Chapter 10

Use of Risk Adjustment Models for Provider Reimbursements

INTRODUCTION

In this chapter, we will focus on the use of patient severity indices to determine the reimbursement to healthcare providers. In order to do this, we must first examine the standard practice of reimbursing hospitals for specific DRG codes, and for reimbursing other providers based upon a point system that designates the level of service. We especially want to investigate the problem of upcoding, or “gaming” in more detail to determine if it can be detected and corrected, so that providers are reimbursed based upon the actual level of care, and not upon better coding practices.

Each hospital has a contract with a healthcare provider that designates the level of reimbursement. The reimbursement is based upon a general formula, with consideration of locat costs. However, these formulas are linear, suggesting that the standard assumption is made that the patient costs are normally distributed. As discussed in Chapter 3, this assumption is not valid. Therefore, we will also examine the issue of reimbursement based upon the normal distribution to determine whether such reimbursements are reasonable, or whether providers are losing money because of the need to treat patients who need extraordinary care. Unfortunately, regression assumes that the relationship of cost to need is linear; if the distribution is gamma or exponential, the relationship will not be linear and the cost will be skewed.

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Therefore, fewer patients are identified as extraordinary if the assumption of normality is made, and there will be a group of patients who require costly treatment, but for whom providers will only receive standard reimbursement. Approximately 5% are identified as outliers when the proportion of outliers is more in the neighborhood of 10-15%.

**BACKGROUND**

**Report Cards to Influence Providers**

Insurers have considerable leverage to influence providers to change policies and to comply with guidelines and benchmarks. (Hollingsworth, Krein, Miller, DeMonner, & Hollenbeck, 2007) Reimbursements are now often linked to the quality of care. This is known as value-based purchasing, or pay for performance, often abbreviated as P4P. Such models assume, for example, that better care will reduce surgical complications, length of stay, and readmission rates. (Lewis & Friesen, 2006) Currently, the Centers for Medicare and Medicaid have established a voluntary system for physicians to report 16 measures of quality outcomes. Hospitals report on 10 measures. Although voluntary, hospitals not reporting can suffer a financial penalty, which tends to make it mandatory. In other words, reporting is “voluntary” in the same way that federal income tax is defined as “voluntary”.

In the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Congress directed the Institute of Medicine to identify options for pay-for-performance to be implemented through Medicare reimbursement. (Anonymous-Medicare, 2003) Other insurers are expected to follow. However, instead of penalizing providers for poor performance, the approach has been to reward high performance with bonuses. (Bhattacharyya, Priyesh, & Freiberg, 2008; Hazelwood & Cook, 2008) The impact is the same. Higher ranked providers get more money.

Unfortunately, physicians are now being taught how to “game” the system to optimize their ranking while not actually improving patient care. In this respect, scarce resources are devoted to documentation to maximize reimbursement rather than to provide actual improvements in healthcare. (Bodrock & Mion, 2008) In addition, it is possible that resources will be focused on the patient conditions that are included in the reporting, neglecting other patient conditions that are not.

Consider, for example, some advice provided to physicians (Hayward & Kent, 2008) specifically on how to “game” the system, including providing incorrect blood pressure readings for hard to treat patients. It also suggests that adults can always be diagnosed with something, and these diagnoses can be used to increase reimbursements.

*All too often clinicians are stingy in diagnosing patients with disease. These physicians carelessly mislabel many patients as “healthy,” overlooking more subtle signs of disease, giving patients a false and dangerous sense of security. In the era of P4P, this is virtually malpractice. Fortunately, experts are beginning to recognize what simple common sense tells us: people are either diseased or prediseased, since good health is always temporary. Thankfully, it’s now quite difficult for an adult patient to avoid having at least one of the following diseases: diabetes/prediabetes, hypertension/prehypertension, obesity/overweight/flabby thighs, or a detectable LDL level.... This one little activity can (1) lower costs per diseased patient (since your “diagnosed” cases are now less sick on average), (2) make your patients appear more ill (since they will now have more comorbid conditions), while (3) improving your quality*