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# How Effective is Capitation at Reducing Health Care Costs?

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# HOW EFFECTIVE IS CAPITATION AT REDUCING HEALTH CARE COSTS?

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## ABSTRACT

Due to skyrocketing healthcare costs in the U.S., several strategies, including capitation, have been utilized to reduce overall cost. Capitation has helped to contain costs by placing a limit on the amount of reimbursement that is offered to the provider for specific types of patients and care. In order for physicians to improve their profitability under capitation, their practices must become more cost efficient. The purpose of this research was to analyze the effects of capitation on the overall reduction of healthcare cost.

**Key Words:** Capitation, healthcare cost, fee-for-service, physician reimbursement, effectiveness.

## 1 INTRODUCTION

In an effort to reduce health care costs in the United States, a payment system known as capitation has evolved. In the mid-1980s, in an attempt to get spending under control, Medicare developed a new form of health care service design known as Managed Care (MC) (Boult, Kane, and Brown, 2000). Capitation is one type of payment that exists within MC. Under capitation, the physician usually Primary Care Physicians (PCPs) receives a set monthly payment for each member called Per Member Per Month (PMPM) (Lerman, 2009). The amount of PMPM is derived from multiple factors, including the patient's gender, age, type of residence,

income, and geographical location (Boult et al., 2000). The physician receives a PMPM payment regardless of how many services are performed for the patient or how expensive the individual services may be (Murphy-Barron, 2002).

Capitation encourages physicians to reduce excessive and expensive services, which translates to decreased cost. Because PMPM payments remain constant and are not directly related to the number and type of services provided, capitation may put the PCP at financial risk (Murphy-Barron, 2002), as the provider is responsible patient treatment cost even if the PMPM payment does not cover the expenditure of the services provided. Capitation thus should cause the physician to be more financially conscious (Lerman, 2009).

The purpose of this literature review was to examine the effects of capitation in the healthcare system, and to see whether it has helped to reduce or increase healthcare costs.

## 2 RESULTS

Using 2004-2005 survey data, Landon et al. (2011) examined the relationship between physicians' reimbursement, quality of care and the costs for the patients receiving Medicare coverage. Two thousand two hundred eleven PCPs, working in various settings (e.g., hospitals, small physician groups, and private practices) delivered services to more than

250,000 Medicare beneficiaries. The study found that, in this capitated environment, healthcare providers charged 3.9% less than physicians with fixed salaries. The owners of practices with great amounts of capitated profits exhibited doctor expenses only half as large relative to salaried staff (6.9%). These authors concluded that healthcare providers who were reimbursed via capitation were more cost efficient and had less intense utilization of services compared to physicians providing care through FFS.

Reschovsky, Hadley, and Landon (2006) examined how payment type, different management tools, and compensation methods shape health care providers' perceptions of whether specific financial incentives lean toward increasing or decreasing services to patients. Physicians associated with capitated contracts were over 9% less likely to state incentives to increase services to patients and more than 4% stated that financial incentives resulted in reduced services to patients compared with physicians with no capitation. However, nearly 70% of healthcare providers did not believe that incentives affected services to patients.

An evaluation of capitation and enhanced FFS models initiated in Ontario in 2001-2003 found that patients in capitated practices had lower morbidity and comorbidity indices, less after-hours care and more visits to emergency departments. Overall, providers in the capitated group enrolled fewer new patients than did physicians in the FFS group (37.0 v. 52.0 per provider). Patients had fewer office visits to physicians working under capitated payment compared to physicians performing under FFS (Glazier et al., 2009).

The Lewin Group calculated the savings with adoption of capitation contracting with Medicaid Managed Care Organizations (MCOs), noting that savings through capitation ranged from 2%-19%. After the first year adopting capitation, researchers estimated 4.1% savings for West Virginia. Additionally, it was estimated \$83 billion cumulative national savings would be achieved if capitation were instituted nationally across the first 10 years (Lewin Group, 2006).

In 2009, Blue Cross Blue Shield of Massachusetts implemented the Alternative Quality Contract (AQC) based on global payment and pay for performance. Researchers analyzed 2006-2009 claims for 380,142 enrollees who received care from physicians in the AQC system and for 1,351,446 enrollees who received care from providers not in the system.

Average spending increase was smaller for participants in the intervention group, \$15.5 (1.9%) less per quarter. Savings resulted largely from lower expenditures for procedures, testing, and imaging; and from a decreasing in spending for enrollees with the highest expected spending (Song et al., 2011).

Ettner et al. (2006) surveyed and reviewed medical records of 6,194 diabetic patients, examining correlations between provider reimbursement incentives and care process. Researchers reported that 83% of patients were predicted to get a proteinuria assessment under direct salary, 68% with FFS model, and 66% under capitation.

The Lewin Group (2009) reviewed 24 studies commissioned by the state and federal governments, researchers, and private foundations. These studies reported that Medicaid Managed Care Model (MMCM) yields from 1%-20% cost savings. In Ohio's Premier Care program, inpatient costs decreased 27% under capitated MMCM, from \$76 PMPM to \$55 PMPM (Lewin, 2009). Researchers reported that the PMPM cost of drugs for Ohio patients in MC setting was 10% to 15% less than in the FFS setting. Ohio's capitated programs created \$72.4 million in savings (The Lewin Group, 2009).

Another case study compared capitation and FFS reimbursement methods. Grieve et al. (2008) conducted a study which evaluated Quality-Adjusted Life Years (QALYs). One group received a mental health reimbursement through Direct Capitation (DC). The second group used capitated services offered through an experienced Managed Behavioral Health Organization (MBHO). Both of these capitation groups were compared to a strictly FFS group. The average cost per case was evaluated pre-capitation, and two 9 month post-capitation periods. The MBHO group had the lowest average cost per case after the second nine month period at \$3,359. This was compared to \$4,000 for the FFS group and \$7,094 for the DC group.

Fang and Rizzo (2008) used the Community Tracking Study physician survey data from 2000-2001 and 2004-2005. The data from survey questions regarding financial incentives related to both Capitated MC (CMC) and Non-Capitated MC (NCMC). In 2000-2001, physicians who accepted managed care insurance had about 53% of their patient care practice revenue come from managed care. Among physicians whose financial incentives did not favor reducing services, the average managed care involvement was lower — 45%. So in 2000-2001, greater managed care involvement was

associated with greater financial incentives to reduce services.

A study using a Capitated Matrix System (CMS) for purchasing implants for Total Knee Arthroplasty (TKA) and total hip arthroplasty (THA) was conducted by Fankhauser and Fowler (2009). The Capitation Matrix (CM) developed and categorized the various orthopedic implants into four different levels of technological characteristics and cost (the more technologically advanced the implant, the higher the charge by the vendor). The CMS prices were based on the previous year's average prices for each category minus 15%. The authors of the study evaluated the cost of implants with this CM over one year. The year's cost analysis was then compared to the prior year when no CMS was in place. Prior to the CMS, the average cost of a prosthetic implant was \$4700 for the TKA and \$5800 for the THA. After the CM, the target average prices were \$3600 per TKA and \$4800 per THA (Taylor et al. 2009). After comparison, the resulting cost savings in the CMS was 26.1% for both THA and TKA implants.

### 3 DISCUSSION

Grieve et al. (2008) evaluated the cost of care for Medicaid patients with severe mental illness. The end result found that a capitation model with a for-profit element was more cost-effective than the FFS model or the not-for-profit capitation group.

Glazier et al. (2009) reported that capitation models were most cost-effective in groups where patients have less complex [costly] diagnoses. The study showed that the capitation practices reported fewer sick patients, and more patients enrolled in the practices compared to the enhanced FFS models.

Landon et al. (2011) found physicians spent 3.9% less in a capitated system in comparison to physicians on a set salary, although the consideration of physician bias could not be excluded from the study.

Reschovsky et al. (2006) used a survey to evaluate physicians' perceptions of the influence of capitation on decisions to decrease services to patients. The study reported that 69.4% of healthcare providers did not believe that incentives affect services to patients.

A physician survey conducted by Fang and Rizzo (2008) showed that the first year under capitation increased physician incentives to reduce cost. The second year showed relatively little difference between the two groups.

The Lewin Group calculated potential savings for ACAP and MHPA if capitation contracting were accepted with Medicaid MCO. If implemented, the capitation could yield 2%-19% savings. Further investigation found that the studies done by Lewin were based on data from Milliman, USA (Barclay, 2002). The data came from programs that were in an HMO model that were converted to a Fee-For-Service Equivalent (FFSE). The FFSEs were estimates of state expenditures if the current HMO models were replaced with a traditional FFS model.

Ettner et al. (2006) used surveys and medical record review to determine the association between provider reimbursement incentives and care process for diabetic patients. The authors reported that, under capitation incentives, there existed a smaller chance of the physician ordering a proteinuria assessment.

Taylor et al. (2009) used a capitated matrix system to evaluate the purchase of implants for TKA and THA. An overall savings for the entire study period was calculated as 26.1%. The study strongly supported the hypothesis that a capitated model decreases the overall cost of health care.

### 4 CONCLUSION

Capitation appears to encourage a decrease in the utilization of physicians' services in some areas of healthcare in the short run. The use of capitation in the healthcare environment as a means to lower overall costs has revealed some mixed results in the studies examined. Capitation does encourage physicians to be more financially responsible in the selection of services provided to the patients as well as the supplies used in surgical procedures.

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