

Title: LITERATURE REVIEW AND SURVEY ON TELEMEDICINE AMONG PEDIATRIC NEPHROLOGISTS AND THEIR PATIENTS IN NORTH AMERICA DURING THE COVID-19 PANDEMIC

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Background: The slow increase in telemedicine utilization expanded rapidly, along with reimbursement changes, during the COVID-19 pandemic. Standardized protocols for these services are lacking but needed for effective and equitable healthcare.

Aim: Our aims were to: 1) do a systematic review of the telemedicine literature for nephrology patients and billing; 2) query pediatric nephrologists and their patients about their telemedicine experiences during the pandemic; and 3) make recommendations based on findings.

Methods: For aim one, we conducted a literature review. For aim two, HIPAA-compliant surveys were deployed on-line. Aim three was completed after review of the survey results and discussions with the co-investigators.

Results: Our literature review identified seven underpowered mostly single center trials conducted in adult patients. We collected survey responses from 400 patients and 197 pediatric nephrologists. Patients reported positive experiences with telemedicine visits as it was logistically easier than in-person visits. Patients also felt that the quality of their visits were equivalent to what they would receive in person. Physicians used a wide variety of on-line systems to conduct synchronous telemedicine with Zoom™ (23%), EPIC™ (9%), Doxy.me™ (7%) or other services not specified (37%). Most physicians' concerns related to technological issues and the ability to procure physical exams and/or laboratory results.

Conclusions: There is a paucity of published trials on telemedicine services in pediatric nephrology. Virtual care was feasible and acceptable for patients, caregivers, and providers during the COVID-19 pandemic. Suggestions for standardized telemedicine services and reimbursement codes for payers are discussed