SELF-REPORTED WORK PERFORMANCE AMONG EMPLOYEES WITH CANCER: IMPLICATIONS FOR EMPLOYERS

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Objectives

The primary objective of this study is to describe self-reported work performance among a sample of employees with cancer. Employers in particular have an interest in understanding the impact of different chronic conditions and treatment approaches on a variety of work outcomes such as absence, job performance and periods of work disability. This study focuses on six types of cancer and self-reported productivity outcomes.

Data & Methods

This study uses data from the Truven Health Analytics Health and Productivity Management (HPM) and Commercial Claims and Encounters (CCAE) databases containing healthcare claims and self-reported performance. The study population consists of individuals over a 5-year period with at least one inpatient claim or two cancer outpatient claims more than 30 days apart with ICD-9 diagnosis codes for one of the following cancer types: breast cancer (female only), prostate cancer, colon and rectal cancer, melanoma, cancer of the lung and bronchus, or multiple myeloma. The study in this presentation sub-samples 4,224 individuals from this cancer pool who completed at least one health risk appraisal containing self-reported performance outcomes. Socio-demographic and co-morbid characteristics are included in multivariate regression models. An additional multilevel analysis currently underway will describe the degree of variation in productivity that is attributed to employer characteristics as opposed to employee factors.

Productivity measure:
In the past 4 weeks, number of days your health problems affected productivity at work?
1=0 days
2=1-2 days
3=3-5 days
4=6-10days
5=11-15days
6=16 or more days
9=NA

Outcomes

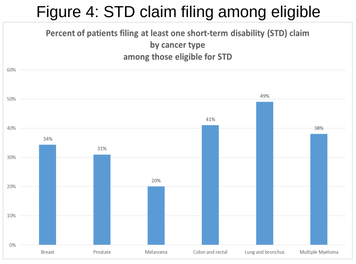
The main outcome in this study presented here is self-reported productivity as defined in data and methods. Figure 3 displays the average productivity levels and sample sizes across cancer types.

Figure 3: Select individuals with HRA data
Average self-reported productivity across six cancer types and four years of data

Sample with Self-reported Productivity over Four Years by Cancer Type				
	2009	2010	2011	2012
Breast	1.47	1.54	1.52	1.53
N	738	798	1657	405
Std.	1.071	1.165	1.141	1.098
Colorectal	1.46	1.49	1.44	1.32
N	207	186	294	78
Std.	1.091	1.111	1.003	.919
Lung	1.52	1.88	1.51	1.71
N	77	72	73	7
Std.	1.273	1.547	1.203	1.254
Melanoma	1.31	1.42	1.35	1.29
N	251	220	311	84
Std.	.844	1.015	.935	.844
Multiple	1.43	1.69	1.97	1.75
N	30	29	32	8
Std.	1.305	1.561	1.769	1.165
Prostate	1.24	1.32	1.26	1.15
N	445	357	488	137
Std.	.739	.870	.776	.527

Among the STD-eligible employees, figure 4 displays the percent of individuals filing at least one short-term disability claim during the five-year study period. The highest rate was among those with lung and bronchus cancer – almost half (49%) filed an STD claim. The lowest STD filing rate, at 20%, was for melanoma.

Figure 4: STD claim filing among eligible



Partners & Sources

Data source: Truven Health Analytics, an IBM Company

Purchase of the data was funded by PhRMA

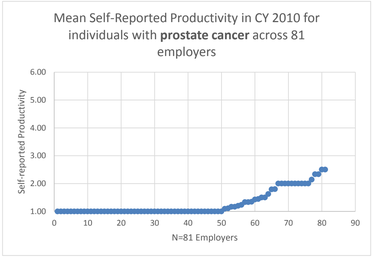
Collaborators on the related study "*Productivity Effects of Innovative Oncology Treatments*" include Samantha Dougherty (PhRMA), Christopher Zacker (Novartis), Seth Seabury and Emma van Eijndhoven (Precision Health Economics)

Results

Across all types of cancer individuals report non-zero work performance loss. Among the six cancer types individuals with breast cancer reported the highest levels of performance loss while those with prostate reported the lowest. Significant variation exists across employers in work performance. This suggests the need for further analyses to understand what could be associated with these between employer differences in cancer outcomes after controlling for employee level factors and other unmeasured factors associated with the employer and employee. The between-employer variation in self-reported productivity for the largest reporting year, CY 2010, is presented for people with breast cancer (Figure 5) followed by prostate cancer (Figure 6).

Figure 5: Variation in self-reported productivity across employers for breast cancer sample

Figure 6: Variation in self-reported productivity across employers for prostate sample



Sample Selection and Related Studies

This research effort involves a three-stage sample selection: 1) select individuals with one of six types of cancer, 2) select individuals eligible for short-term work disability insurance and 3) select individuals with available health risk appraisal data. Related studies investigate the relationship between innovative cancer treatment and short-term work disability. This particular study presented here utilizes the sample developed for the related study as depicted in Figure 1. Among individuals with six different types of cancer selected, Figure 2 represents eligibility for short-term work disability insurance coverage.

Figure 1: Select individuals with cancer

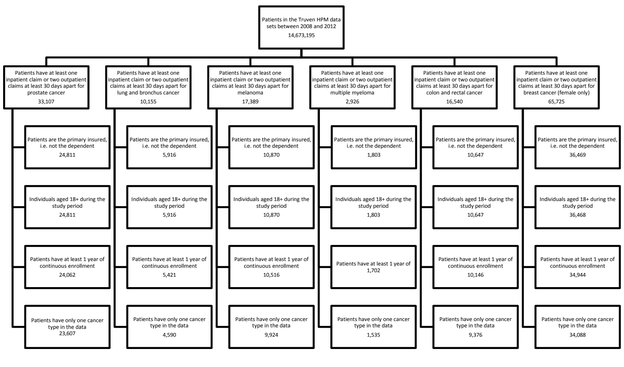


Figure 2: Select individuals with STD eligibility

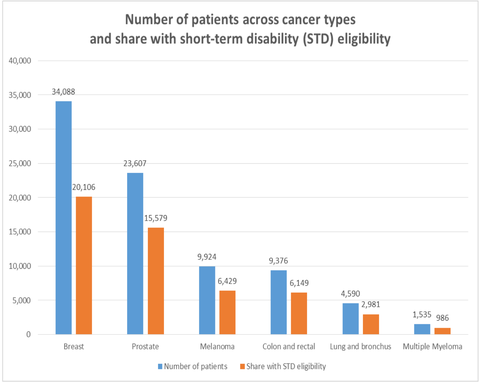


Figure 2 shows the number of cases across the six cancer types with breast cancer represented by the largest number of patients across the five-year study period at 34,088 employees. The orange bars represent the share of patients who are eligible for short-term disability (STD) with computed rates ranging between 59% and 66%.

Conclusions

For this sample of employees between one fifth and one half experienced some type of work disability. Whether that work disability is associated with cancer or some other underlying condition is part of the further analysis under way. Clearly, a large portion of individuals with cancer experience work disability and assessing ways to better identify and treat these patients may help reduce the incidence of work disability and costs associated with work-disruptive disability periods.

Additional work-disruptive performance loss was also demonstrated with variability across cancer types and employers. These types of work performance losses are usually not included in studies of medical costs, but they are important outcomes for employees, employers, families and society at large. Variation across employers and employees in these types of outcomes, beyond health care costs, warrants further attention. Access to high quality and appropriate treatment may mitigate the effects of work performance loss and prevent longer term periods of work disability and income disruption. The results of the parent study will be published in scholarly journals with companion reports and presentations disseminated through IBI and CWHP.