Concordance of Colorectal Treatment Information between a Central Cancer Registry and Medicaid Claims

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NAACCR Annual Meeting, Québec City, June 22, 2010

Overall Medicaid Linkage Results

Site	Cases	Matched to Medicaid*	%
Colorectal	32,800	9,300	28.3
Female Breast	51,400	12,000	23.4
All Sites Combined	317,900	80,500	25.3

*Diagnosed between 2004-2006 and enrolled in Medicaid at some point between 2001-2008

Surgery

Case study:

- 86 y.o. female diagnosed at a major New York City hospital with rectal cancer in May 2006.

- A second source from a radiation oncology center reports pre-operative radiation therapy in combination with chemotherapy in June and July 2006.

- A Medicaid claim indicates proctectomy performed at a second NYC hospital in September 2007. This was not reported to the registry.

- A review of the more than 1000 claims for the period between May ’06 and September ’07 reveals many heart-related issues along with ongoing cancer-related blood work.

Surgery

Colorectal Cancer Cases with Medicaid Claims for Surgical Procedures

		Reported to Registry	Not Reported to Registry	% Not Reported
Colon	All cases	3214	241	7.0
	Dx to Tx ≤180 days	3054	202	6.2
	Dx to Tx >180 days	160	39	19.6
Rectum	All cases	1117	234	17.3
	Dx to Tx ≤180 days	976	181	15.6
	Dx to Tx >180 days	141	53	27.3

See authors for CPT and ICD-9 procedure codes used

Surgery

	Best Class of case	Reported to Registry	Not Reported to Registry	% Not Reported
Colon	Dx and Tx	2686	139	4.9
	Tx only	437	20	4.4
	other	91	79	47.0
Rectum	Dx and Tx	847	147	14.8
	Tx only	239	45	15.8
	other	31	45	59.2

Surgery

	Year Dx	Reported to Registry	Not Reported to Registry	% Not Reported
Colon	2004	1109	89	7.4
	2005	1040	70	6.3
	2006	1065	82	7.2
Rectum	2004	401	72	15.2
	2005	359	84	19.0
	2006	357	78	17.9

Surgery

		Registry surgery type			
		No surgery	Surgery, NOS	Local tumor destruction/ excision	Resection/ colectomy
Medicaid surgery type	Local tumor destruction/ excision	264	14	458	126
	Resection/ colectomy	211	71	87	3575

Sources agree

Registry is missing information

Surgery recorded in registry was paid by another payor

Radiation

Case study:

- 76 y.o. woman diagnosed with regional rectal cancer (site C20.9) at Hospital A in December 2004. Source text indicates chemo is recommended.
- 2nd report from the same hospital includes text on which chemo drugs were administered, but not when.
- 3rd report from the same hospital changes site to C19.9 and adds to source text, "Chemotherapy given (06/05) 11/17/05". Chemo date fields still not filled in.
- 4th report from Hospital B indicates cancer has become metastatic by early 2006.
- Medicaid match reveals a full course of radiation was given at Hospital C beginning in March 2005. No source was ever received from Hospital C, and radiation was never noted in any of the reports from A and B.

Radiation

Colorectal and Breast Cancer Cases with Medicaid Claims for Radiation Treatment

- Limited to those with a single tumor (sequence number central = 00)

Site	Reported to Registry	Not Reported to Registry	% Not Reported
Colon	60	93	61%
Rectum	522	113	18%
Breast	2361	1183	33%

CPT codes 77371-77373, 774xx, 775xx, 777xx; ICD-9 procedure codes 922, 924, 923.0-923.3, 923.9

Radiation

	% not reported radiation Tx		
Days between dx and tx	Colon	Rectum	Breast
0-90	33.3	10.6	17.0
91-180	35.7	12.6	17.9
181-270	72.7	24.4	34.8
271-364	70.6	69.2	48.5
365+	79.1	59.3	57.5

Chemotherapy

Colorectal and Breast Cancer Cases with Medicaid Claims for Chemotherapy

- Limited to those with a single tumor (sequence number central = 00)

Site	Reported to Registry	Not Reported to Registry	% Not Reported
Colon	801	414	34%
Rectum	598	152	20%
Breast	2340	805	26%

CPT codes 36823, 51720, 964xx, 96500-49,; ICD-9 procedure codes 9925, V581; see authors for HCPCS drug codes

Conclusions

- Linking to other sources for treatment information yields a worthy payoff

- From Brad Wohler's presentation at the 2010 Program Director's meeting:

  Radiation ↑ ↑
  Chemo ↑ ↑
  Immunotherapy ↑ ↑
  Surgery ↑

Conclusions

- If we are going to use registry data for treatment analysis, it's no longer enough to have excellent case completeness. We need to strive to capture every treatment encounter.

- We are already responding to these findings:
  - Missing data is distributed over a very wide range of facilities, not concentrated among a few
  - We are following back with some of the largest facilities that have >10 missing reports
  - We are considering creating a new source type based on the Medicaid linkage (could be expanded to other linkages)

Future Directions

- Links to Medicare and hospital discharge data have also been completed
- Only 1.4% of cases link to NONE of these sources – a large share of these are skin cancers