U.S. HOSPITAL CHARGES IN MASTECTOMY: EMPIRICAL ANALYSES USING PATIENT, HOSPITAL AND TREATMENT VARIABLES

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ABSTRACT

Breast cancer and, more specifically, related mastectomies, are putting a strain on the healthcare system. The objective of this study is to identify statistically significant contributors of hospital charges for mastectomy hospitalizations, and empirically suggest cost reduction reforms in mastectomy treatments and patient care. The AHRQ's (Agency for Healthcare Research and Quality) is a federal agency data that gathers data on in-patient hospitalization episodes for all Diagnosis Related Groups (DRGs) used to classify all disease conditions for which patients are admitted to hospitals. This research used the AHRQ's data on Mastectomy treatments (DRG codes 582 and 583). Employing regression analyses on a total of 1921 cases, we analyzed hospital charges as a dependent variable that is a function of patient & hospital characteristics, and the specific patient care rendered. Our results show that the most important determinants of hospital charges were length of stay and control-ownership of the hospital. The number of procedures, severity of illness, median household income, primary expected payer, location/teaching status of the hospital, and risk of mortality were also significant. These results identify statistically significant factors that determine hospital charges. Such evidence-based results lead directly to focused cost reforms that can reduce hospitalization charges for mastectomies. While our study is focused on mastectomies replicating our research for other DRGs is is sine-qua-non for cost reforms in the healthcare sector and in-hospital care in particular.

Keywords: *Hospital Charges; Mastectomy; DRG 582; DRG 583; Patient Demographics; Hospital Control, Payer*

1. INTRODUCTION

Hospital costs in the U.S. usually give a sticker shock to most patients, even though much of the costs are borne by healthcare insurers. Research on the determinants of healthcare cost growth has thus been a constant call for action among healthcare researchers (Toader, 2014). Evidence based research that can statistically identify the contributors of healthcare costs and long-run health enhancements would cut down health costs. Much of the current healthcare reforms focus on insurance (who pays) and coverage (who is covered) with relatively little attention paid to reducing costs of care. The efficiency and effectiveness of the healthcare system requires both broad insurance reforms and narrow DRG level cost reduction reforms. Popescu (2014) avers that increasing the scope of insurance coverage will only exacerbate the healthcare expenditures problem, and the only way to rein in this intractable problem is through cost reforms that increase efficiency in the delivery of patient care. Our study is focused on the determinants of healthcare costs and utilization to provide evidence-based cost reforms. In particular, we focus on mastectomies.

Breast cancer is a major health concern for the medical community with 1 in 8 women experiencing this disease in their lifetime. Furthermore, according to the Agency for Healthcare Research and Quality (2016), the number of mastectomies has risen sharply with a 36% increase from 2005 to 2013. With breast cancer accounting for the highest proportion of Medicare money spent on cancer care, this could strain the Medicare system (Journal of Business, 2018).