2020 NPCR MISSOURI CANCER REGISTRY SUCCESS STORY

STORY TOPIC: Newsletter Education Effectiveness

STORY CATEGORY: Registry Operations

STORY TITLE: Data Quality as a Function of Education Effectiveness

STORY AUTHORS: Nancy Rold, BA, CTR; Babette Langeneckert, CTR; Jeannette Jackson-Thompson, MSPH, PhD

SUMMARY

Through initial and follow-up audits, Missouri Cancer Registry (MCR) staff determined who did and did not benefit from educational newsletter tips on coding of histology and SEER Summary State 2000 for pituitary adenomas and why.

CHALLENGE

Complexity of data collection for disease surveillance has increased dramatically since the establishment of the National Program of Cancer Registries (NPCR). With the increase from fewer than 30 to several hundred required data elements and little, if any, increase in staffing or funding levels, reporting facility/central cancer registry (CCR) staff struggle to maintain data quality, creating a need for cost-effective evaluation. To comply with CDC's NPCR provisions, we added "evaluation of data quality as a function of audit and education effectiveness" to our Missouri Cancer Registry (MCR) evaluation plan and designed a tool to assess communication/education techniques. Through an internal audit, we had assessed the quality of coding of pituitary adenomas (C75.1) with the correct histology (8272) and SEER Summary Stage 2000 (SS00) (8). We disseminated findings/abstracting tips to reporters via our *MCR Monthly Update* newsletter, a potentially cost-effective means of improving/maintaining data quality.

SOLUTION

One year later, we repeated the audit to assess whether quality had improved in cases exported in the nine months following the published findings and abstracting tips. A certified tumor registrar (CTR) reviewed histology coding on 4,101 benign/borderline pituitary adenomas reported to MCR; the total included 3,753 cases before dissemination of the histology abstracting tip and 348 cases after dissemination. Only 712 cases diagnosed between 2015 and 2017 were evaluated for SS00 coding, including 449 cases reported before the SS00 abstracting tip appeared and 263 after it appeared.

RESULTS

Of 3,753 cases reported before the histology tip was disseminated, 409 cases (10.9%) had incorrect histology; of 348 cases reported after dissemination, only 18 cases (5.2%) had incorrect histology. Of 449 cases reported before the SS00 tip disseminated, only 34 (7.8%) were coded incorrectly; 65 (24.7%) of 263 cases reported after dissemination were coded

incorrectly, representing 24% of electronic reporting hospitals. No clear trend was seen across the nine-month period.

In the subsequent audit, twenty-four percent of electronic reporting hospitals had a least one error on Summary Stage 2000 for this primary. Results were sorted by facility and by abstractor initials.   Abstractors were cross-referenced to the newsletter distribution list; however, matching was not comprehensive since the distribution list is updated in real time and not reflective of the time window under analysis. The distribution list has historically been sent only to the lead registrar at each institution, with a reminder inserted within the newsletter annually regarding the recipient's responsibility to share the information internally. Of 15 abstractors who made more than one mistake, only two were on MCR's distribution list.

As a follow-up to our analysis, the lead registrar at each of six large facilities where a non-lead abstractor had more than one mistake was contacted to determine if the newsletters were being circulated to all abstractors. Each of them reported that they were currently circulating, posting or teaching from the *MCR Monthly Updates* at staff meetings. Four facilities that have since moved to contract registry services were also contacted to reiterate their responsibility to forward our emails. Some had not recognized this responsibility in the past.

Findings pointed to potential flaws in our *Monthly Update* distribution system. Maintenance of the distribution list has been assigned to just one staff person. We have also added wording to the subject line of each month's newsletter so that it now reads "*MCR Monthly Update* (Month) (Year) – please share with all abstractors". With more facilities moving to remote and contracted registrars, the responsibility of lead staff in these facilities to share our communications with all abstractors will be an important point for us to make when we are aware of such transitions. Unfortunately, there is sometimes a lag before we become aware of the transition.

Note: COVID-19 has brought many transitions. Some abstractors have been furloughed or laid off while others who had worked on site are working from home. Some facilities have decided to move to contract registrars.

Limitations: The follow-up audit sample was for a shorter time span and contained 63% fewer cases than the original audit. This would explain some of the variability in results.   The records analyzed had been 10% reviewed by MCR QA staff prior to inclusion at time 1 and time 2; a random subset may have been corrected to code 8 before either phase of this study. Because pituitary adenomas account for less than one percent of tumors reported into MCR annually, the study cases may not have been equally reviewed /corrected by QA for each sample. These factors point to inherent variability in the data sets, making it difficult to rely statistically on the measures chosen for this assessment.

SUSTAINING SUCCESS

Despite the limitation of the statistical analysis, the evaluation of our processes was useful. Steps have been taken to improve maintenance of the distribution lists within MCR and to improve distribution of the newsletters within the facilities.

The analysis of this measure was also discussed with all Quality Assurance staff at an MCR Operations Group meeting.   We concluded that, when available, targeted edits at the time of

abstracting and at submission of data are the best tool to assure accurate registrar coding. An edit for use of code 8 for benign brain tumors is now available and in use for Summary Stage 2018.   We feel that QA feedback to individual abstractors regarding errors on specific cases is the next best tool for education.   Information in newsletter articles and training sessions must be retained by the reader and retrieved for application to subsequent abstracting scenarios. This evaluation found the effectiveness of such tips to be potentially variable, but we feel that they are still useful within this three-tool educational approach.

REGISTRY CONTACT INFORMATION

Nancy Rold, Operations Manager, 573-882-7236
https://medicine.missouri.edu/centers-institutes-labs/cancer-registry-research-center