

2021 NPCR MICHIGAN SUCCESS STORY

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LexisNexis Linkage to Improve Social Security Number and Vital Status Information

National Program of Cancer Registries SUCCESS STORY

SUMMARY

Our team identified over 78,000 patient records needing improvements in the Social Security Number and vital status fields. These data points were updated using linkage results provided by LexisNexis.

CHALLENGE:

Frequently, incoming records to MCSP supplied all 9's in the SSN field. Other times, records were submitted with a masked SSN (such as leading 8s, followed by the last 4 actual digits). This issue makes data linkages more difficult as the SSN is customarily a strong and unique patient identifier. As a result, this weakness in the incoming data inhibits linkages with death records. How can this weakness be remedied through a data quality initiative?

SOLUTION

LexisNexis provides a robust linkage to patient identities by running algorithms against a wide variety of sources (to include credit histories, licenses, etc.). First, the candidate records from the cancer Registry were selected from the database. From the consolidated data set, SQL queries extracted a set of demographic data for 70,979 patients. Additionally, 4,833 records were selected from the "pending consolidation" queue. Lastly, 2,473 unprocessed records were included for consideration. These records were enumerated with a state-specific ID, for correlating the results back to the internal CRS Plus patient IDs.

RESULT

The total records sent outbound to LexisNexis included 78,285 rows. The results were returned to MCSP in a spreadsheet with the same row count including "best matches" from the LexisNexis linkages. Within these results, the "best SSN" was reliably supplied 66,645 times (85.1%). Separately, vital status information was included for 9,062 patients who were linked to deceased identities from the Social Security Administration or death records. This included dates of death and last known addresses.

We developed processes using local SQL databases and/or Excel to generate database update scripts to apply to our registry database. In the first round of updates, patient SSNs were updated for consolidated patient records from the linkage results. Fields that were updated from death information included Vital Status, ICD Revision Number, Death Cause, Date of Last Contact, and several MI-specific fields used for tracking/auditing purposes. In the second round of updates, the patient date-of-birth was also updated, as the date supplied by Lexis Nexus were consistently more precise than the previously stored dates.

For records which had been pending consolidation or were unprocessed, a supplemental worksheet was created from the results to aide data consolidators with best matching information. Lastly, a 60,696 patient current addresses were updated via scripts from the LexisNexis results.

SUSTAINING SUCCESS

Fortifying the data intake process is the first level of defense against incomplete data. To prevent the accumulation of unknown SSNs, MCSP created an updated metafile with state-specific error checking. In a state-specific field, a "reason for unknown SSN" must be supplied whenever such a circumstance arises. This check will act as an ongoing reminder and request for follow-back by the facility to obtain these data.

The process of updating the CRS Plus database has been documented, so that future linkages may be performed in the same or similar manner.

REGISTRY CONTACT INFORMATION

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https://www.michigan.gov/dhhs/0,5885,7-339-71551_2945_5221-16586--,00.html



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