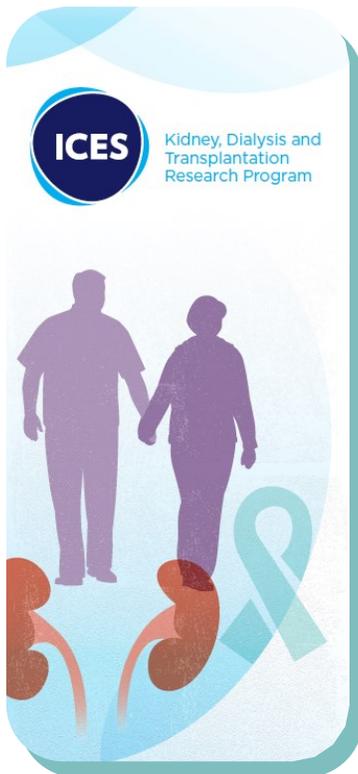


# DTRIG 2016 Newsletter



## ICES Kidney, Dialysis and Transplantation Research Program

The Institute for Clinical Evaluative Sciences (ICES) is an independent, non-profit organization that investigates the effectiveness, equity, quality and efficiency of health care and health services in Ontario. ICES maintains a data repository consist-

ing of record-level, coded and linkable health data sets. ICES has seven research programs, one of which is the Kidney, Dialysis and Transplantation (KDT) program. KDT aims to improve health and health care provincially, nationally and internationally

by generating new knowledge across the spectrum, from preventing serious and progressive kidney disease to the optimal delivery of dialysis and solid multi-organ donation and transplantation.

## Donation and Transplantation Research Interest Group

ICES KDT is organized into several thematic groups, one of which is the Donation and Transplantation Research Interest Group (DTRIG). DTRIG was established in August 2014 with the goal of increasing deceased organ donation and consent and improving outcomes for solid organ transplant recipients. The group, which

meets monthly to discuss new projects, includes clinician scientists, epidemiologists and biostatisticians. DTRIG members collaborate on projects with several knowledge users, including Trillium Gift of Life Network, the Ontario Renal Network, and the Kidney Foundation of Canada.

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**Interested in collaborating with DTRIG?**

**See page 2 for more details.**

## Meet the DTRIG Team



Greg Knoll, MD, MSc  
The Ottawa Hospital  
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Joseph Kim, MD, PhD  
University Health Network  
Scientific Lead



Amit Garg, MD, PhD  
London Health Sciences Centre  
Investigator



Ngan Lam, MD, MSc  
University of Alberta  
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Kyla Naylor, PhD  
ICES  
Postdoctoral Fellow



Stephanie Dixon, PhD  
ICES  
Biostatistician/Analyst



Eric McArthur, MSc  
ICES  
Biostatistician/Analyst



Megan McCallum, MPH  
ICES  
Research Coordinator



Alvin Li, BHSc, PhD(c)  
Western University  
Research Assistant/Trainee

## Opportunities for Collaboration

We are open to collaborating on projects using ICES data. Currently, we are working with a core group of researchers, but we are interested in gaining new perspectives through work with other investigators or directly with transplant centres. Please contact Dr. Greg Knoll ([gknoll@toh.ca](mailto:gknoll@toh.ca)) or Dr. Joseph Kim ([joseph.kim@uhn.ca](mailto:joseph.kim@uhn.ca)) if you are interested in collaborating.

Knowledge  
Users

Ontario Renal Network  
Réseau Rénal de L'Ontario



## Recent DTRIG Publications

### *Deceased organ donation registration and familial consent among Chinese and South Asian persons in Ontario, Canada*

Previous studies conducted in the United States suggest that organ donation and consent attitudes are lower among different ethnic groups. This study found that Chinese and South Asian individuals in Ontario are less likely to be registered organ donors compared to the general population (Chinese: 8.9%, South Asian: 12.8%, general population: 25.4%). Chinese and South Asian families are also not

as likely to consent to deceased organ donation (Chinese: 40%, South Asian: 54.2%, general population: 68.3%). Lead author Alvin Li said, "In Canada, people of Chinese and South Asian ancestry represent the two largest visible ethnic minority groups. The findings reveal that there is an opportunity to build support for organ and tissue donation in these communities, which would have a sig-

nificant impact for those on the transplant waiting list." [Li et al., *PLOS ONE*, 2015]

[Journal article](#)

[News release](#)

[Media coverage](#)



### *Fracture incidence in adult kidney transplant recipients*

It is well-accepted that kidney transplant recipients have a higher risk of fracture compared to the healthy general population. However, it was not known whether kidney transplant recipients were a high-risk fracture group. This population-based cohort study found that kidney transplant recipients are not a

high-risk fracture group, having a 10-year cumulative incidence of hip fracture of 1.7%; clinical guidelines define  $\geq 3\%$  as high risk. However, female kidney transplant recipients aged 50 or older were a high-risk fracture group with 5.6% fracturing their hip. Therefore, despite alterations in bone mineral metabolism and

steroid administration post-transplant, adult kidney transplant recipients in Ontario may have better bone health than previously suggested. [Naylor et al., *Transplantation*, 2016]

[Journal abstract](#)

### *Despite being older and sicker, kidney transplant recipients' risk of cardiovascular disease is not increasing over time*

Increases in the average age and number of comorbidities of kidney transplant recipients are raising a concern about associated complications. This population-based study assessed trends in the three-year cumulative incidence of post-transplant death or major cardiovascular events (myocardial infarction, coronary angioplasty, coronary artery bypass graft surgery, stroke) in kid-

ney transplant recipients in Ontario from 1994 to 2009. The three-year cumulative incidence of death or major cardiovascular events was similar between eras (8.4% for 1994–1997, 9.0% for 2006–2009). However, after adjusting for age, sex and comorbidities, the risk of death or major cardiovascular events was significantly lower in more recent eras (2006–2009 adjusted hazard ra-

tio 0.70; 95% confidence interval 0.54–0.92; referent 1994–1997). These results are comforting for kidney transplant recipients and may be the result of advances in the prevention and treatment of cardiovascular disease. [Lam et al., *Transplantation*, 2016]

[Journal abstract](#)

## Recent DTRIG Publications (continued)

### *Frequency of bone mineral density testing in adult kidney transplant recipients*

There is a lack of consensus on the clinical value of bone mineral density (BMD) testing for kidney transplant recipients. This population-based cohort study found that the proportion of kidney transplant recipients who received at least one BMD test in

the three years after transplant varied widely across Ontario's six transplant centres, ranging from 15.6% to 92.1%. The variation persisted after adjusting for relevant covariates. These results highlight the need for prospective studies to evaluate the utility, op-

timal timing and frequency of BMD tests in this unique patient population. [Naylor et al. *Canadian Journal of Kidney Health and Disease*, 2016]

[Journal article](#)

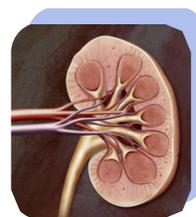
### *Validation of kidney transplantation using administrative data*

Health administrative databases are being increasingly used to assess health outcomes in kidney transplant recipients; therefore, it is important to know that this population can be accurately identified in these databases. This validation study compared data collected directly from three Ontario transplant centres to administrative data captured in the Ca-

nadian Organ Replacement Register (CORR), the Ontario Health Insurance Plan and the Canadian Institute of Health Information's Discharge Abstract Database. It was determined that codes used in administrative databases can accurately capture kidney transplant recipients (sensitivity and positive predictive values >95%). For example, CORR had a sensi-

tivity of 96% and a positive predictive value of 98%. [Lam et al. *Canadian Journal of Kidney Health and Disease*, 2015]

[Journal article](#)



## Work in Progress

### **Secular trends, risk factors and outcomes of early hospital readmissions in kidney transplant recipients**

Main investigators: Joseph Kim, Greg Knoll, Kyla Naylor

### **Incidence and outcomes of pregnancy in kidney transplant recipients**

Main investigators: Joseph Kim, Greg Knoll, Kyla Naylor

### **Venous thromboembolism in incident kidney transplant recipients**

Main investigators: Ngan Lam, Amit Garg

### **The impact of acute kidney injury on the risk of death or graft loss in the renal transplant population**

Main investigators: Greg Knoll, Amber Molnar

### *Work in collaboration with the Ontario Renal Network*

#### **Access to kidney transplantation across Ontario dialysis programs**

Main investigators: Greg Knoll, Joseph Kim, Kyla Naylor, Amit Garg\*

#### **Pre-transplant dialysis duration and kidney transplant outcomes**

Main investigators: Greg Knoll, Joseph Kim, Kyla Naylor, Amit Garg\*

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