Examining Statewide Patterns in Collection of Family History Variables for the Michigan Cancer Surveillance Program

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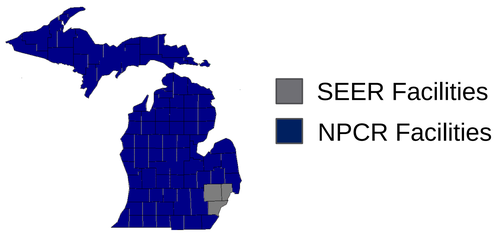
INTRODUCTION

Beginning in 2007, the Michigan Cancer Surveillance Program (MCSP) became the first state cancer registry to mandate collection of three family history fields for reportable cancer cases. This information helps identify individuals at risk for hereditary cancer syndromes.

The three required family history fields are:
1) Is there a family history of cancer?
2) Is the cancer in an immediate relative?
3) Is the relative's cancer in the same site?

The mandate covers National Program of Cancer Registries (NPCR) facilities in Michigan. Surveillance, Epidemiology and End Results (SEER) facilities have separate reporting guidelines.



Two software packages allow NPCR facilities to submit cases electronically to the registry – Metriq or AbstractPlus.

Table 1. Description of software packages used for submitting data to the cancer registry.

	Metriq	Abstract Plus
Supplier:	2 private vendors	Centers for Disease Control and Prevention
Users:	American College of Surgeon certified facilities	Small facilities/labs
Variables:	Family history & relationship optional; no collection of relative's cancer site	All three fields required

Because of limitations in the software packages, medical charts may contain more information about a family history of cancer than what is captured by the registry.

We evaluated the completeness of family history variables captured in the MSCP cancer registry since the 2007 mandate.

METHODS

Using MSCP data from 2007–2009, we examined patterns of family history variables among young female breast cancer cases (≤50 years old), male breast cancer cases and ovarian cancer cases. We also analyzed patterns by individual reporting facilities.

Cases reported from out-of-state facilities, laboratories, SEER facilities or death certificates were excluded from the analyses.

Table 2. Coding schema utilized by MCSP for family history variables.

Code	Family History	Immediate Relative	Same Site
0	No	No	No
1	Yes	Yes	Yes
2	Yes	Yes	No
3	Yes	No	Yes
4	Yes	No	No
5	Yes	Yes	Blank
6	Yes	Blank	Yes
7	Yes	Blank	No
8	Yes	Blank	Blank
9	Blank	Blank	Blank
A	Yes	No	Blank

A blank field indicates information was not in the medical chart.

RESULTS

Table 3. Overall patterns in reporting, 2007–2009.

Code	Frequency	Percentage (%)
0	573	14.59
1	1,369	34.86
2	64	1.63
3	13	0.33
4	7	0.18
5	1	0.03
6	1	0.03
7	0	0.00
8	397	10.11
9	1,502	38.25
A	0	0.00
Total	3,927	100.00

Individual Facility Results

- 86 reporting facilities
- Completeness of family history fields (no blank fields; codes 0–4)
  - 16 facilities met ≥ 67% complete reporting
  - 9 facilities met ≥ 75% complete reporting
  - 4 facilities met = 100% complete reporting

DISCUSSION

Approximately one third of the cases captured in this study were coded "1" (Table 3). This group is of particular concern as they may represent hereditary cancer syndrome cases. Individuals at risk for a hereditary cancer syndrome require increased clinical care – earlier and more frequent cancer screenings, referrals for genetic counseling and education for at-risk family members.

Furthermore, with approximately half of the cases in this study containing at least one blank field for family history (codes 5–9 and A; Table 3), research is needed to assess the accuracy in current coding and to determine methods for increasing overall completeness.

Potential improvement strategies include:
1) Conduct medical chart reviews from NPCR facilities to determine whether family history information is documented in the chart.
2) Implement software changes that require facilities to submit complete family history variables for each case.
3) Establish cutoffs to reward facilities with high percentages of complete reporting for family history variables.

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