2019 NPCR ALASKA SUCCESS STORY

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The Challenges & Successes of Transitioning to CRS Plus after 18 years with a Private Vendor

NATIONAL PROGRAM OF CANCER REGISTRIES
SUCCESS STORY

SUMMARY: For the last 18 years, the Alaska Cancer Registry (ACR) has been using Precis Central, a central registry database software developed by Elekta. With the announcement of the extensive NAACCR v18 standard changes, the vendor made the business decision to no longer support the software, prompting ACR to switch to CRS Plus and Prep Plus, part of NPCR's Registry Plus suite of registry software. This transition involved changes on several levels for ACR. The NPCR subject matter experts (SMEs) and software engineers for these programs helped ACR along the path to a successful implementation of this new system.

CHALLENGE: Transitioning from a very familiar software system to a brand new one posed several challenges:

- ACR data had to move from the old system into the new system and include both NAACCR and state-specific data items.

- ACR's data analyst, who has extensive IT experience, had to become familiar with the new SQL databases & tables and request administrative rights from the Department's IT staff in order to create and modify the database structure in partnership with the NPCR software engineers.

- CRS Plus would have to be able to display the state-specific data items in the date entry grid and would need state-specific consolidation rules. Also, some data items are consolidated differently and at different levels (facility vs. tumor vs. patient) in the old software versus the new software.

- ACR staff had to learn how to use a brand-new system that used a potentially different workflow from the old system.

- The new NPCR software is itself an upgrade from a software platform that was used for a very long time (an upgrade from Microsoft Visual Basic 6 to Microsoft.NET Framework). ACR would become a brand-new user at the same time that many other state cancer registries were transitioning from the old version to the new version. As such, the new software lacked an extensive review period by the other state cancer registries.

- The ACR data analyst had monthly tasks that involved running MS Access queries that were linked to the SQL database tables and variable names of the old software. These tasks included producing ad-hoc reports and performing global updates. To perform these same tasks going forward, the ACR Data Analyst would have to re-write each SQL query to refer to the correct table and variable name in the CRS Plus database.

SOLUTION: During the transition to the new software, pre-planning and close collaboration occurred between ACR and the NPCR SMEs & software engineers. The high levels of expertise of NPCR staff, along with NPCR's dedication to customer service, greatly helped the transition process. This collaboration resulted in solutions to most of the potential challenges, such as:

- The SMEs for Prep Plus and CRS Plus provided ACR with comprehensive training manuals for the new software. They were also available to answer questions from the ACR staff.

- The data analyst was able to produce files of consolidated patent-level, consolidated tumor-level, and attached facility-level cases, as well as of unattached facility-level cases in Pending that still needed dispositioning. The software engineer created "special import" SQL scripts that uploaded each data file into the CRS Plus database. ACR used this initial database on an interim basis for about a month for testing and training purposes before repeating the process for a final special import.

- The testing of the CRS software with an interim version of the ACR database made the training period a lot easier before the final special import was performed. It allowed ACR staff to switch back and forth between the two software systems to compare functionalities and verify that all data items were successfully transitioned and properly displayed in the data entry grid.

RESULTS: The transition of the ACR database from the old system to CRS Plus was successful. The old and new software systems are based on the same core program from about 20 years ago and have similar database structures and data flows. This made the transition tasks of the data analyst a lot easier. It also made it easier for the ACR registrar staff to understand the flow of data through the system. Some results of the transition are as follows:
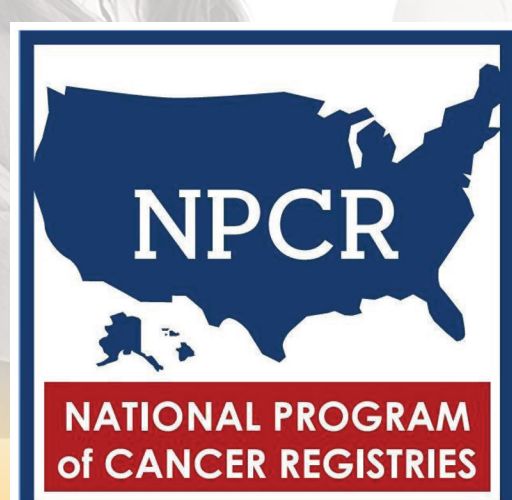
- The similarity between the two software systems turned out to be a great advantage. Not only did it make it easier for the ACR registrar staff to understand the data flow, but it allowed ACR to view the software from a unique perspective as a new user. As the .NET version of CRS Plus was only recently released in mid-2019, it was new to all the old users at the same time ACR was transitioning and had not yet undergone an extensive user review period that would have provided valuable feedback to NPCR SMEs and software engineers. ACR's extensive experience and expertise with the old software resulted in a large amount of feedback regarding the operation of both Prep Plus and CRS Plus, and many of the suggestions were incorporated into the software for the benefit of all Registry Plus users. For example, some feedback ACR provided about Prep Plus for processing incoming data files shifted its functional focus from simply clearing edits to also making it much easier for the user to perform visual QC.

- Transitioning the large text fields was especially challenging. For facility-level abstracts, the old software displays the text fields in the data entry grid while CRS Plus displays them in a floating dialog box. The latter technique turned out to be a more efficient method as the user doesn't have to constantly scroll up and down in the grid to re-read text while QCing coded fields.

- State-specific data items were successfully transitioned into the CRS Plus database. A state-specific large text field used for visual QC of incoming abstracts was successfully added to the floating text dialog box.

- The old software also has special non-NAACCR QC text fields for the consolidated patient and the consolidated tumor records. Those fields were successfully transitioned into the CRS Plus "Note" fields that are displayed in a floating dialog box similar to the facility-level text fields.

- The CRS Plus SME and software engineer implemented ACR's request to consolidate certain data items that aren't normally consolidated in CRS Plus and create consolidation rules for them. Also, the ACR data analyst used queries in MS Access to create consolidated fields for the Usual Occupation & Industry text data items prior to the special import since they are not normally consolidated in the old software.

- The data analyst was successful in creating a linkage between the CRS Plus database in SQL and MS Access. This enables ACR to continue to use Access to produce ad hoc reports and to perform global updates as it had in the past with the old software. However, as these tasks are typically scheduled for a particular month of the year (for example, to perform the National Death Index linkage in September), it will take the data analyst a year to fully transition all the MS Access queries from the old database to the CRS Plus database.

SUSTAINING SUCCESS: ACR is now fully operational in its use of Prep Plus and CRS Plus. Once the transition was completed, the data analyst worked closely with the CRS Plus SME and software engineer to upgrade the CRS Plus database from NAACCR v16 to v18. ACR trained its contractor on how to use Prep Plus and is now helping ACR process its backlog of v18 files. Once the backlog is gone, ACR will be processing all incoming files in Prep Plus and uploading them into CRS Plus on a routine basis.

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