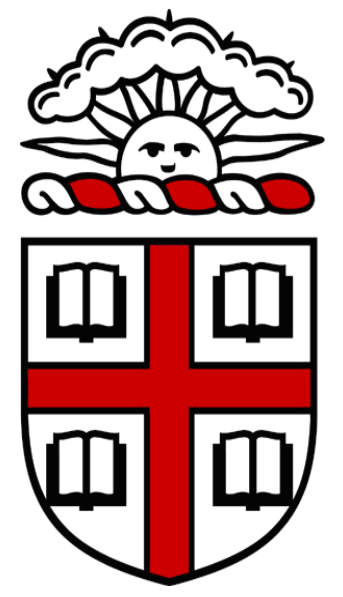


Types of Access Used in End Stage Renal Disease Patients: Recent Trends



BROWN

Vincent Mor, PhD,^{1,2} Shailender Swaminathan, PhD,^{1,2} Mahesh Krishnan, MD,MPH, MBA,³ Franklin W. Maddux, MD FACP⁴

1. Center for Gerontology and Health Care Research, Brown University, Providence, Rhode Island; 2. Department of Health Services, Policy & Practice, Warren Alpert Medical School, Brown University, Providence, Rhode Island; 3. DaVita Inc, Denver CO; 4. Fresenius Medical Care

BACKGROUND

- Catheters are widely used as modes of access in dialysis patients
- The use of catheters has been associated with higher mortality rates in ESRD patients.
- Increasingly new initiatives are refocusing on reducing the use of catheters

OBJECTIVES

To examine trends in the use of catheters at time of initiating dialysis and to document the extent of Network-level differences in the use of catheters (at initiation) after adjusting for Network-level differences in the characteristics of incident patients

METHODS

Data Sources

- We used data from the Renal Information Management System (REMIS) that provides information on the characteristics (demographic and clinical) of ALL incident ESRD patients each year
- Data are received in real time and updated each quarter
- We merge REMIS data with data on dates of death from the Social Security Master Death Master File

Outcome Measure

- Catheter Rates in hemodialysis patients at time of initiating dialysis
- Catheter rate in (say) quarter 1 of 2008 = (# patients reporting use of catheters in Form 2728 that began hemodialysis in first quarter of 2008)/ (total number of patients in 2728 that began hemodialysis in first quarter of 2008 with non-missing data on “access type” at time of entry)

Analytic Approach

- Network-level differences in use of catheters after adjusting for differences in the following patients characteristics
 - Age (polynomial), race, gender, albumin>3.5, hemoglobin>10, creatinine, previous care by nephrologist, maturing fistula at time of entry, and whether diabetes listed as primary cause

RESULTS

Figure 1. Catheter Rates in Hemodialysis Patients

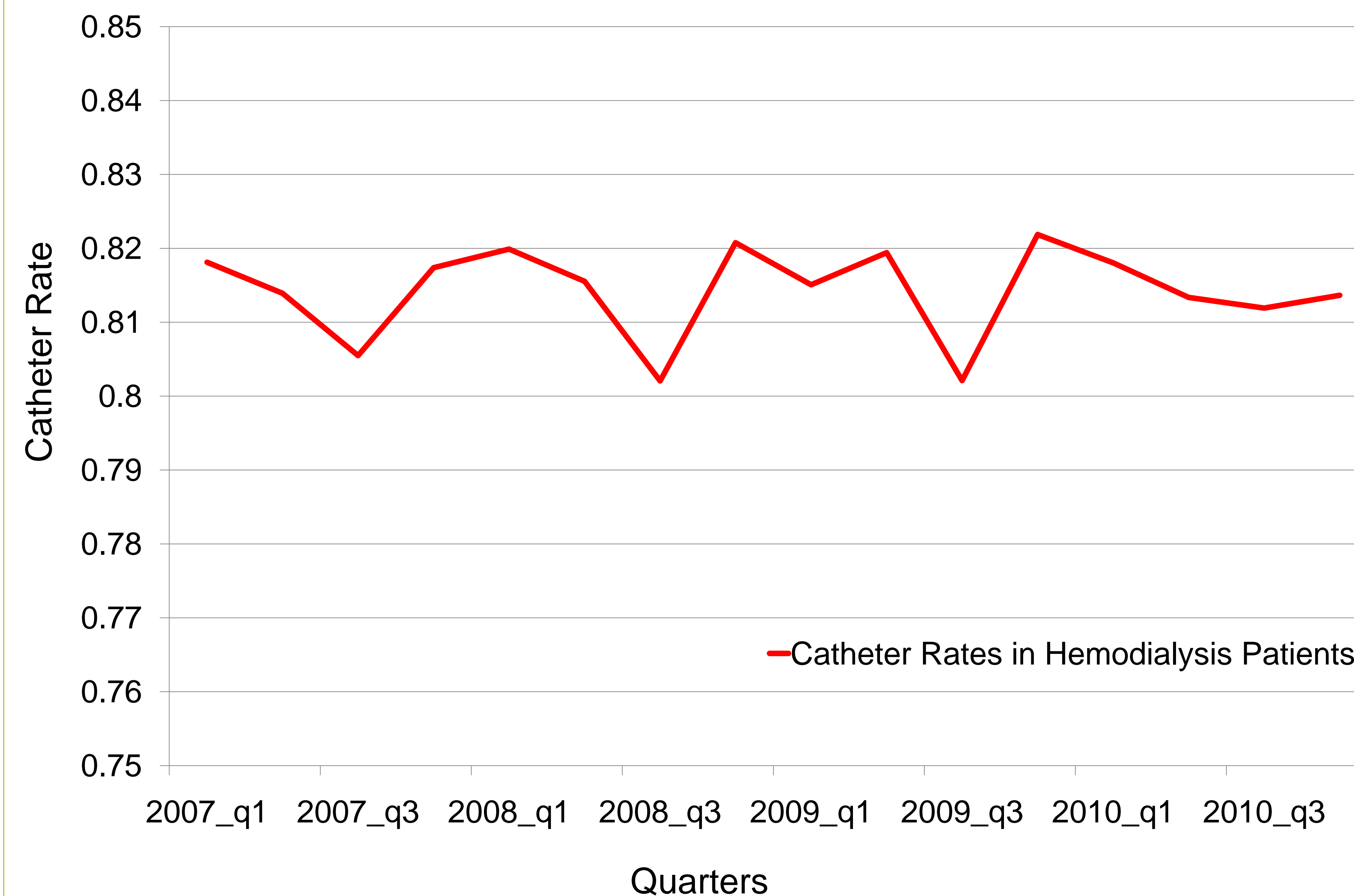


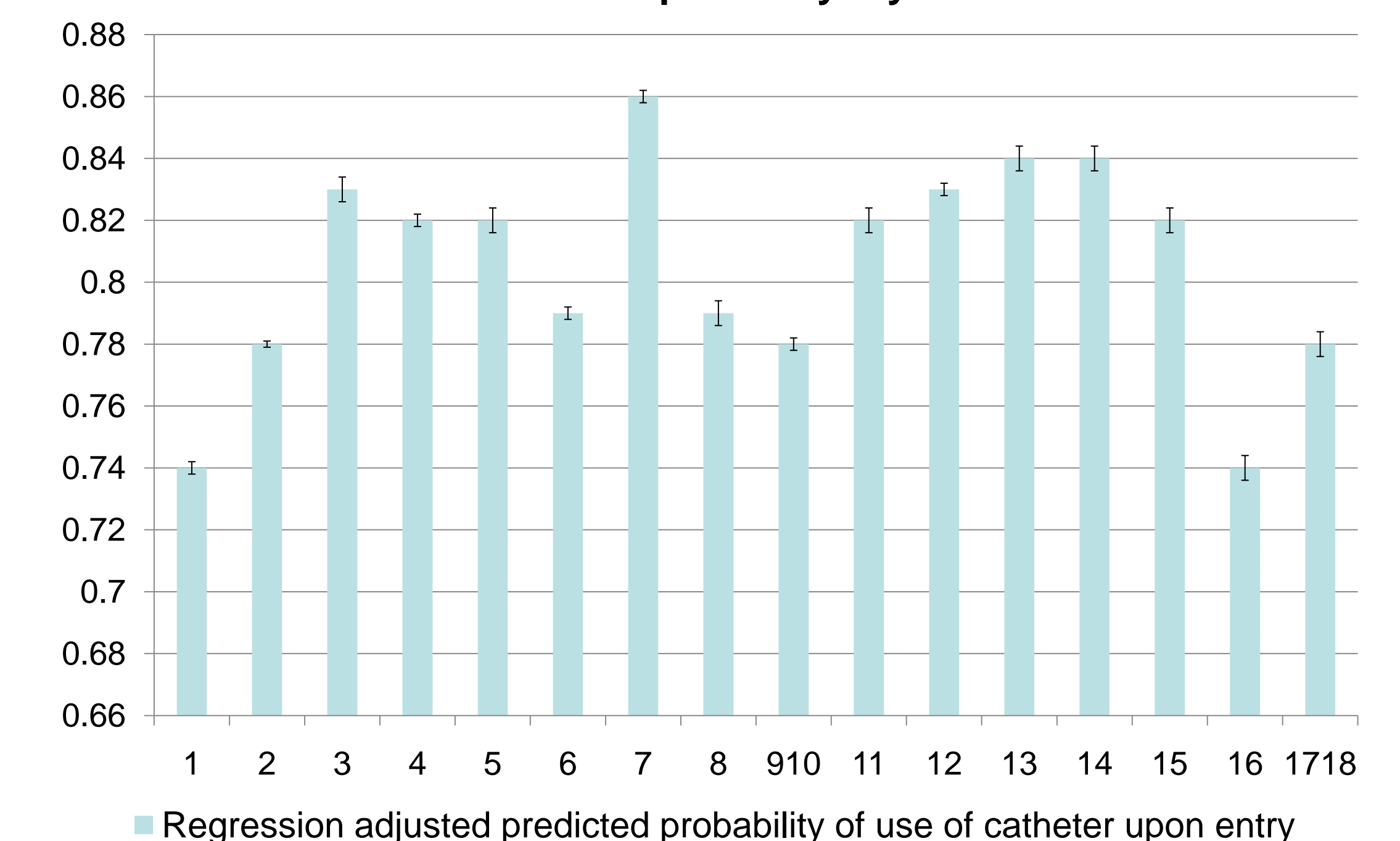
Table 1. Trends in Type of Access in Hemodialysis Patients

Year of Incidence	Catheter	Fistula/Graft	Maturing Fistula/Graft*
2007	0.814	0.176	0.22
2008	0.815	0.172	0.21
2009	0.814	0.178	0.21
2010	0.815	0.182	0.22

Conditional on use of catheters at entry into ESRD

RESULTS

Figure 2. Regression adjusted predicted probability of use of catheter upon entry: by Network



SUMMARY

- No downward trend in catheter use nor in whether a maturing fistula/graft is present at time of entry into ESRD
- Network-level differences in catheter rates even after adjusting for 9 important patient characteristics

IMPLICATIONS

- More effort must be made to reduce the use of catheters upon entry in ESRD
- Likely that real Network-level differences in treatment practices exist *and/or*
- Unmeasured factors contribute to Network-level differences in use of catheters, and more research needed to understand these factors

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Further information can be found at www.kidneycarepartners.org.

Contact: Vincent_Mor@brown.edu