Telemedicine in Neurology
The Neutral Corner: Telemedicine in Neurology

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9/10/2016
Telemedicine and Telehealth

• “The use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status.”

• Some early examples of telemedicine

• Web 2.0 and Voice Over Internet Protocols and growth of AV communication has fueled recent advances

• Many uses: education, consultation (ie echos and EEGs), practice (links to child care centers or schools or juvenile detention facility), and research

• “Telemedicine: Pediatric Applications” Burke et al Pediatrics July 2015 Volume 136 Issue 1
A Drive for the Future

• Patient Protection and Affordable Care Act (ACA) promotes use of telemedicine

• CMMI (Center for Medicare and Medicaid Innovation) established; goal is exploring and developing new care models across a variety of clinical settings

• Including clinically underserved areas

• For Medicaid, individual states offered health home option to coordinate primary care, acute and chronic issues and social services for those who are chronically ill
  
  • Telemedicine: Pediatric Applications” Burke et al Pediatrics July 2015 Volume 136 Issue 1
Applications

- Inpatient consultations for areas with limited pediatric subspecialists
  - genetics consultation in NICU at local community hospital
- Outpatient consultations
- Telepractice
  - example Pediatric Epilepsy Telemedicine Initiative
  - Maternal Child Health Bureau
  - partnered with Epilepsy Foundation of Michigan
    - www.epilepsymichigan.org
- Maintain medical home
Applications

- Telemedicine in Pediatric Applications
  - epilepsy
  - asthma
  - diabetes
  - genetic conditions
  - obesity
  - congenital cardiac conditions
  - mental health disorders

Benefits to Patients

- High Parent Satisfaction
- Reduced Absenteeism Due to Illness
- Reduced Travel Time and Costs
- Reduced Emergency Department Use

“High Satisfaction with Telemedicine in Pediatric Epilepsy.” CNS 2013 Annual Meeting

Dr. Joshi  University of Iowa Children’s Hospital

75% of caregivers felt that could convey same information via telemedicine via clinic visit (sample 12) and all felt that there was enough time to discuss concerns
Benefits to Patients

- Decreases barriers to care
- “Safety and Effectiveness of Telemedicine for Neurology Outpatients.”
- Duncan et al. United Kingdom study due to long wait times (defined as greater than 6 months)
- 44 patients using two neurology providers (adult study)
- Later compared with physical examination by face to face provider
- Not shown to alter what was told to patient regarding diagnosis or management.
Benefits to Physician

- Participation with other providers
- Less travel time to satellite clinics
- Care coordination managed at shorter intervals
- Decreased wait times for patients; “Less Doctor Guilt”
- Increases physician job satisfaction; real life CME
Challenges to Delivery

- Technological Constraints and Time to Troubleshoot

- Paperwork, Consents for Conferencing

- Privacy and Security; need to ensure good delivery system; Skype; “go to meeting” technology

- Billing and Coding---ensuring reimbursement

- Requires authorizations

- Staffing and scheduling---need a helper in order not to lose money in my opinion
Challenges to Delivery

- MedicoLegal Considerations
  - Establishes a patient-physician relationship
  - f/u on labs and recommendations/studies
  - Avoid patient abandonment
  - Technological failures—poor audio capability; difficult with language barrier
  - Liability insurance
  - What does malpractice carrier conclude if cross state lines?
  - Informed consent
  - Security
  - Situations we have not considered yet

- Telemedicine: Pediatric Applications” Burke et al Pediatrics July 2015 Volume 136 Issue 1
Nuts and Bolts

- Preauthorization for the visit

- Informed consent for telemedicine visit/consent for information to be sent over the internet and for use of camera

- Physician plus extender support (counselor or physician assistant or resident)

- Coordinating with physician schedule

- Billing: 99215 for me as generally an hour spent with patient
Two Example Clinics

- Neurogenetics
- UF Gainesville + Child Neurology Center
- Greater than 75 patients seen since Feb 2012
- Dysmorphisms and variations found on microarrays
- Epilepsy syndromes
- Movement disorders
- Neurodegenerative disorders
- Autism
Two Example Clinics

- American Clinic of Tbilisi
- Georgia

- I am remote specialist; interact with pediatricians at clinic with some preparatory information on the patients
- Many with HIE, spastic quadriparesis, and seizures
- Can review EEGs and MRI brain remotely. Staff and many of the families speak English
This disk is secured by PGP Whole Disk Encryption
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Smartcard users: Type your PIN and press CTRL+ENTER

If you need any assistance please contact Pediatrics IT @ 273-5808
Use ESC to clear, or TAB to show keystrokes

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Keyboard
Future Applications

- Coordination of care with subspecialties esp in areas of community hospitals ie. Autism Clinic with developmental pediatrics, neurology and psychiatry

- Outreach to existing patients who live hours away or are medically complex

- Children’s Medical Services in Florida; connection with the Panama City office

- Collaborations with other providers who can help a patient care plan who have a special interest or expertise in a certain condition or treatment plan.
Making Connections

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Making Connections

www.shakeit.us

Blog for Teenagers with Epilepsy
Hannah Koske
Next Up:
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