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Children with chronic kidney disease (CKD) have been found to have cognitive deficits that are not completely attributable to the burden of their chronic illness. Recent research in identifying genomic disorders, specifically pathogenic copy number variants (CNVs), in children with CKD has linked impaired kidney development with neuropsychiatric and neurodevelopmental disorders. This implies that children with CKD may have a higher risk of neurocognitive deficits than their healthy age-matched peers. In addition, I am interested in the impact that neurocognitive status may have, as neurocognitive deficits may present a barrier to the ability to acquire the appropriate skills for adherent behavior, which may compromise their overall health and increase morbidity and mortality from CKD.

A substantial subset of children with CKD harbor genomic disorders that simultaneously impair kidney and neurocognitive function. I propose a series of studies to assess the link between genomic disorders, CKD, and neurocognitive deficits, with the following specific aims: 1) Identify genomic disorders in children with CKD; 2) Identify prevalence of neurocognitive deficits in children with CKD.