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# Cooperation and Collaboration: Lessons from and for Pediatric Nephrology

By Charles Varnell, Jr., and Aviva M. Goldberg

The success of Wikipedia, Airbnb, and Uber and the increasing influence of social media show the strength of decentralizing knowledge, the power of collaboration, and the ways we find community in modern times (1). Despite the rise of this “sharing economy,” in the United States and Canada, healthcare systems remain areas of centralized power and expertise. Pediatric nephrology, fortunately, has shown to be a field amenable to collaboration at all levels, and the last year has increased the opportunities for this work.

Former US Surgeon General C. Everett Koop once said, “Drugs don’t work in patients who do not take them.” This recognition in pediatric nephrology has led to growing attention toward how medication adherence directly affects clinical outcomes for our patients and how health disparities affect adherence. Randomized controlled trials, like the TAKE-IT (Transplant Regimen Adherence for Kidney Recipients by Engaging Information Technologies) study in pediatric kidney transplant (Figure 1) and the MAESTRO-Tx (Medication Adherence Enhancing Strategies in Solid Organ Transplantation) and MAGIC (Myoblast Autologous Grafting in Ischaemic Cardiomyopathy) studies in adult solid organ transplant, provide the evidence that addressing barriers to medication adherence through targeted interventions improves outcomes. Like medication adherence, transition from pediatric to adult care requires a holistic approach to barriers and opportunities that come with our patients achieving developmental milestones and increasing independence. By getting to the “why” of what our patients do and do not do, we can test interventions that can influence those behaviors. Such research is only possible, however, with the continued collaboration that has defined much of the most successful work in this field.

Due to the relative rarity of many pediatric kidney diseases, no center is able to produce significant generalizable knowledge alone. Our field has long recognized this

dilemma and has sought to collaborate to answer the questions of how to provide optimal care. Following the lead of early collaborations, like the International Study of Kidney Disease in Children (ISKDC) and the North American Pediatric Renal Trials and Collaborative Studies (NAPRTCS), multiple research and improvement networks have been created to advance the care of children with kid-

ney diseases (Table 1). These networks were started within specific aspects of pediatric nephrology care, and they use the power of large data collection and registries to provide benchmarking and identify gaps in care along with quality improvement methods to advance outcomes and inform the development and spread of best practices. This collaborative spirit is present as part of the culture of pediatric nephrologists around the world. There are also several international pediatric nephrology Listservs that exist to share knowledge, help with challenging cases, and disseminate best practices for questions brought to the group.

**The necessity to literally meet people where they are means that we now know much more about how our patients . . . live and what is most important to them.**

The COVID-19 pandemic has, as one of its very few silver linings, given us the impetus and opportunity to collaborate more effectively among centers and through previously novel means of communication. One year ago, few of us would have spent our days in virtual communication with patients, local partners, or cross-country collaborators, but this is now routine. The necessity to literally meet people where they are means that we now know much more about how our patients and colleagues live and what is

most important to them. These lessons can allow us to ensure our ongoing collaborations are likewise nimble—collaborating on solutions to shared problems and responding in real-time to data and trends. Most important, such work ensures that ultimately our work serves to improve the lives of children with kidney diseases, whether they are on the exam table or on the other side of our screens. ■

Dr. Varnell is on the QI/IT committee for the Improving Renal Outcomes Collaborative and is on the IT subcommittee for NAPRTCS. Dr. Goldberg reports no conflicts of interest.

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**Table 1. Networks to advance the care of children with kidney diseases**

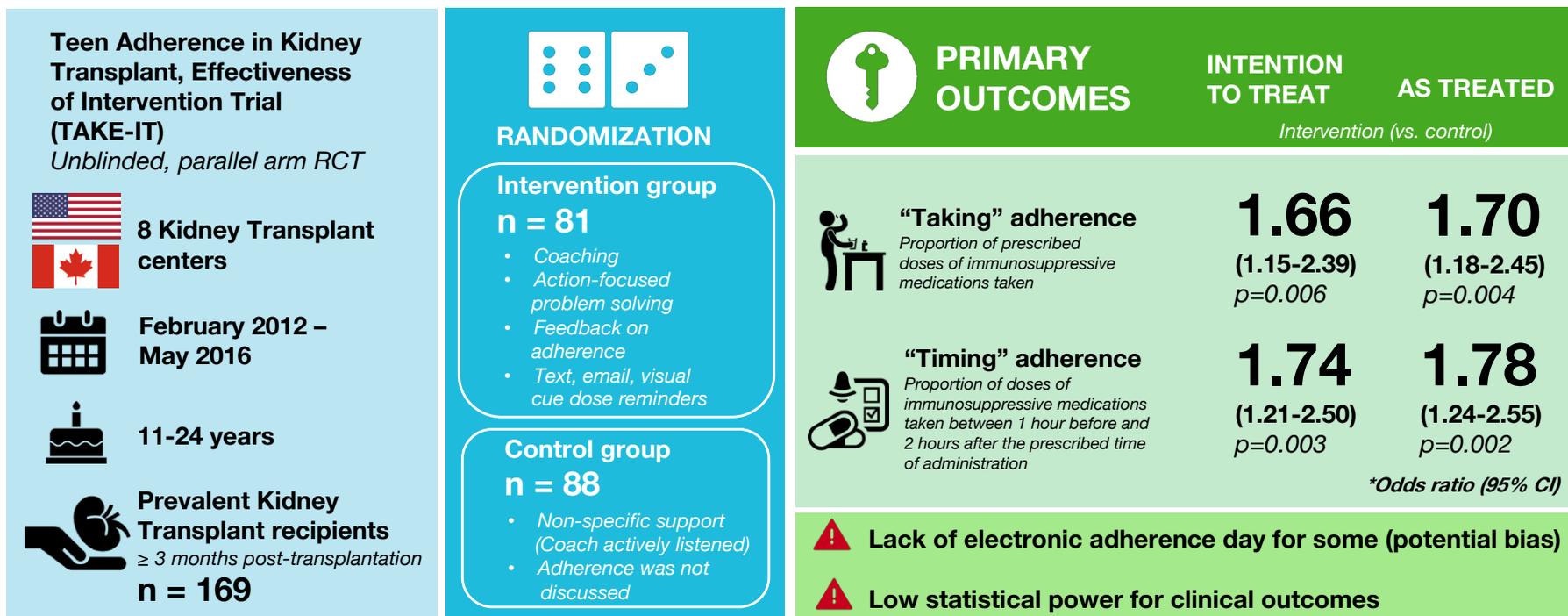
Research/Improvement networks	Clinical focus
Chronic Kidney Disease in Children (CKiD)	Chronic kidney disease
Glomerular Disease Learning Network (GLEAN)	Glomerular disease
Improving Renal Outcomes Collaborative (IROC)	Transplant
Neonatal Kidney Collaborative (NKC)	Neonatal kidney disease
Nephrotoxic Injury Negated by Just-in-time Action (NINJA)	Acute kidney injury
Standardized Care to Improve Outcomes in Pediatric Endstage Kidney Disease (SCOPE)	Dialysis

## Cooperation and Collaboration

Continued from page 23

Figure 1

# Clinic-based Intervention to Promote Medication Adherence in Kidney Transplant Recipients



**Conclusions** The multicomponent TAKE-IT intervention resulted in significantly better medication adherence than the control condition. Better medication adherence may result in improved graft outcomes but this will need to be demonstrated in larger studies.

Foster BJ, Pai ALH, Zelikovsky N, et al. *A Randomized Trial of a Multicomponent Intervention to Promote Medication Adherence: The Teen Adherence in Kidney Transplant Effectiveness of Intervention Trial (TAKE-IT)*. Am J Kidney Dis. 2018 Jul;72(1):30-41

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