Healthcare 3 (2015) 135–141

Contents lists available at ScienceDirect

Healthcare

journal homepage: www.elsevier.com/locate/hjdsi

New entrants' practice patterns in Medicare home health care after the prospective payment system revision in 2008

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ARTICLE INFO

Article history:
Received 26 February 2015
Received in revised form
7 May 2015
Accepted 16 June 2015
Available online 26 June 2015

Keywords:
Medicare home health care
Prospective payment system
Financial incentives
Market entry

ABSTRACT

Background: Medicare home health care spending increased under the prospective payment system (PPS) that was introduced specifically to control the rising spending. To explain this unexpected spending rise, we focused on new home health agencies that entered the market under the PPS. The high profit margins under the PPS attracted many new agencies to the market partially due to home health care's unique feature of low entry costs. We examined whether new entrants were more likely to adopt the practice patterns leading to higher profit margins than incumbent agencies that had been operating in the market before the PPS.

Methods: Using 2008 to 2010 Medicare Home Health Claims and Provider of Services File, we estimated regressions of agencies' practice patterns controlling for agency and patient characteristics.

Results: We found that new entrants were more likely than incumbents to adopt practice patterns leading to high profit margins. They were more likely to target the 14th and 20th therapy visit where marginal revenue is relatively greater than that of other number of visits. Under the payment system that compensates extra therapy visits but not for other types of visits, entrants were also more likely to provide therapy visits, but less likely to provide medical social service visits.

Conclusions: Given the high entry rates of agencies under the PPS, distinct practice patterns among entrants explain the drastic home health spending increase under the PPS. Heterogeneity in agencies' practice patterns also suggests an opportunity to improve efficiency in the Medicare home health care market.

1. Introduction

Medicare home health spending has drastically increased under the prospective payment system (PPS) since its introduction in October 2000. The spending increase was surprising because the PPS was introduced to Medicare home health care specifically to control its rising spending.[1–4] Between 2001 and 2009, Medicare home health spending rose by 7.8% annually. This increase was far higher than the 3.7% annual growth in the aggregate Medicare spending during the same period.[5]

Past studies attributed this unexpected spending increase to financial incentives embedded in the PPS.[4,6] The PPS enabled home health agencies to receive higher payment rates when agencies slightly adjusted practice patterns. Agencies actively responded to that incentive. We also aim to explain the unexpected spending increase, but with a focus on agencies that entered the market after the implementation of PPS. We examined whether these new entrants were more likely to adopt practice patterns leading to higher payment rates or/and lower treatment costs as compared to agencies that had entered the market before the PPS. Since the introduction of the PPS, many agencies entered the market. The agency number increased by about 64% between 2000 and 2012.[4] If new entrants were more likely to adopt practice patterns leading to higher payment rates, that would then partially explain the spending increase under the PPS.

Our study is an extension of a study by Kim and Norton.[6] Using 2001 through 2007 data, they studied entrants' practice patterns in Medicare home health industry. Entrants might be more likely to adopt profitable practice patterns than incumbents that had entered the market before the PPS because entrants face lower adjustment costs. Profitable practice patterns are likely to change by payment system. For example, under the interim payment system between 1998 and 2000, agencies cut down the number of visits, more so for sicker patients because the payment rate for all

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http://dx.doi.org/10.1016/j.hjdsi.2015.06.005
2213-0764/

patients was the same regardless of the number of visits provided or patient health condition.[7,8] Under the PPS, providing exactly ten therapy visits during a two-month long episode of care led to the highest profits because payment rate increased by about $2000 at the 10th therapy visit.[1–4] Incumbents that had entered the market prior to the PPS might find it relatively hard to fully adopt this new practice pattern because their therapists might have established their own practice patterns for a long period of time. Such high adjustment costs could make incumbents reluctant or slow to adopt practice patterns leading to higher profits. In contrast, entrants established under the PPS might face no or little adjustment costs. Consistent with this expectation, Kim and Norton found that, compared to incumbents, entrants were more likely to adopt profitable practice patterns. Entrants were more likely to target the 10th visit and recertify patients (i.e., extending care by another two-month-long episode) because the prospective payment is made on an episode-basis.

In addition to adjustment cost differences, Staw and Szwajkowski provide another explanation for potentially different practice patterns across entrants and incumbents.[9] They suggest that firms facing greater resource scarcity are more likely to get involved with strategic behaviors. Incumbents are likely to have a more steady patient inflow than entrants because of their established relationship with local health care providers who can refer patients to them. Incumbents were also the ones that survived the restrictive interim payment system, which resulted in one third of agencies exiting from the market. Those survivors might have more stable revenue sources than entrants.[7] Therefore, entrants who lack such financial stability could be more likely to adopt profitable practice patterns than incumbents.

Our study took a similar approach to Kim and Norton's but improved it in two ways. First, our study used year 2008 to 2010 data and examined entrants' practice patterns under the "current" Medicare home health payment schedule. In 2008, Medicare home health care revised its payment system. A major change was to replace the single threshold of the 10th therapy visit with multiple staggered thresholds to prevent agencies from targeting the 10th visit.[10] Therefore, Kim and Norton's results that examined the home health care between 2001 and 2007 might not apply to the current Medicare home health market. Even after the 2008 revision, home health spending continued to rise rapidly and new agencies continued to enter the market.[1–4] It is thus important to examine practice patterns under the revised PPS using recent years of data.

Second, we examined a diverse set of agency practice patterns. Thus, our study gives a more complete picture of entrants' practice patterns under the PPS compared to the earlier study which examined only two practice patterns, and provides comprehensive information that could be used in developing policies for efficient home health payment systems.

2. Background

Medicare home health provides skilled nursing, therapy, home health aide, and medical social service visits to patients who are home-bound and need skilled care. A preceding hospitalization is not required for Medicare home health care, but patients should have a physician's certification and face no cost-sharing.[1]

In 2010, home health accounted for 6% of total Medicare spending, and approximately 10% of Medicare beneficiaries received home health visits.[3,11] The costs of home health market entry are relatively low.[12] Market entry by agencies does not require large capital investments such as building a care facility because service delivery takes place in patients' homes.[13] Low entry costs make it easy for new agencies to start a business

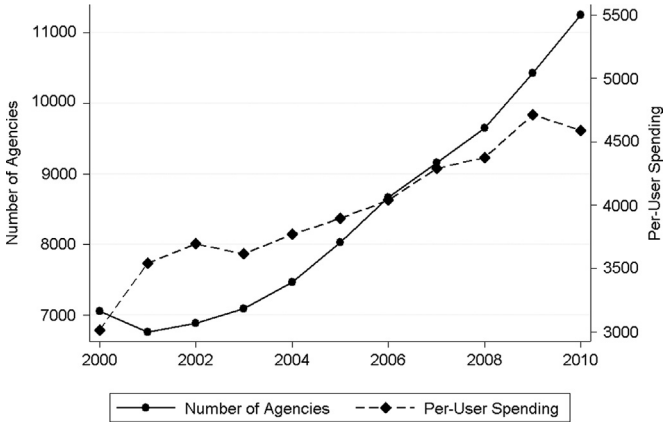

Fig. 1. Change in per-user spending in Medicare home health care and number of home health agencies.

particularly when the payment system guarantees high margins as under the PPS. Between 2001 and 2011, home health margins were 17.5%, which was far higher than hospitals' Medicare margin (−7 to −5% between 2007 and 2012). The high margins attracted numerous agencies to the market, more than 500 each year.[4]

Despite the expectation that spending would be controlled under the PPS that prospectively sets the payment rate, both per-user spending and the number of agencies increased under the PPS (Fig. 1). The unexpected increase in spending and entry may have resulted from several retrospective features – which adjust payment rates to the actual treatment levels – in the home health PPS. The most well-known retrospective feature is the payment rate increase at the 10th therapy visit.[6]

In 2008, Medicare replaced the 10-visit threshold with staggered thresholds to address this problem. After the change, the payment rates gradually increase at the 5th, 6th, 7th, 9th, 10th, 11th, 14th, 16th, 18th, and 20th therapy visits.[11] This new fee schedule might eliminate the incentive to target the 10th therapy visit, but can create another incentive to target the 6th, 14th, and 20th visit. The payment rate could increase, at maximum, by about 650, 850, and 1,900 dollars at the 6th, 14th, and 20th visit, respectively, which are greater than those at other thresholds ($300 to $500) and the cost of a single physical therapy visit ($124 in 2010). Agencies responded to this incentive: The conspicuous peak at 10th visit between 2001 and 2007 was replaced with peaks at the 6th, 14th, and 20th visit between 2008 and 2010 (Fig. 2a).

This fee schedule makes provision of therapy visits relatively profitable compared to home health aide and medical social service visits, which have fixed payments regardless of the number of visits provided. Consequently, this payment schedule might lead agencies to shift their service provision toward therapy visits and away from home health aide or medical social service visits.

In summary, the retrospective features of the PPS could encourage agencies to adopt practice patterns which lead to higher profits. Agencies would target the 6th, 14th, or 20th therapy visit. They might also increase the likelihood therapy visits to receive higher payment rates while decreasing the likelihood and the number of home health aide and medical social service visits to lower treatment costs. We focused on these practice patterns to examine how entrants' practice patterns differ from incumbents'.

3. Methods

3.1. Data

We used two datasets of the years 2008–2010. First, we used