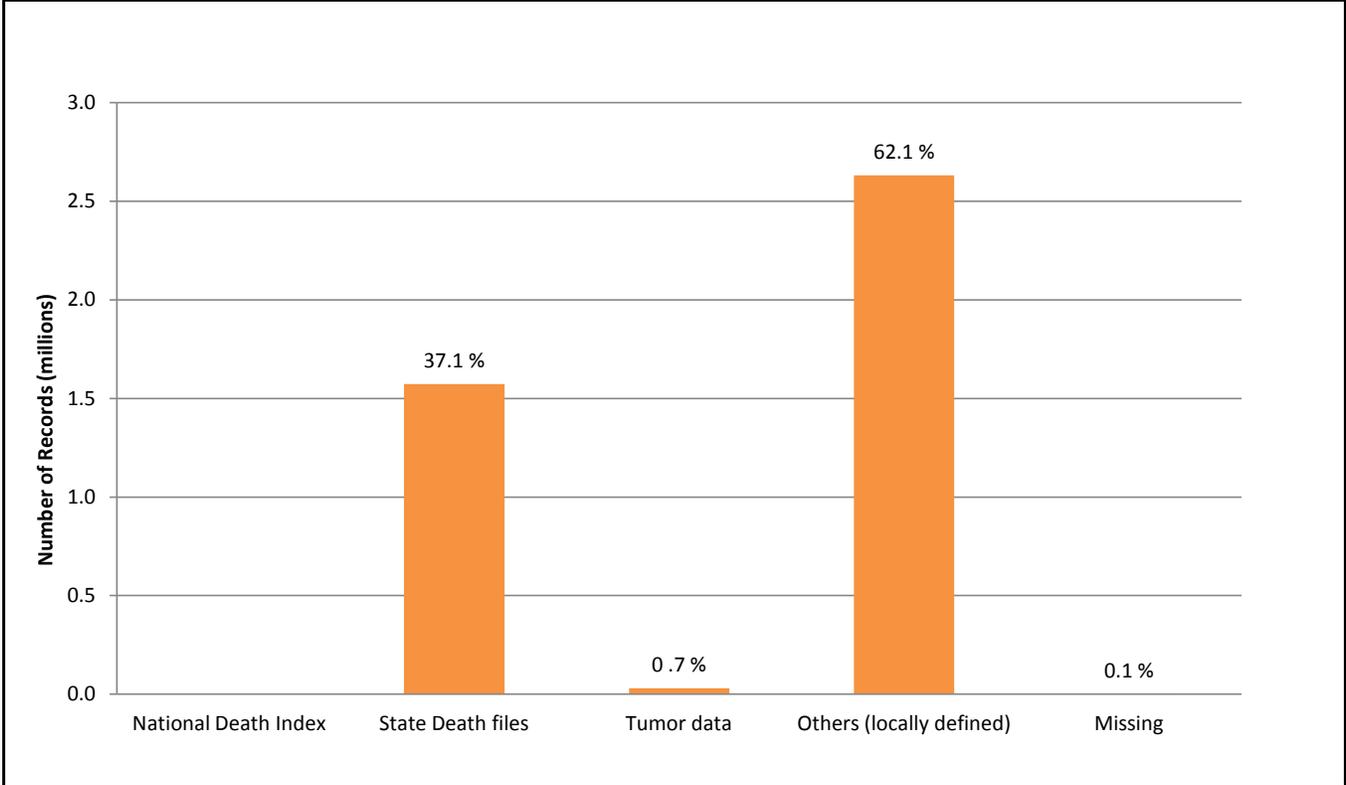**Figure 9.** Total Encounters, by Month and Encounters per Patient, by Year

Source: Mini-Sentinel Year One Data Quality Report; File: Enc_L3_Stats_Y, Enc_L3_EncDate_YM
NOTE: Mean Encounters is among patients with at least one encounter.

Table 5. Snapshot of the Mini-Sentinel Distributed Database Death Table in Extract 1 (Unique patients = 4,266,538)
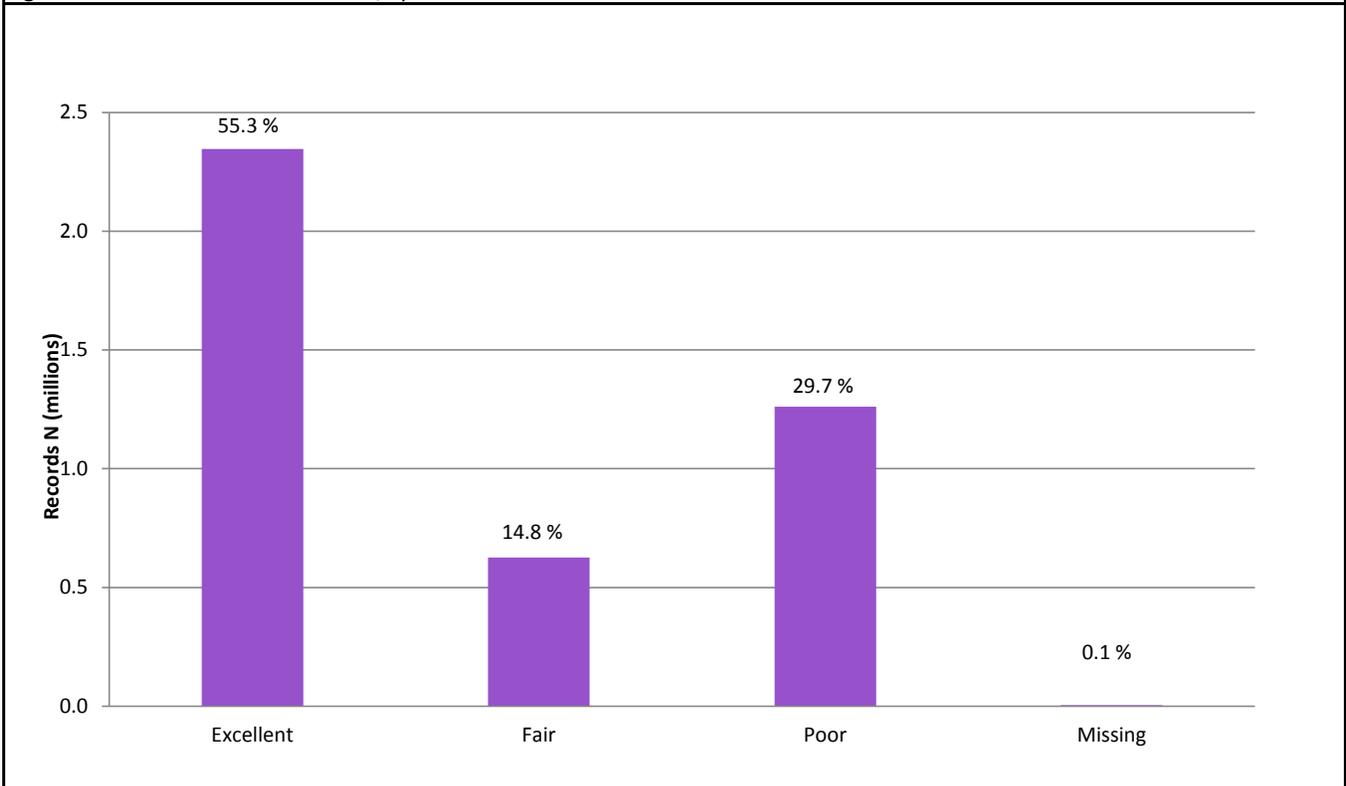
	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	Total
Source																
State Death Files	89.5%	0.0%	---	93.9%	87.2%	0.0%	72.3%	85.9%	0.0%	30.8%	59.8%	73.9%	---	42.1%	0.0%	37.1%
National Death Index	0.0%	0.0%	---	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	---	0.0%	0.0%	0.0%
Tumor data	4.3%	0.0%	---	0.5%	0.0%	0.0%	8.6%	0.0%	0.0%	0.0%	31.0%	0.0%	---	0.0%	0.0%	0.7%
Other, locally defined	6.2%	100.0%	---	5.6%	12.8%	100.0%	19.1%	14.0%	100.0%	69.2%	9.1%	26.1%	---	57.9%	0.0%	62.1%
Missing	0.0%	0.0%	---	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	---	0.0%	100.0%	0.1%
Invalid Code	0.0%	0.0%	---	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	---	0.0%	0.0%	0.0%
Confidence																
Excellent	65.0%	100.0%	---	88.4%	87.2%	100.0%	76.0%	0.0%	100.0%	18.6%	100.0%	47.5%	---	100.0%	0.0%	55.3%
Fair	22.1%	0.0%	---	11.6%	12.8%	0.0%	22.9%	100.0%	0.0%	28.6%	0.0%	10.7%	---	0.0%	0.0%	14.8%
Poor	13.0%	0.0%	---	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	52.7%	0.0%	41.8%	---	0.0%	0.0%	29.7%
Missing	0.0%	0.0%	---	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	---	0.0%	100.0%	0.1%
Invalid Code	0.0%	0.0%	---	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	---	0.0%	0.0%	0.0%

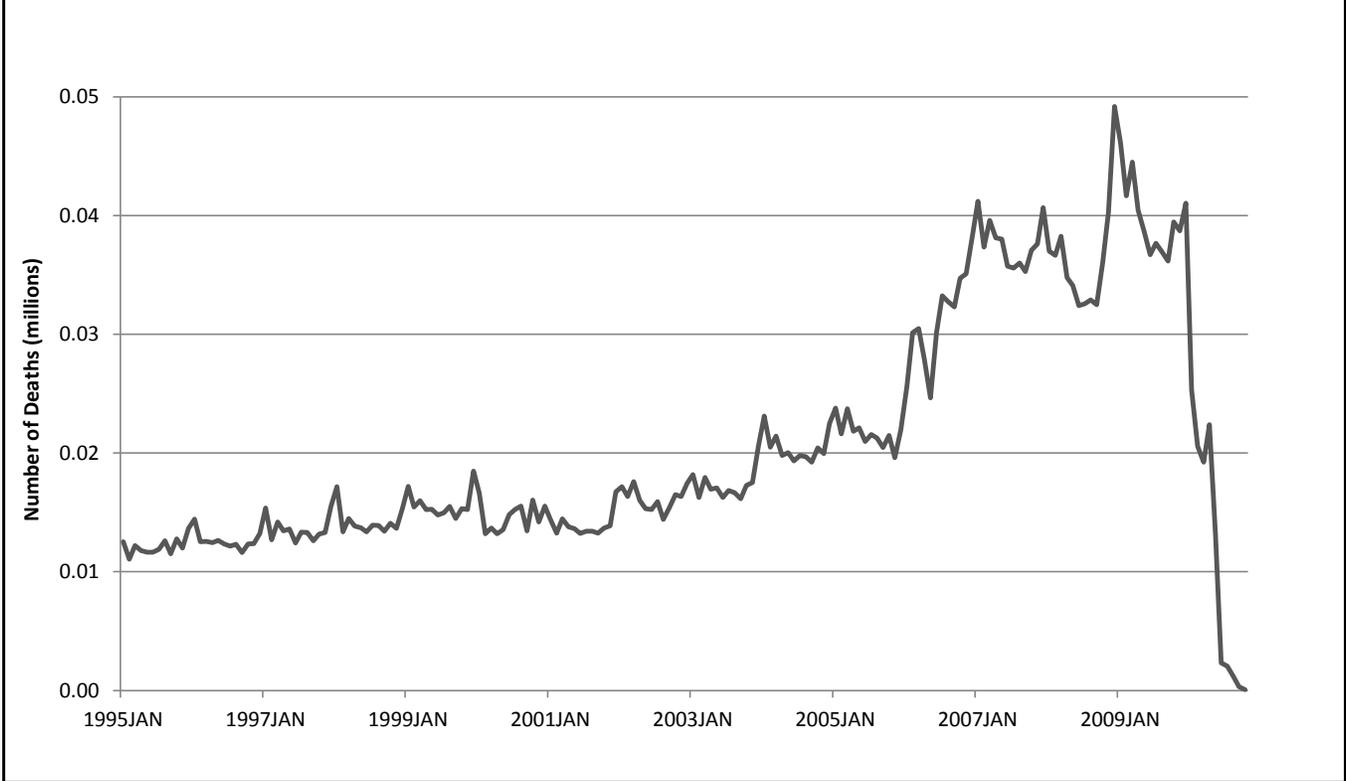**Figure 10.** Distribution of Death Records, by Source

Source: Mini-Sentinel Year One Data Quality Report; File: Dth_L3_Source

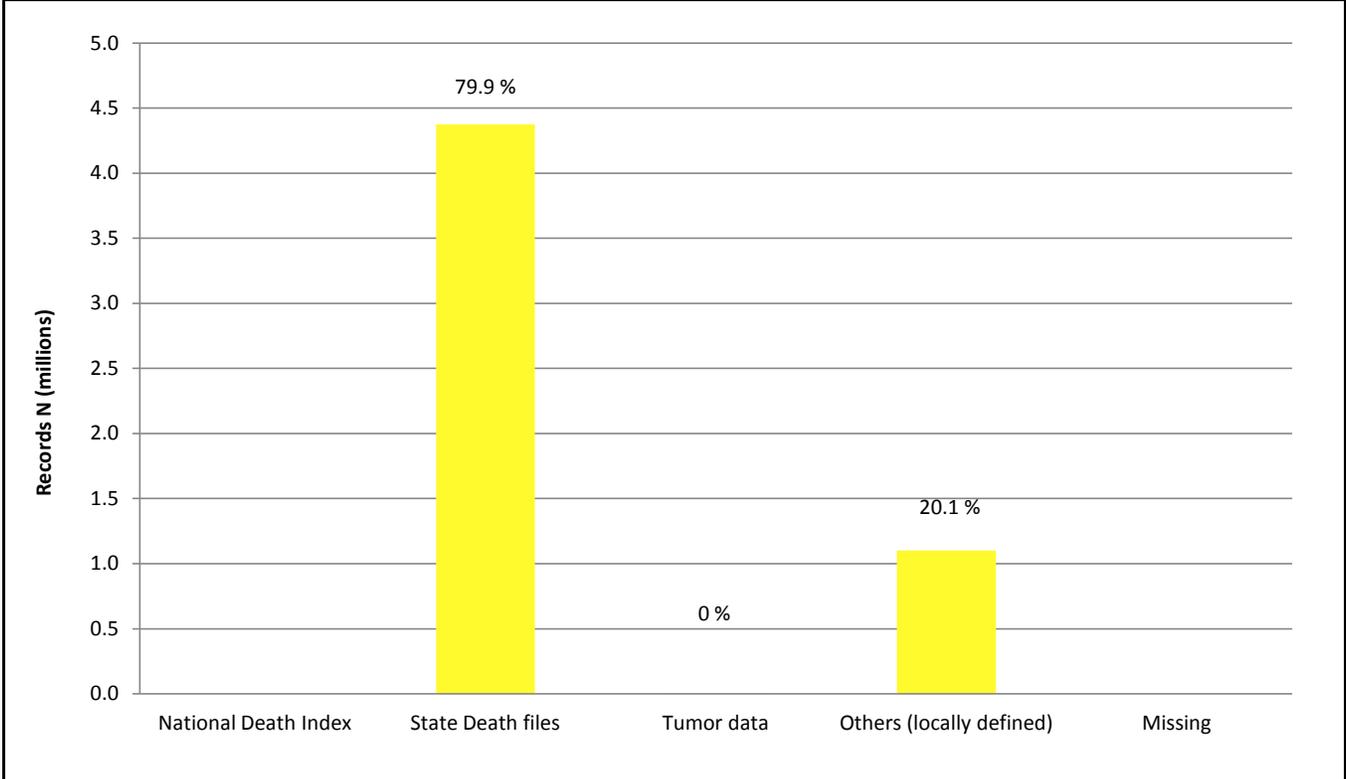**Figure 11.** Distribution of Death Records, by Confidence

Source: Mini-Sentinel Year One Data Quality Report; File: Dth_L3_Confidence

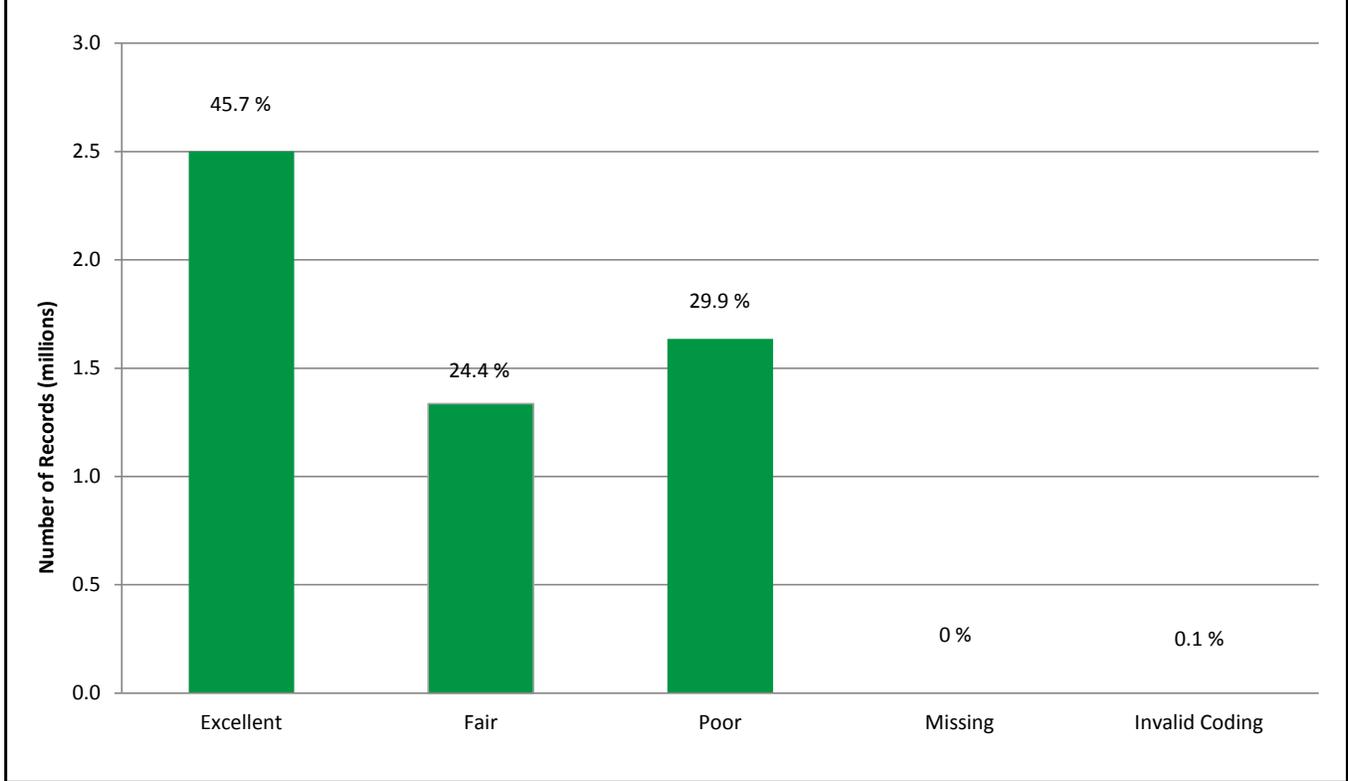**Figure 12.** Number of Deaths January 1995 to October 2010

Source: Mini-Sentinel Year One Data Quality Report; File: Dth_L3_DthDt_YM

Figure 13. Distribution of Cause of Death Records, by Source

Source: Mini-Sentinel Year One Data Quality Report; File: Dth_L3_DthDt_YM

Figure 14. Distribution of Cause of Death Records, by Confidence

Source: Mini-Sentinel Year One Data Quality Report; File: COD_L3_Confidence