The Impact of Dysphonia on Work-Related Dysfunction

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Abstract

Objective: To determine the short-term disability (STD) and lost work productivity due to laryngeal disorders.

Study Design: A retrospective analysis of a national database of work absence and STD claims was performed.

Methods: The number of patients with 12 months follow-up who had an STD claim specifically linked to a laryngeal disorder based on ICD-9 codes was identified during the period January 1, 2004 to December 31, 2008. Patient age, gender, diagnosis, and the total number of work days absent were determined. Using the mean national hourly wage, productivity losses in terms of lost wages were calculated.

Results: Of the 18,466 unique patients with an STD claim, 386 (2.1%) had an STD claim due to a laryngeal disorder. The mean age was 45.9 years (standard deviation 9.6) with 53.2% male. The mean number of work days absent was 39.2 days (95% confidence interval CI 31.9 to 46.5). Total STD payments in 2008 dollars were $647,269.30 with a mean per person in 12 months of $3406.68. Total and mean lost wages in 12 months were $843,198.72 and 4437.89, respectively. Patients with laryngeal cancer had the most days absent and highest total STD payment.

Conclusion: Laryngeal disorders lead to work-related disability with STD claims and productivity losses and represent a significant societal burden. Managing work limitations from voice disorders is an important public health goal.

Introduction

Laryngeal disorders have significant societal implications.

Patients suffer social isolation, depression, and impaired disease-specific quality of life (QOL).

5-10% of the workforce rely on their voices.

7% of employed individuals miss 1 day of work annually due to dysphonia.

Examining work dysfunction is a vital and quantifiable means of assessing indirect societal costs of illness.

Methods

IRB approval

Retrospective analysis of data from a large, nationally representative administrative US claims database.

MarketScan® Commercial Claims and Encounters and Medicare Supplemental and Coordination of Benefits datasets.

Annual health care claims of 55 million individuals.

Health and Productivity Management (HPM) dataset.

Subset of MarketScan® database that contains available STD claims.

STD claims are linked to specific diagnoses.

Inclusion Criteria:

Individuals continuously enrolled in database for 12 months after day of first diagnosis with a laryngeal disorder.

STD claim linked to a laryngeal disorder (based on ICD-9-CM code) during January 1, 2004 to December 31, 2008.

Results

18,466 unique patients with some type of STD claim.

2.1% of patients had an STD claim due to a laryngeal disorder.

1.4% of STD claims were due to laryngeal disorders.

190 patients with voice-related STD claims had 12 months follow-up data.

This is sample for subsequent analyses.

Mean age 45.9 years (9.6 SD).

53.2% male, 46.8% female.

Mean # of work days absent in 12 months = 39.2 days (95% CI 31.9 – 46.5).

Total STD payment = $647,269.30.

Mean STD payment per person in 12 months = $3406.68.

Total work productivity loss = $843,198.72.

Mean work productivity loss per person in 12 months = $4437.89.

Discussion/Conclusion

This study is the largest assessment of indirect costs, such as STD payments and productivity losses in the form of lost wages, due to laryngeal disorders in the general population.

2.1% of unique patients with an STD claim had a claim due to a laryngeal disorder.

Mean days absent and work productivity losses comparable to asthma, depression, acute coronary syndrome.

Yet, in a national survey study in the US evaluating health-related work limitations, voice problems were not directly assessed, possibly indicating that voice disorders’ impact on the workforce may not be fully appreciated.

Benign vocal fold lesions accounted for 43.7% of STD claims.

Fewer work days absent and lower total payments than patients whose STD claim was due to non-specific dysphonia and chronic laryngitis.

Having a vocal lesion may lead to more prompt diagnosis and treatment with more rapid return to work than patients whose cause of dysphonia may be more elusive or secondary to conditions such as muscle tension dysphonia.

Patients with laryngeal cancer had the highest mean STD payments and highest mean number of work days absent.

Limitations

Our STD data is limited to a subset of the overall treatment-seeking dysphonic patient population.

As a result, true STD rates due to dysphonia cannot be determined.

Cannot determine accuracy of ICD-9-CM coding.

Other forms of indirect costs could not be assessed.

Our estimates are likely underestimates.

Work-related disability is an important outcome variable in studies examining the evaluation and treatment of voice disorders.

Managing work limitations from the conditions causing laryngeal disorders is an important public health goal.

References


