KKI-NECT: Preparing Providers for Tomorrow through Tele-Education on Neurodevelopmental and Mental Health Disorders

Mary L. O’Connor Leppert MB BCH, Joyce N. Harrison, MD

Background

• Prevalence of pediatric neurodevelopmental and mental health disorders in U.S. children is now 15% and 11-20% respectively.
• Current estimates are one board certified pediatric subspecialist for every 100,000 U.S. children.
• Pediatric primary care clinicians (PPCCs) are increasingly tasked with identifying and managing pediatric neurodevelopmental and mental health disorders.
• Surveys of practicing pediatricians indicate that they lack the training, knowledge, and confidence to meet this need.
• Approaches to preparing the primary care workforce:
  • Expanding instruction at the training program level
  • Offering high quality continuing medical education
  • Arming primary care practices with integrated care models

Objective

Kennedy Krieger Institute’s Network for Early Childhood Telehealth (KKI-NECT) was established to provide education and guided practice to PPCCs through case based learning and didactic presentations regarding neurodevelopmental and mental health disorders in early childhood.

Methods

KKI-NECT replicates the Project ECHO (Extension for Community Healthcare Outcomes) hub-and-spoke model.
• Offers CME instruction to PPCCs in rural Maryland and West Virginia
• Weekly virtual clinics held by multipoint video-conferencing
• Each one hour clinic combining a case presentation by a spoke member and didactic content aimed at guiding PPCC practice
• Didactic presentations based on a multidisciplinary, multilevel curriculum authored by KKI teaching faculty

The Hub
• Behavior Psychologist
• Child and Adolescent Psychiatrist
• Developmental and Behavioral Pediatrics
• Neurodevelopmental Pediatricians
• Social Workers
• Research Assistant
• IT Specialists

The Spokes - Participants
52 Unique Participants from Maryland, Virginia, and West Virginia
• Pediatricians
• Family Practitioners
• Nurse Practitioners
• Physician Assistants
• Social workers

The Cases
52 Total Cases
• 71% Male
• 40% Medicaid
• 65% White
• 10% African American
• 10% Hispanic or Latino

The Didactics
• ADHD
• Anxiety
• Autism
• Developmental Delay
• Disruptive Behavior
• Genetics
• ODD and OCD
• Sleep Disorders
• Speech and Language Disorders
• Consequences of Substance Exposure
• Trauma (ACES)

Results:

• 74 KKI-NECT clinics have been held.
• All but 2 cases have been managed within the Medical Home.
• Didactic sessions have progressed from novice to advanced content.
• Statistically significant improvement shown in PPCC-rated knowledge and confidence surrounding identification and management of neurodevelopmental and mental health disorders.
• KKI-NECT provides an effective solution to expanding the pediatric subspecialty workforce, by expanding PPCC knowledge and confidence in these disorders through guided practice and mentorship.

KKI-NECT is funded by: HEALTH RESOURCE AND SERVICES ADMINISTRATION
Grant No. H2ARH1302
JHM IRB00108505

KKI-NECT Team:
Nancy Grace PhD, Anna Maria Wilms Flock MD, Deepa Menon, MD, Janna Steinberg MSW, Rebecca German MSW, Belinda Chen, MA