Session Information:

Session Title: Joint Program: Section on Telehealth Care and Section on Home Care
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Faculty Disclosure Information

In the past 12 months, I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this CME activity.

I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.
Telehealth, Home Care and the Medical Home: New Modalities in the Care of Children with Medical Complexity

Applications of telehealth care in the treatment of CMC receiving care at home: history, current modalities, and view of the future.

Dale C. Alverson, MD, FAAP
“Back to the Future”
Patient-Centered Medical Home

- A Patient-Centered Medical Home is a team-based model of care usually led by a personal physician that provides, **comprehensive, continuous and coordinated care** to maximize health outcomes
- Overall improved continuity
Patient-Centered Medical Home

• The “Team” can consist of a spectrum of health care providers that are addressing the patient’s health care needs: Community Health Workers, Mid-Levels, Counselors, Therapists, Pharmacists, Oral Health providers, Behavioral Health Providers, Primary Care Providers, Specialists

• Using Telehealth, that Team can provide services directly into the home of a child with requiring complex medical care
Overcoming Geographic and Distance Barriers

“Telehealth to the Hogan”
Telehealth to the home
Becoming more feasible

• Improved broad-band connectivity in the home to the internet
• Improved network security
• Less expensive technologies and use of existing home-based computers and mobile devices with cloud-based video conferencing
• Simpler user interfaces
Hand Held Devices- “mHealth”

Smart Phones

BlackBerry

Treo/Palm

iPhone

Droid
Otoscopes on Smart Phones
Remote Monitoring

The “Smart Band-Aid”
The “StarTrek Tricorder: Is it Here?”
Examples of use of Telehome Care for Children with Medical Complexity
Behavioral Health

- William J. Higgins, Ph.D., BCBA-D, Licensed Mental Health Practitioner
  Pediatric Psychology Department, Munroe-Meyer Institute,
  University of Nebraska Medical Center
- Using web-based telehealth technologies to provide pediatric behavioral healthcare services to families in their home
- Treatment focuses on a variety of behavioral healthcare problems (e.g., autism, noncompliance, anxiety, toileting, aggression, depression…) 
- Other MMI departments are also using web-based telehealth technologies to extend the reach of their service (e.g., pediatric feeding disorders, behavioral genetics, social work, the center for autism spectrum disorders)
Cystic Fibrosis

• Kathleen M Kramer MAT; PMP; RT(R)
  Center for Telehealth, Cincinnati Children's Hospital Medical Center
• Plans are to have the Respiratory Therapist, Registered Dietician and the Social Worker see the patients via Telemedicine in their homes.
• This would lessen the amount of time spend in clinic and potentially increase patient and provider satisfaction
• The most important aspect in the care of these patients is to decrease the exposure to infections: The Infection Prevention and Control Guidelines for Cystic Fibrosis contain recommendations to reduce the risk of people with CF getting or spreading potential pathogens in the CF clinic or hospital setting. These guidelines include: Separate all people with CF from others with CF,
• Intend to use a mobile wireless solution (tablets, phones, laptops) and a video platform to interact with the patient during their airway clearance treatments, seeing how they clean their equipment, medications storage, etc…
• Begining stages/pilot with their Cystic Fibrosis team at CCHMC to do in home visits and still testing technology solutions and workflows.
Pediatric Palliative Care Telehealth Initiative

- In collaboration with UC Davis Health System, Providence TrinityCare Hospice, and Children’s Hospice and Palliative Care Coalition, CCHP is exploring how telehealth can improve pediatric palliative care.
- Community-based palliative care teams provide many of the services needed for these patients, but a variety of challenges – limited resources in rural areas, shortages of qualified professionals, families with limited transportation options – can cause gaps in a child’s access to needed services.
- Telehealth has the potential to bridge many of these gaps by bringing care directly to the child, wherever he or she is, but there is very little data on telehealth for pediatric palliative care.
- The project acts as both a pilot research project and as a quality improvement initiative, exploring how telehealth-delivered services improve pediatric palliative care while gaining practical data to develop more rigorous future research designs. Findings will set the stage for additional research on the effectiveness and economic impact of telehealth-delivered pediatric palliative care.
Other Potential Uses
(See references)

- Cardiology
- Neonatology and post-hospital care
- Diabetes
- Asthma
- Oncology
- Tele-rehabilitation and speech/language therapy, post cochlear implants
- Intermittent acute illnesses such as otitis media
Changes You May Wish to Make in Practice

1. Incorporate home–based telehealth into the management of your pediatric patients with medical complexity
2. Use telehealth to augment and enhance home care as part of a Patient/Family Centered Medical Home initiative for children with medical complexity
Join the Section on Telehealth Care

Member Benefits

- Weekly updates on emerging topics in telehealth care
- Notices of educational programs, webinars, and policy meetings
- Practical tips on improving telephone triage and advice
- Access to telehealth experts for networking, idea exchange and discussions on hot topics
- Advocacy for payment for all forms of telehealth services
- Guidance on how to make telehealth services efficient, safe, private, secure, and quality
- Dues are only $25 annually for AAP Members
Questions?
References

For more information on this subject, see the following publications:

**Studies and Demonstrations of Home-based Telehealth for Children**
From Pediatric and Child Specialty Care Telemedicine Webliography
--prepared by Michael Edwards, PhD, NorthEast Telehealth Resource Center, August, 2014 ([netrc.org](http://netrc.org))

**General**

For more information on this subject, see the following publications:

**Neonatology and post-hospital care**

References (cont.)

**Diabetes**

**Cardiology**
- Black AK, Sadanala UK, Mascio CE, Hornung CA and Keller BB. Challenges in Implementing a Pediatric Cardiovascular Home Telehealth Project. Telemedicine and e-Health 20, No 9, 858-867, 2014

**Pulmonary disorders**
Behavioral health

References (cont.)

Telerehabilitation and speech/language therapy


• Mashima PA, Doarn CR. Overview of telehealth activities in speech-language pathology. Telemed. eHealth 14(10):1101-1117, 2008 htm


Oncology and palliative care

