Big City Resources in Small Town Hospitals: Expanding Pediatric Access through Virtual Services

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FirstLight Health System
Children’s Minnesota
A little about Children’s Minnesota

- Only exclusively pediatric health system in Minnesota
- 2 hospitals, 12 clinic and 6 rehabilitation sites, specialty and virtual care
- 383 staffed beds, 2\textsuperscript{nd} highest neonatal volume in the country
- 40 Board certified pediatric emergency physicians; 100,000+ visits per year
Minnesota Virtual Care Landscape

Minnesota Telemedicine Act

– Payers must provide coverage for telemedicine services at the SAME rate as in-person consultations
– Limited restrictions
– Pediatrics not subject to Medicare rules

– 2016: Medicaid
– 2017: Commercial
Appropriate Pediatric Virtual Care Services

- Subspecialty
- Primary Care
- Emergency / Critical Care
Operational Infrastructure Considerations

- Contracts
  - Fee for service
  - Lump sum
- Licensing / Credentialing
- Who’s patient is it?
- Other considerations
  - How to fit into schedules, etc.
  - Other support services available
  - Technology / connection
Pediatrics in Minnesota
80% of pediatric specialists in the 5-state region reside in the Twin Cities metro area.
General information – http://pediatricreadiness.org/
Take the assessment - http://pedsready.org/
National Pediatric Readiness Project

- Multi-phase quality improvement initiative
- Based on Joint Policy Statement: *Guidelines for the Care of Children in the Emergency Department*
- Self-assessment with immediate feedback
- Benchmarking in groups by pediatric volume
- Access to QI resources targeted to identified need
Purpose

- Establish a baseline of nation’s capacity to provide pediatric emergency care in the ED
- Create a foundation for QI process
  - Includes implementation of Joint Policy Statement
- Develop benchmarks to measure improvement over time
Minnesota Results

**STATE SCORE AND COMPARATIVE SCORES:**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>STATE AVERAGE HOSPITAL SCORE OUT OF 100</td>
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<tr>
<td>61</td>
<td>STATE MEDIAN HOSPITAL SCORE OUT OF 100</td>
</tr>
<tr>
<td>69</td>
<td>NATIONAL MEDIAN OF PARTICIPATING HOSPITALS</td>
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<td>n = 4,146</td>
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**DISTRIBUTION OF STATE SCORES FOR EACH VOLUME TYPE:**

- Low (<1800 patients)
- Medium (1800-4999 patients)
- Medium High (5000-9999 patients)
- High (≥10000 patients)
Minnesota Results

Breakdown by EMS Regions
Summary

- Pediatric resources are concentrated in metro
- Legislative / reimbursement landscape is favorable to pediatric virtual care
- Opportunities to improve ability to care for kids in emergency departments through virtual connections
Thank you.

Kristi Moline – Program Manager
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Experience with Emergency Pediatric Telemedicine Consultations
FirstLight Health System is a self-sustaining, county-owned, critical access hospital (CAH) and clinic system with campuses in Mora, Pine City, and Hinckley.

- Has been serving the communities for 70 years
- Recipient of many awards including MHA’s Patient Safety Commitment and Good Catch Patient Safety, Joint Commission Key Measurer, Women’s Choice, Star Tribune’s Top 150 Workplace
• The hospital has a surgery suite, 24-hour ED, an EMT/Paramedic staffed ambulance service, birthing center, access to over 100 different specialists to constantly meet the needs of our communities.

• FirstLight performs approximately 2,500 surgeries, delivers 150 babies, manages 12,500 emergency department visits, and carries a staff of 450 caregivers.
Telehealth in Mora

Other uses of Telemed

- Telehealth for Stroke Program with Abbott Northwestern
- Tele-Mental Health Program with Assessment and Referral – Allina
Patient Demographics

- June 2015 thru March 2016 (10 months)
- Total Patients – 16
- Avg. Patients/month – 1.6

- Age
  - 2 weeks to 14 years
  - Average – 4 years

- Video consult – 12 (75%)
- Telephone only – 4 (25%)
• Admitted/Transferred to CHC - 3 Patients (20%)
  - Facial Nerve Palsy
  - Respiratory Failure
  - Febrile Seizure

• Remained at FL Mora – 13 (80%)
  - Bronchiolitis/pneumonia/other respiratory
  - Rashes
  - Allergic reactions
  - Other (fractures/syncope)
• Additional Opportunities
- 5 Patient encounters
- Transferred to MPLS without telemedicine

• Outcomes
- 1 admission to Cardiac ICU – Myocarditis
- 4 discharged to home – no further intervention required
  • Migratory arthritis
  • HSP
  • Vaginal laceration (straddle injury)
  • Gastroenteritis
Case #1

- **CC:** Rash

- **HPI:** 15 mo with rash presenting today
  - Day 5 of Amoxicillin for AOM
  - Concern for allergic reaction
  - “Acting well” per parents
  - No respiratory difficulty at home
  - No interventions prior to arrival

- **NKDA**

- **Medication – Amoxicillin**
Case #1

• Physical Examination
  - Well appearing without distress
  - No respiratory difficulty
  - Not irritable or itching
  - Eyes: Clear, no injection
  - Mouth: No lesions
  - Skin: “raised, erythematous, at times confluent rash that had areas of target lesions. The rash was noted on her trunk, extremities and her face.”
Case #1

• Diagnosis: Erythema Multiforme

• Interventions:
  - Benadryl – No relief
  - Parental Reassurance
  - Follow up with PCP/ED
    • Respiratory difficulty
    • Oral lesions
• CC: Breathing Difficulty

• HPI: 18 day old with noisy breathing
  - Began at home shortly after birth
  - Worse with lying down, feeding, and crying
  - More prominent with inspiration
  - NO fever, congestion/cough, or feeding difficulty

• PMH: Full term, no complication

• FHx: 4 older siblings - healthy
• Physical Examination
- No distress
- Normal HR and RR, Sats 99-100%
- Chest clear to auscultation

- Mom recorded the infant on her cell phone when having difficulty
  • Demonstrates inspiratory stridor with crying
• Diagnosis: Laryngomalacia

• Interventions:
  - Positioning
  - Children’s ENT
    • Laryngoscopy demonstrated Laryngomalacia
    • No further intervention
• Anaphylaxis
  - Presentation
    • Lip/facial swelling
    • Hives
    • No respiratory difficulty
  - Interventions
    • Epinephrine and Benadryl
    • Telemedicine call – confirmation of improvement

• Fall – Trauma
  - Request – C-spine clearance
  - Recommendation
    • Precautions
    • Imaging and/or transfer
Reassuring parents, offering quality care and keeping kids close to home