Association of freestanding dialysis facility size, Quality Incentive Program scores and patient survival

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Abstract

Background

In 2011, The Centers for Medicare and Medicaid Services (CMS) has introduced a bundled payment reform along with a Quality Incentive Program (QIP) to bring efficiency in End stage renal disease (ESRD) care. The QIP rates facilities using clinical and reporting criteria, but misses out on patient outcomes. It penalizes facilities not achieving a target score by 0-2% of payments. The small facilities are expected to be impacted more by a reduction in payments. We determined the association between ESRD facility size and QIP scores and the association between QIP scores and patient survival.

Methods

We used the Medicare dialysis facility compare, facility level impact and QIP files; United State Renal Data System (USRDS) facility and patient data and Area health resource (AHRF) file. We restricted the data to 2013, the most recent year for which all data were available.

For the first objective, we aggregated the USRDS patient data by facility. Merging the above data yielded 5,193 facility records. We measured facility size by number dialysis stations. Given a non-linear relationship between QIP sores and dialysis stations, we categorized stations into three categories including small (\(\leq 10\)), medium (11-25) and large
We used a multivariable generalized linear model to determine the association between QIP scores and facility size.

In the objective 2, we included 96,102 incident ESRD patients from January 2013-December 2013, using USRDS patient files. We determined 1-year patient survival among incident patients who survived the first 90 days. A multivariable Cox proportional hazard model was run to estimate the association between QIP scores and patient.

Results

The medium and large size facilities scored higher on QIP than small facilities. Facilities in South, offering peritoneal dialysis, having higher number of Hispanics patient and county populations scored higher on QIP. However, the facilities with a higher average distance between patients and facility, a higher proportion of black population in a facility or county scored lower. Further, patients in facilities scoring < 60 showed a higher mortality than patients in facilities scoring ≥ 95.

Conclusions

We found small facilities scored lower by the QIP than medium and large facilities. Further, facilities performing lower on the QIP criteria demonstrated lower patient survival. Our finding that a higher black population in a facility or in the county is associated with lower QIP scores warrants more research.