



PRESS RELEASE

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MANY CHILDREN WITH KIDNEY DISEASE MAY BE PRESCRIBED DRUGS THAT ARE TOXIC TO THE KIDNEYS

Highlights

- Among 1,018 children with newly diagnosed chronic kidney disease and 4,072 children with normal kidney function who were seen at primary care practices, 71% and 50%, respectively, received at least one medication that might be toxic to the kidneys over an average follow-up of 3.3 years.
- The rate of such prescriptions was 4-times higher in patients with kidney disease than in those without.

Washington, DC (December 12, 2019) — An analysis of records from primary care practices in the United Kingdom found that many children with kidney disease are prescribed medications that may be toxic to their kidneys. The findings, which appear in an upcoming issue of *CJASN*, suggest that research is needed to determine whether these medications are necessary and appropriate, or if alternatives could be prescribed instead.

For children with chronic kidney disease (CKD), it's important to limit intake of medications that can damage the kidneys. To study this issue, Claire Lefebvre, MDCM (University of Montreal) and her colleagues analyzed 1997–2017 data on children who received care at general primary care practices in the United Kingdom. Children with CKD were matched 1:4 with patients without CKD. The researchers labeled medications as Category A (consistently recognized as toxic to the kidneys) and Category B (recognized as potentially toxic to the kidneys)

The analysis included 1,018 patients with newly diagnosed CKD who were matched to 4,072 patients without CKD. Over an average follow-up of 3.3 years, 26% of patients with CKD and 15% of patients without CKD were prescribed one or more Category A medications. When considering Category B medications (which include Category A medications), 71% of patients with CKD and 50% of patients without CKD received at least one medication during follow-up.

The rate of Class A prescriptions was 71 per 100 person-years and 8 per 100 person-years in CKD and non-CKD patients, respectively. (A person-year is the number of years of follow-up multiplied by the number of people in the analysis.) The respective rates of Class B prescriptions were 278 vs. 44 per 100 person-years. Analyses revealed that

children with CKD were prescribed medications that were potentially toxic to the kidneys at a rate that was 4-times higher than in children without CKD.

“We have shown that medications potentially toxic to the kidney are prescribed at high rates to children with kidney disease, suggesting the need for increased awareness among physicians and patients about this problem,” said Dr. Lefebvre. “We hope this research will encourage future studies evaluating the reasons for these high rates and, eventually, the development of clinical decision support systems and physician education programs to reduce inappropriate nephrotoxic medication prescribing in children with CKD.”

Study co-authors include Kristian B. Filion PhD, Pauline Reynier, Robert W. Platt PhD, and Michael Zappitelli MD, MSc.

Disclosures: Dr. Lefebvre was supported by a Canadian Institute of Health Research (CIHR) Frederick Banting and Charles Best Canada Master’s Scholarship funded through the McGill University Research Bursary Program as well as a Master’s bursary from the *Fonds de recherche du Québec - santé* (Quebec Foundation for Health Research; FRQS) in partnership with Fondation des Étoiles. Dr. Platt holds the Albert Boehringer I Chair in Pharmacoepidemiology at McGill University. Dr. Filion is supported by a Junior II salary support award from the FRQS. Dr. Zappitelli received \$1,500 from Baxter as an honorarium for giving an educational session to intensive care nurses on continuous kidney replacement therapies in 2018. None of the other authors have any disclosures.

The article, entitled “Primary Care Prescriptions of Potentially Nephrotoxic Medications in Children with Chronic Kidney Disease,” will appear online at <http://cjasn.asnjournals.org/> on December 12, 2019, doi: 10.2215/CJN.03550319.

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Twitter: Many children with kidney disease may be prescribed drugs that are toxic to the kidneys.

Facebook: An analysis of records from primary care practices in the United Kingdom found that many children with kidney disease are prescribed medications that may be toxic to their kidneys. The findings, which appear in *CJASN*, suggest that research is needed to determine whether these medications are necessary and appropriate, or if alternatives could be prescribed instead.

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