

The Importance of Transplant Nephrology to a Successful Kidney Transplant Program

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Introduction

Nephrologists are responsible for the care of patients with a diverse array of systemic diseases, comorbidities, and kidney issues across a variety of service locations (clinic, inpatient, dialysis unit). As the field of nephrology becomes increasingly complex, there has been a need for advanced training and subspecialization, similar to the transformation cardiology experienced with heart failure, electrophysiology, and interventional cardiology. As a result, the American Society of Nephrology (ASN) formed the ASN Task Force on Academic Nephrologist Compensation and Productivity to begin to understand the needed transformation, especially as it relates to assessing clinical productivity and compensation. Members of the task force included nephrology division chiefs, transplant program directors, and transplant nephrologists, representing academic and community transplant programs across the United States. The group met virtually throughout 2021 to discuss specific job functions, roles, responsibilities, and compensation models, and the discussion and conclusions follow. The flow of transplant funds from the hospital to the physician and transplant nephrology models of care are further discussed in a companion perspective.

Transplant Nephrologist Roles and Responsibilities

Kidney transplant is the preferred treatment for most patients with ESKD. Transplant nephrologists are involved in the management of patients before and after transplant, with responsibilities that include evaluation and waitlisting of appropriate patients referred for transplantation, ensuring that patients remain qualified while on the waiting list, and living donor evaluation as well as short- and long-term management of immunosuppressive therapy and allograft dysfunction. In many cases, the transplant nephrologist acts as the patient's primary care physician. For optimal patient care, transplant nephrologists must be in constant communication with other providers, including but not limited to referring nephrologists, medical consultants, transplant surgeons, pathologists, histocompatibility laboratory personnel, dialysis teams, and transplant coordinators. With improving outcomes and an increasing number

of kidney transplants performed, the responsibility of routine postoperative and hospital care has gradually shifted from the surgeon to the transplant nephrologist, and the volume of patients is cumulative as more survive longer, often presenting management challenges that general nephrologists or other primary care providers are unable to address. This has also led to an exponential increase in the number of clinic visits and staff needed to properly follow patients.

Transplantation is regulated by the US Department of Health and Human Services through the Organ Procurement and Transplantation Network. Each transplant program is required to name a primary transplant physician (who usually serves as the medical director) who must maintain current working knowledge of kidney transplantation and perform administrative, regulatory, and budgetary oversight of the program (1). The medical director also connects medical and surgical care to ensure coordination of care and program success, yet there is no standard for protected time for these activities. Outreach is required to maintain the waiting list and involves travel time and interaction with multiple providers and health systems. The medical director and other transplant nephrologists are also heavily involved with the evaluation of new candidates and care coordination to maintain the waiting list. The Renal Physician Association surveys show that, regardless of program size, a wide range of effort (10%–50%) is required to deliver these services, none of which generate relative value units (RVUs).

Compensation

The Omnibus Budget Reconciliation Act set into motion the implementation in the early 1990s of the Resource-Based Relative Value System (RBRVS) as an effort to reduce health care costs (2). The RBRVS informs the Medicare Fee Schedule by way of the RVU assigned to a particular procedure or service. Relative value is determined by the resources expended on a specific service and quantified by an RVU assigned to that service. Three components make up the total RVU of a given service: physician work effort, practice cost, and relative risk associated with that service. After adjustment for geographic factors, the total RVU for a

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procedure or service is determined by the sum of the physician work, the practice expense, and malpractice RVU components multiplied by the conversion factor (the dollar amount used to calculate Medicare reimbursement).

RVUs have become the dominant currency to assess clinical productivity for compensation (1,3–5). Benchmarks established by health care performance improvement companies, such as Vizient and the Medical Group Management Association, are often utilized by institutions to measure the value of clinical work and to assess clinician productivity. However, as no benchmarks are specific to the encounter of the patient in transplant nephrology, each program has devised its own “productivity” metric for it. The result is a wide range of disparate expectations and targets across the country. Furthermore, many duties of the transplant nephrologist are not captured in a single patient encounter and therefore are not reflected in the RVU: for example, managing patients,

reviewing records, talking to referring physicians, attending selection committee meetings, supervising transplant coordinators, traveling to outreach clinics, and teaching. These non-patient encounter activities occupy a substantial portion of the transplant nephrologists’ time and effort and are crucial to successful outcomes, but they are often unrecognized and uncompensated (6).

In contrast to payments for individual clinic or inpatient encounters or provision of dialysis services, revenue for many of the non–RVU-generating activities for donors and recipients is included in the global payment to transplant centers as specified in the Centers for Medicare & Medicaid Services Conditions of Participation (Figure 1). Operative care and perioperative care are also compensated for from this global payment on the basis of the transplantation procedure as a capitated payment. A substantial component of this perioperative care is provided by transplant nephrologists. A

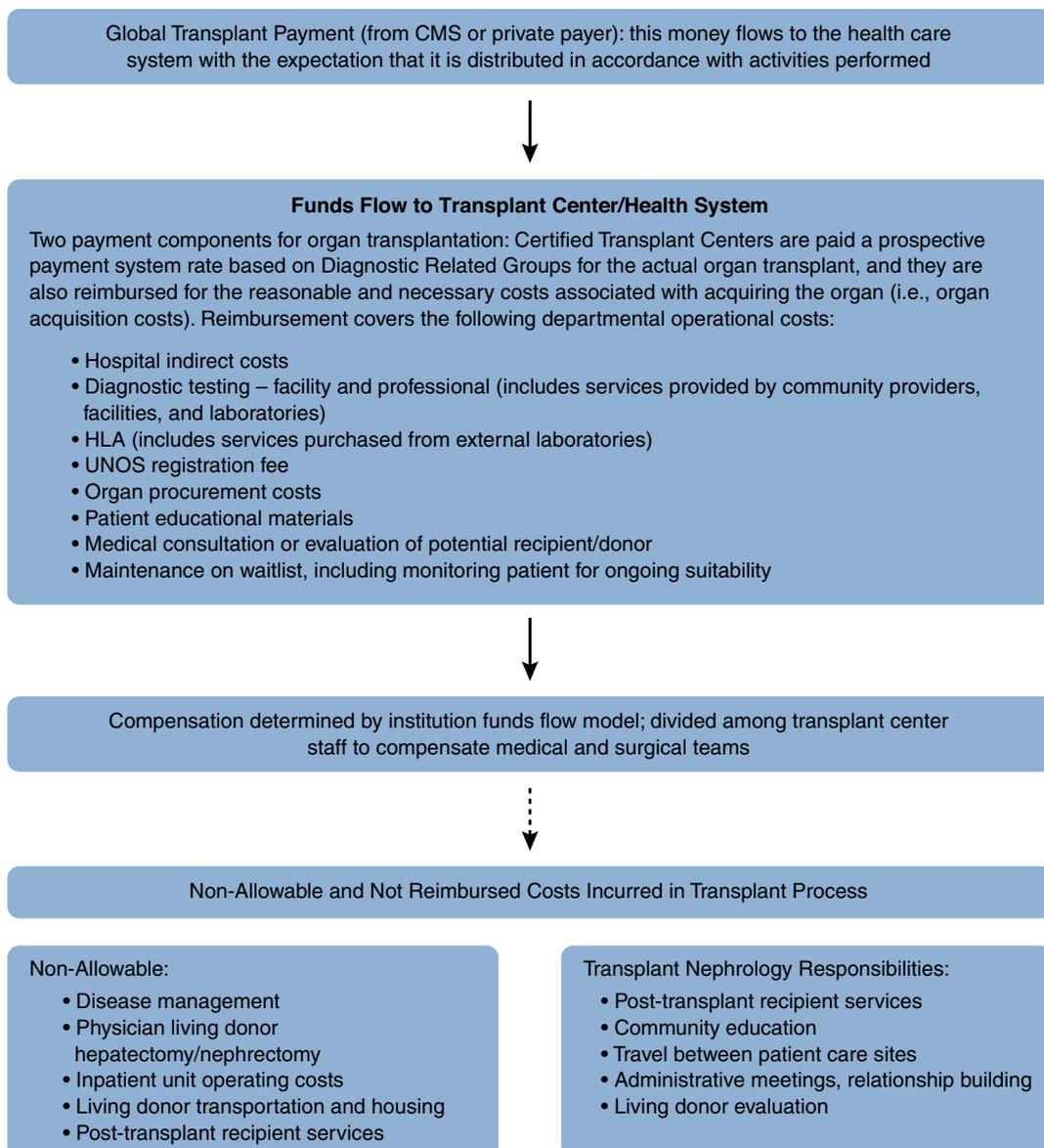


Figure 1. | Transplant global payment structure: compensated and uncompensated components of care. CMS, Centers for Medicare & Medicaid Services; HLA, human leukocyte antigen testing; UNOS, United Network for Organ Sharing.

portion of the additional cost to a hospital of having a transplant program is recoverable as organ acquisition *via* the Medicare Cost Report. The overall contribution of a transplant physician to the health care system *via* pretransplant evaluation, testing, radiology, cardiology, histocompatibility testing, waiting list workup, transplant event, infusion suites, pharmacy expenses, and post-transplant care, along with pharmacy revenues, must be analyzed as a whole to understand its financial effect (7,8). Thus, a significant portion of services provided by the transplant nephrologist to both recipients and donors is not billable, yet it is reimbursed to the transplant center or the hospital. However, this funding rarely finds its way back to support transplant nephrology.

Transplant Nephrology Compensation Survey

In July 2019, the American Society of Transplantation (AST) commissioned a task force of 14 kidney transplant medical directors representing programs of varying size, locations, and practice affiliations to administer a compensation and job satisfaction survey, which was distributed to 809 nephrology members of AST in 2020. Of the 260 respondents included in final analyses, 175 (67%) were affiliated with a university hospital, 56 (22%) were affiliated with a nonuniversity hospital, 25 (10%) were in community practice, and four (1%) were affiliated with the Veterans Administration. Academic rank was evenly distributed; 218 (84%) spent 50% or more of their time performing transplant-related clinical activities, and 117 (45%) had at least one major administrative title, such as transplant center director or kidney/kidney-pancreas medical director. The base compensation was fixed for the majority (90%), and for the remaining, it varied on the basis of wRVU, cash collections, and other parameters. One third of respondents did not receive any incentives above their base salary. All spent time performing nonbillable services; only a third were aware of receiving some compensation for this work, and 154 (56%) were unsure. RVUs were tracked and reported in 194 (76%), but only 107 (44%) were aware of an RVU target; of these, 102 were working at a university hospital. Job satisfaction was associated with total compensation. Although limited by its small sample size, the survey highlights variation in assessing the clinical productivity of a transplant nephrologist and reimbursing for vital nonbillable services.

In conclusion, determination of appropriate compensation for transplant nephrologists is complicated. Beyond wRVU metrics, there is a need to compensate for the important nonbillable activities performed by transplant nephrology in ensuring successful access and outcomes of patients undergoing kidney transplants and contributions to the overall success of a transplant center in fulfilling its mission. The changing dynamic of kidney transplantation requires health systems to recognize and support all components of the team approach now essential to a successful program, with transplant nephrologists playing an essential role.

Disclosures

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See related article, “Survey of Salary and Job Satisfaction of Transplant Nephrologists in the United States,” on pages XXX–XXX, and unsolicited feature, “Existing Transplant Nephrology Compensation Models and Opportunities for Equitable Pay,” on pages XXX–XXX.

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