

2021 NPCR NEW HAMPSHIRE SUCCESS STORY

New Hampshire State Cancer Registry: Judy Rees; Adriane Burke

New Hampshire Childhood Cancer Recoding Audit

National Program of Cancer Registries SUCCESS STORY

SUMMARY

Pediatric cancer data from 1987 onwards were independently audited for data quality.

CHALLENGE

New Hampshire and the Northeast have some of the highest childhood cancer rates in the country, according to a published paper by the Centers for Disease Control and Prevention (CDC). This finding and results of a prior investigation into higher-than-expected rates of two childhood cancers in the Seacoast area have generated concerns about possible environmental causes of these cancers. In response, the New Hampshire State Legislature set aside funds to explore childhood cancer issues in the Granite State. This state funding has allowed a group of cross-disciplinary childhood cancer and environmental health experts to further investigate childhood cancers in New Hampshire. The challenge was to investigate whether there was a significantly high cancer rate, and to communicate with the public during any further investigation, to make the process understandable and transparent.

SOLUTION

A commonly used method to assess cancer data quality is a recoding audit. In this process, text and other contextual data within the registry record are used to code each case. Recoding audits therefore involve independently reassigning codes to abstracted text information but not reviewing the source documents. The pre- and post- data are compared to identify differences, estimate rates of agreement, and to identify problems in data collection and interpretation. The childhood cancer data were audited by independent Certified Tumor Registrars contracted from Registry Partners, Inc. to review 2036 records for the period 1986-2020 for all patients aged <20 years at diagnosis. The key 47 variables were reviewed for each case, for a total of 95,692 data fields. Codes assigned by reviewers were compared with codes in the registry database. Differences were tabulated. The Accuracy Rate (%) was calculated as: Accuracy Rate (%) = (# Data Fields - # Differences) / # Data Fields

RESULTS

Of the 47 key variables reviewed, there were 22 variables with no differences across all records. A total of 154 differences were detected in any of the 95,692 variables reviewed in all records, for an accuracy rate of 99.8%. Most errors were in coding Stage, Laterality, and Grade. For a small number of variables, some differences were identified relating to missing values.

Overall, the accuracy rate was excellent (99.8%) for NHSCR Childhood Cancer data. This means that we can be confident in the quality of data collected on these patients.

SUSTAINING SUCCESS

Ongoing, periodic recoding audits will be critical to ensure high quality cancer data.

REGISTRY CONTACT INFORMATION

603-653-6265

<https://geiselmed.dartmouth.edu/nhscr/>

2021 Recoding Audit Results, Childhood cancer 1986-2020

NAACCR #	Data Item	# Differences	% Agreement
220, 380, 390, 820, 830, 1211, 1220, 1221, 1230, 1231, 1240, 1241, 1250, 1251, 1292, 1294, 1390, 1400, 1410, 1420, 1639, 3250,	Sex, Sequence Number—Central, Date of Diagnosis, Regional Nodes Positive, Regional Nodes Examined, RX Date—Radiation Flag#, RX Date Chemotherapy, RX Date—Chemo Flag#, RX Date Hormone, RX Date—Hormone Flag#, RX Date Biologic Response Modifier, X Date — BRM Flag#, Rx Date Other, RX Date — Other Flag#, RX Summary Scope Regional Lymph Node Surgery, RX Summary Surgery Other Regional/Distant, RX Summary Chemotherapy, RX Summary Hormone, RX Summary Biological Response Modifier, RX Summary Other, RX Summ--Systemic/Surg Sequence, RX Summary Transplant/Endocrine	0	100
230	Age at Diagnosis	1	100
400	Primary Site	1	100
523	Behavior Code ICD-0-3	1	100
752, 754, 756, 780, 2800	Tumor Size	1	100
1210	RX Date Radiation	1	100
1380	RxSumm—Surg/Rad Seq	1	100
1380	RX Summ--Surg/Rad Seq	1	100
1270	Date of 1st Course RX—CoC	2	99.9
1200	Date of Surgery Primary Site	3	99.9
1201	RX Date — Surgery Flag#	3	99.9
1271	Date of 1st Crs RX—CoC Flag#	3	99.9
1570	Radiation Regional RX Modality	3	99.9
1340	Reason No Surgery	4	99.8
1639	RxSumm—Systemic/Sur Seq	6	99.7
1290	RX Summary Surgery Primary Site	7	99.7
522	Histologic Type ICD-0-3	9	99.6
490	Diagnostic Confirmation	11	99.5
440,3843, 3844	Grade	19	99.1
410	Laterality	27	98.7
759, 760, 764, 3010, 3020	SEER Summary Stage	50	97.5



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention