

CAREGIVER COSTS OF CANCER: A MULTI-EMPLOYER ANALYSIS

PRESENTED BY:

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BACKGROUND

- Family caregivers have become an essential part of the U.S. health care system because of the financial and emotional demands of caring for elderly, chronically or terminally ill, or disabled relatives at home.
- The economic impact of family members' willingness to provide care, potentially at great economic, personal, and health cost, has not been investigated.

OBJECTIVE

- This study aims to quantify the economic effect on employers of a spouse or dependent of an employee who is diagnosed with cancer.
- The employers' burden is measured in terms of direct and indirect health-related costs as well as loss-of-productivity by the employees.

DATA AND METHODS

- Costs based on claims data for five major employers (number of employees exceeds 100,000 for each employer) over the period of 1995-1998 were analyzed from the employers' perspectives.
- The data source was an administrative claims database with medical, prescription drug, and disability claims, as well as productivity data. The analytic dataset contained a total of 25,808 employees, including 3,133 caregivers who had a dependent or spouse with cancer.
- Cancer dependents/spouses were identified based on the following criteria:
 - Two or more claims more than 30 days apart for the same malignant cancer;
 - At least two claims with an ICD-9 code indicating a personal history of malignant cancer (i.e., V10 code);
 - At least one claim for malignant cancer associated with chemotherapy or radiation.
- Each cancer episode was divided into three phases: pre-cancer, current cancer, and post-cancer. Periods before the pre-cancer period and after the post-cancer period were classified as non-cancer periods.
- Incremental costs for employees who had a family member with cancer were calculated by comparing their direct and indirect costs during the cancer period of the family member to those costs incurred during the non-cancer period. Direct costs included claims-paid amounts for medical services, prescription drugs and workers' medical compensation. Indirect costs included short- and long-term disability, sick leave, workers' disability compensation. Productivity costs included reduced at-work performance.
- Multivariate regression analysis modeled the increase in the frequency and amount-paid of these claims, separately. Frequency and payment amount of claims were combined into a total incremental cost measure. Among employees who had a family member with cancer, we examined the relationship between the employee's direct and indirect costs and the timing of the family member's anemia diagnosis.

EXHIBIT 1: DEMOGRAPHIC CHARACTERISTICS FOR CAREGIVER AND NON-CAREGIVERS

	Non-caregivers	Caregivers
Weekly Medical Costs (\$)	14.58	23.39
Weekly Workers' Compensation (Medical) (\$)	2.39	2.19
Weekly Workers' Compensation (Disability) (\$)	1.44	1.40
Weekly Sick Leave (\$)	5.60	6.22
Weekly STD (\$)	2.36	2.21
Weekly LTD (\$)	0.69	1.05
Weekly Drug Costs (\$)	3.57	6.07
Age*	41	48
Tenure*	8	10
Weekly Wage* (\$)	520	633
Gender (% Female)	56.5	43.7
Union Membership (%)	3.5	9.2
Management/Professional Position (%)	17.5	24.0
Marital Status		
Single or Common Law (%)	39.9	11.8
Married (%)	48.9	68.2
Divorced (%)	2.8	1.2
Widowed (%)	0.2	1.5
Separated (%)	0.1	0.1
Other / No status (%)	8.2	17.3
Overtime Compensation		
Non-exempt (%)	80.7	72.4
Exempt (%)	18.9	27.3
Other or Unknown (%)	0.4	0.3
Class		
Full time (%)	93.8	96.6
Seasonal (%)	0.1	0.1
Temporary (%)	0.1	0.1
Part-time and Unknown (%)	6.0	3.3

* Average over all individuals and weeks for the period 1995-1998.

EXHIBIT 2: CANCER PHASES

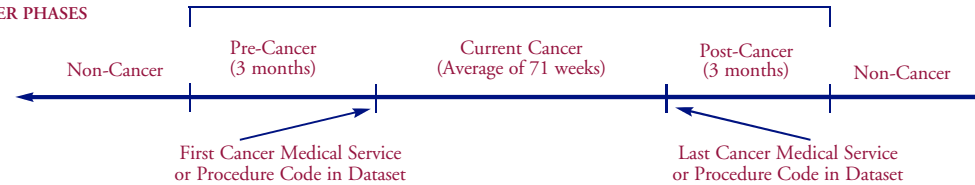


EXHIBIT 3: INCREMENTAL COST DUE TO DEPENDENT'S CANCER (EXCLUDING PRODUCTIVITY)

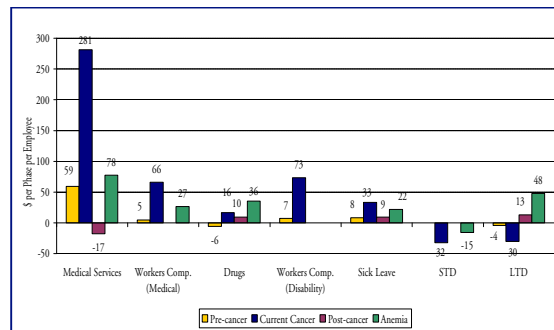


EXHIBIT 4A: FINANCIAL INCREMENTAL COST DUE TO DEPENDENT'S CANCER

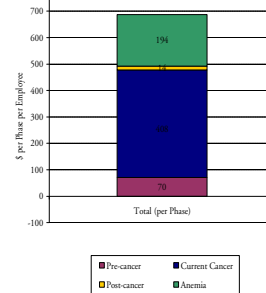
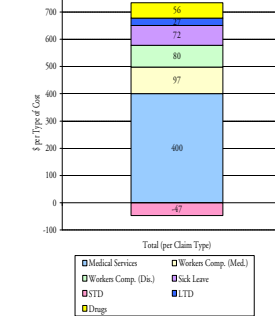


EXHIBIT 4B: FINANCIAL INCREMENTAL COST DUE TO DEPENDENT'S CANCER



RESULTS:

- Significant employer costs were associated with employees with a family member who had cancer. The total incremental cost was \$3,589 per caregiver (\$1,923 per year per care-giver) comparing the cancer period to the non-cancer period. Loss of productivity accounted for the majority (81%) of the incremental costs, at \$2,902 per care-giver per year (\$1,555 per year per care-giver).
- Anemia was a major cause of medical-related costs and accounted for \$104 per person per year, or 28 percent of direct and indirect medical-related costs.
- Financial costs follow a specific time pattern, with greatest direct and indirect costs in the cancer period. However, direct costs are relatively greater in the pre-cancer period, while indirect costs are relatively more in the post-cancer period.

CONCLUSIONS:

- The economic impact of caregiving for a family member with cancer is significant, and has translated into increased workplace costs. Moreover, this cost increase is more pronounced when cancer-related anemia is present.
- These patterns suggest that programs to promptly treat a family member's cancer and the related anemia could yield benefits through reducing the caregiver's burden beyond that directly resulting from the costs of patient treatment.

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EXHIBIT 5: OVERALL INCREMENTAL COST DURING PRE-, CURRENT, AND POST-CANCER PHASES

	Pre-cancer (13 Weeks)	Current Cancer (71 weeks)	Post-cancer (13 Weeks)	Anemia (17.27 Weeks)	Total (97 Weeks)	Annual (52 Weeks)
Medical services	\$59.26	\$281.15	-\$17.49	\$77.55	\$400.47	\$214.61
Workers' compensation (medical)	4.89	65.94	0.00	26.60	97.43	52.22
Drugs	-5.67	16.49	9.66	35.58	56.05	30.04
Direct costs	58.48	363.58	-7.83	139.73	533.96	296.87
Workers' compensation (disability)	7.32	73.14	0.00	0.00	80.46	43.12
Sick leave	8.43	33.10	9.16	21.77	72.46	38.83
Short-term disability	0.00	-32.16	0.00	-15.30	-47.46	-25.43
Long-term disability	-3.79	-29.96	12.98	47.86	27.09	14.52
Indirect costs	11.96	44.12	22.14	54.33	132.55	71.03
Productivity	0.00	2,902.05	0.00	0.00	2,902.05	1,555.21
TOTAL	\$70.44	\$3,309.75	\$14.31	\$194.06	\$3,588.56	\$1,923.11

Note: Totals may not add up exactly due to rounding.