DOI: 10.1111/j.1475-6773.2011.01311.x
RESEARCH ARTICLE

Nurse Staffing and Deficiencies in the Largest For-Profit Nursing Home Chains and Chains Owned by Private Equity Companies

Charlene Harrington, Brian Olney, Helen Carrillo, and Taewoon Kang

Objective. To compare staffing levels and deficiencies of the 10 largest U.S. for-profit nursing home chains with five other ownership groups and chain staffing and deficiencies before and after purchase by four private equity (PE) companies.

Data Sources. Facilities for the largest for-profit chains were identified through Internet searches and company reports and matched with federal secondary data for 2003–2008 for each ownership group.

Study Design. Descriptive statistics and generalized estimation equation panel regression models examined staffing and deficiencies by ownership groups in the 2003–2008 period, controlling for facility characteristics, resident acuity, and market factors with state fixed effects.

Principal Findings. The top 10 for-profit chains had lower registered nurse and total nurse staffing hours than government facilities, controlling for other factors. The top 10 chains received 36 percent higher deficiencies and 41 percent higher serious deficiencies than government facilities. Other for-profit facilities also had lower staffing and higher deficiencies than government facilities. The chains purchased by PE companies showed little change in staffing levels, but the number of deficiencies and serious deficiencies increased in some postpurchase years compared with the prepurchase period.

Conclusions. There is a need for greater study of large for-profit chains as well as those chains purchased by PE companies.

Key Words. Ownership/governance (for-profit/NFP/public/chains/systems), long-term care: home care/nursing homes, quality of care/patient safety (measurement)

Poor quality of care is an endemic problem in many U.S. nursing homes (US Government Accountability Office [US GAO] 1987, 2003, 2007, 2009a, b.

A number of studies have found that for-profit ownership is related to poorer quality of care than nonprofit ownership (Hillmer et al. 2005; Comondore et al. 2009). There is some evidence that nursing home chains, defined as companies that own or operate two or more facilities, also have lower staffing, poor resident outcomes, and more deficiencies (violations of regulations) (Cohen and Spector 1996; Grabowski 2001a, b; Harrington et al. 2001; Banaszak-Holl et al. 2002; O'Neill et al. 2003; Harrington, Mullan, and Carrillo 2004; Kim, Harrington, and Greene 2009a; Kim et al. 2009b). Recently, the US GAO (2009a) found that the most poorly performing nursing homes in the United States tended to be owned by for-profit chains.

Nursing home chains grew steady in numbers and emerged as a dominant organizational form in the 1990s (Banaszak-Holl et al. 2002). In 2008, chains made up 54 percent of the nation's 16,000 nursing homes (Harrington et al. 2010). A number of chains were public-traded companies until the early 2000s, when five of the nation's largest chains entered into bankruptcy (Stevenson, Grabowski, and Coots 2006; Harrington et al. 2011). After restructuring and ownership changes in the early 2000s and increases in Medicare payments, the largest nursing home chains became more financially stable (US GAO 2002). More recently, some of the largest publicly held chains were purchased by private equity (PE) investment firms, which invest funds received from private investors and share the profits and losses (Stevenson and Grabowski 2008; US GAO 2010).

No studies were found that specifically examined quality of care in the largest for-profit chains. The 10 largest nursing home chains were selected for this study because they have been the most successful nursing homes in terms of their growth and market share, having weathered financial strains to maintain their position at the top. The quality of care delivered by the 10 largest chains is important because they provide care to about 14 percent of the nation's residents (LaPorte 2009; Harrington et al. 2011). Moreover, their quality assurance, managerial, and financial strategies may be emulated by smaller chains and other nursing homes.

To address questions of quality in large for-profit chains, this study had two major aims. The first was to compare the quality of care in the 10 largest

---

Address correspondence to Charlene Harrington, Ph.D., Professor, Department of Social & Behavioral Sciences, University of California, 3333 California Street Suite 455, San Francisco, CA 94118; e-mail: charlene.harrington@ucsf.edu. Helen Carrillo, M.S., and Taewoon Kang, Ph.D., are with the Department of Social & Behavioral Sciences, University of California, San Francisco, CA. Brian Olney, B.A., is with the Irvine School of Law, University of California, Irvine, CA.