

## Do Health Outcomes Vary by Profit Status of Hemodialysis Units?

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In this issue of *CJASN*, Dalrymple *et al.* report the timely and potentially provocative results of their study comparing hospitalization rates among for-profit and nonprofit dialysis facilities (1). On the basis of their analysis of US Renal Data System (USRDS) data from Medicare beneficiaries starting dialysis between 2005 and 2008, they found that overall hospitalization rates were significantly higher (15% higher) for patients receiving hemodialysis in for-profit compared with nonprofit dialysis facilities. In addition, for-profit dialysis facilities had higher admission rates for heart failure and volume overload (37% higher) as well as vascular access complications (15% higher) compared with nonprofit facilities. Of note, there was no difference in hospitalization rates of patients receiving home peritoneal dialysis related to the provider for-profit/nonprofit status. Home hemodialysis patients were not included in the study.

The relationship of for-profit versus nonprofit status in health outcomes has long been an intense health policy issue in the hospital sector, with persistent Congressional and Office of the Inspector General scrutiny of for-profit/nonprofit status of hospitals, as well as a recent increase in hospital conversions from nonprofit to for-profit status. Nonprofit hospitals account for 58% of all US community hospitals and 74% of all non-governmental US community hospitals (2). Although many studies have compared hospital for-profit/nonprofit status on health outcomes, the findings are mixed and inconsistent.

Nonprofit dialysis facilities, on the other hand, comprise only 15% of United States dialysis facilities; 85% of facilities are classified as for-profit, with two large for-profit dialysis organizations controlling over two thirds of United States dialysis facilities (3). The number of dialysis facilities nationwide has been steadily increasing, with growth in the percentage of for-profit dialysis facilities mirroring that increase. Given the intense national scrutiny of the for-profit/nonprofit status implications in the hospital sector, it is surprising that health policy interest regarding this issue in the dialysis sector has not been as robust.

Dalrymple *et al.* reference a relatively small number of prior studies examining for-profit status effects on health outcomes of dialysis patients, most prior studies focused on mortality rates and concluded that mortality rates were higher among beneficiaries receiving

dialysis treatments at for-profit facilities compared with nonprofit facilities (4,5). In addition, other studies have shown greater utilization of erythropoiesis-stimulating agents in for-profit versus nonprofit facilities (6), decreased rates of listing for transplantation in for-profit facilities (7), and decreased transplant education time with nephrologists at for-profit compared with nonprofit dialysis facilities (8). Most of those studies predated by years the January 1, 2011, implementation of the Medicare ESRD Bundled Prospective Payment System (PPS) and Quality Incentive Program (QIP). This raises the question of their current relevance under a different reimbursement system that is increasingly dominated by two huge corporate organizations, as well as a diminishing number of nonprofit competitors. Critics cite concerns about study methodologies and data interpretations. However, growing general opinion appears to suggest that nonprofit dialysis organizations may have lower mortality and hospitalization rates, as well as higher transplantation rates, compared with for-profit counterparts. Dalrymple *et al.* add to that general opinion. However, every new study on this topic has been qualified by a call for further studies needing to be performed.

Although the authors refer briefly to USRDS data reports, there is information to be considered from the USRDS regarding the importance and possible relationship between hospitalizations, as well as mortality, and for-profit status of treating dialysis facilities. The USRDS annual data reports (ADRs) have focused on all-cause and cause-specific hospitalizations over the past few years as part of the USRDS's morbidity surveillance functions. All-cause admissions and hospital days have been steadily falling over the past decade, with hemodialysis patient cause-specific rates mirroring the all-cause rates. The same is true for declining mortality rates over the past decade. Cause-specific admission/hospital day rates reveal a marked increase in infectious causes of both metrics, particularly for the in-center hemodialysis population (9). Furthermore, 36% of ESRD patients discharged from an all-cause admission were readmitted to a hospital within 30 days. This markedly exceeds the readmission rate within 30 days of discharge for all Medicare patients (20%) (10). This is especially significant when one considers that ESRD patients are seen three times per week and should have multiple opportunities to address

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medical issues. These all-cause readmission rates are higher in African Americans and patients between the ages of 22 and 44 years. Cause-specific readmission rates indexed to the same initial hospitalization admission causes are highest among patients with cardiovascular disease (37%), all infections (34%), and vascular access infections (31%) (10). The 2013 USRDS ADR (and prior year reports) has comparative outcomes data by organization type, but does not report these data by for-profit/nonprofit status, using large, small, independent, and hospital-based categories. In reporting large dialysis organization results, the report does show that DCI, a nonprofit provider, has lower standardized hospitalization and mortality rates than both Fresenius and DaVita (both for-profit) and the average for all facilities (10). This is interesting, but far from conclusive, and other individual quality metrics vary widely across large and small dialysis organizations, and presumably across individual for-profits and nonprofits. Nonetheless, this finding buttresses the viewpoint that more evidence regarding provider organizational characteristics is desirable to help address unacceptably high admission/readmission rates, as well as variation in other health outcomes measures, for dialysis patients.

Amid the concerns about whether ESRD patient outcomes are affected by the profit status of dialysis providers, it is important to stress that not all for-profit providers are equal, and even if there is some relationship between outcomes and profit status, that characterization may not apply to all for-profit (or nonprofit, for that matter) organizations. Dialysis organizations vary significantly not only in size, geographic locations, patient demographics, nephrologists, management styles, and so forth; but there are also different ownership and governance structures across for-profits, which make generalized characterizations quite difficult. For-profits can be set up as joint ventures, autonomous independent franchises, local/regional/national models, employed versus independent nephrologist models, or any combination thereof. If for-profit status matters regarding health outcomes, population studies are heavily skewed by one or both of the large for-profit dialysis organizations. The key need for health policy makers is information down to the corporate (or preferably the individual facility) level, not broad category results reported in studies to date. Any dialysis organization will likely have variable results across its individual facilities and this may have nothing to do with profit status.

On the eve of submitting this editorial, the US Centers for Medicare & Medicaid Services (CMS) posted its 2014 ESRD Bundled PPS (“the Bundle”) Final Rule (11). In this rule, the CMS finalized a phased-in rebase of the existing Bundle and QIP, most notably cutting the base bundle of dialysis services by 12% over 3 to 4 years. The CMS declined to finalize a suggestion submitted by the National Renal Administrators Association to apply larger cuts in the bundle to larger, higher-revenue organizations, with differentially lower cuts to smaller, lower-revenue organizations, citing lack of authority and no precedent in other Medicare PPS calculations. The Bundle and QIP were intended to promote higher quality of ESRD care and services, while reducing unnecessary costs and incentivizing greater efficiencies in the care of patients with ESRD. The study by Dalrymple *et al.* attains greater significance as a reminder to all kidney disease

stakeholders and policymakers that ongoing healthcare payment reform efforts are complex, and that well intentioned reform elements may have unintended negative effects. If the authors’ conclusion is correct, additional caution should be raised as to how payment reform might affect subcategories of dialysis providers, particularly if that subcategory demonstrates delivery of superior health outcomes. In this case, the discussion questions whether nonprofit dialysis providers might reduce hospitalization rates or, conversely, whether for-profit status leads to higher hospitalization rates of ESRD patients. If either is true, one would want to avoid reimbursement reform that inadvertently penalizes higher-quality facilities. This factor, as well as healthcare consolidation, is yet one more issue to be discussed as the details of rebasing and evolution of the Bundle continues.

#### Disclosures

None.

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See related article, “Comparison of Hospitalization Rates among For-Profit and Nonprofit Dialysis Facilities,” on pages 73–81.