Session 1
Using Telehealth Across the Care Continuum

June 15, 2017
Telestroke Subscription Model

Barb Andreasen
Director, Telehealth and Regional Development, Allina Health
Current Telehealth Services

Total encounters by year

* Forecasted 2017 count based on Q1 results
National Stroke Statistics

• 795,000 Americans will have a new or recurrent stroke annually (prevalence 2.6%)
  – 610,000 are first time strokes (every 40 seconds!)
  – Death rate 37.9/100,000 (every 4 minutes!)
• 5th leading cause of death
• Stroke is a leading cause of long-term disability and the leading preventable cause of disability.
• There are an estimated 7 million Americans who are stroke survivors (30% permanently disabled)
• Direct and indirect cost – 33 billion

Mozaffarian D et al. 2015;131:e29-322.
Residents of rural counties have a **12%** higher risk of stroke death than those living in urban counties.* Postulated reasons – Risk factor or socioeconomic disparities and limited access to care.

Stroke and Rural Minnesota**
- More than a third of Minnesotans live more than 60 minutes from a Primary Stroke Center
- Nearly one in three stroke victims in Minnesota present initially to a small rural hospital
- The rural population has a greater percentage of seniors at higher risk for stroke

*Sergeev et al, 2011  
**MN Dpt. of Health Fact Sheet: Stroke in MN
Evolution of Telestroke Nationally

• Driving force for “telestroke” – 1996 approval of tPA for stroke
• First telestroke practices (2000-2005) – academic centers initiated with grant support only addressing the thrombolytic treatment decision
• Last 10 years:
  – Improving telehealth reimbursement
  – Growth of stroke subspecialty in private practice, and
  – Increasing complexity of treatment decision have pushed telestroke out into mainstream practice
• Last 5 years
  – Move to expand telestroke to a broader stroke system of care approach (other nonurgent stroke consultative work)
  – Development of other teleneurology services
Telestroke Model

- Stroke neurology access in communities without this expertise
- 24/7/365 coverage for stroke codes in ED
- Mobile video cart
- Web-based HIPPA compliant provider
- Subscription based model
# Telestroke Partnership Overview

## BENEFITS FOR PARTNERS

- Enhanced Capabilities for Identification and Management of Stroke Patients
- Higher Retention of Stroke Patients at Your Site
- Seamless Coordination with Allina Team from Implementation to Stroke Code

## Allina Telestroke Partnership Model

- Collaborative partnership development
- Team-based telestroke consultation
- Ongoing quality improvement

## BENEFITS FOR PATIENTS

- Lower Mortality Rate for Stroke Patients
- Reduced Risk of Long-Term Impairment from Stroke
- Local Care Supported by Renowned Clinical Expertise
### How are we doing? A national comparison

#### AHA / ASA recommendation – DTN 60 min

<table>
<thead>
<tr>
<th>Get With the Guidelines US Experience – before and after intervention:</th>
<th>Allina Health - Clinical Model Goal: Door to needle (tPA) &lt;40 min</th>
</tr>
</thead>
</table>
| - Percent treated with tPA<sup>1</sup>  
  - 4% (2003-2005)  
  - 7% (2010-2011)  
- Door-to-needle time - median<sup>2</sup>  
  - 77 minutes (2003-2009)  
  - 67 minutes (2010-2013)  
| - Percent treated with tPA  
  - 26% (2006 – 2016)  
- Door-to-needle time - median  
  - 52 minutes (2006 – 2016)  |

---

Telestroke in action

Telestroke Demo
“Using Telehealth Across The Care Continuum”

e-Health Summit, Brooklyn Center, MN
June 15, 2017

Maureen Ideker, RN, BSN, MBA
System Director of Telehealth, Essentia Health
Duluth, Minnesota
Essentia Health—An Internal Business Model for Telehealth

- “One Mission, One Essentia”
- Largest Rural Health Care Provider in MN - ACO
- Over 17,000 employees in 4 states-MN, WI, ND and ID
- 1500 Physicians and Advanced Practice NP/PAs
- Bring specialists to rural sites and share between regional sites
- Support Primary Care Providers
- Telehealth capability in every Essentia clinic, hospital and nursing home
- Over 4000 Telehealth visits/yr.
- Over 350 Telehealth Providers
Internal Business Model

- Professional Fees are billed by the specialist provider
- GT Modifier is used
- Reimbursed the same as in-person
- Rural Staff time can be allocated back to the Essentia specialty department
- Rural Site bills the Q3014 Facility Fee Code...$24
- Each facility purchases their own equipment-standardized and maintenance is centralized
- Help Desk is centralized in Telehealth for the visits
How are patients identified

- Specialty department notes patient’s city of residence and offers the option
- Patient’s know of the service and request to use telehealth
- Initial Visit defines who can be referred for follow up visits using telehealth
- Clinics offer the option at referral....travel or use telehealth
- Established Standards of Care
  - Tele-Hospitalists to Aurora
  - Tele-ER Protocols for NP use
Adding Programs

- Requests for telehealth services come from:
  - Specialty departments (Gastroenterology, Oncology)
  - Rural or Regional hospitals and clinics
  - Strategic Initiatives...(Elder Care-LTC & Medical Weight Loss)
  - External Partnerships-In-Reach.....(Stroke, Gillette Children’s, Mpls. Heart)
Essentia Health 6 Tele-Hospital Based Services

- Emergency Room ED Rural to Metro ED
- Pediatric ED
- Hospitalist
- Stroke Care
- Toxicology
- Behavioral Health Crisis
20 Tele-Clinic Based Services

- Allergy
- Behavioral Health Therapy
- Cardiology -- (CHF, EP)
- Chronic Pain Management
- Dermatology
- Dietitian Services
- Gastroenterology
- Home Monitoring
- Infectious Disease
- Medical Weight Loss

- Medication Therapy
  Mgmt. /Opioid Tapering
- Nephrology
- Oncology
- Pediatric Infant Audiology - Diagnostic Testing
- Podiatry - Wound Care
- Psych - Child & Adult
- Pulmonology
- Speech
- Urology
Dr. Park using Telehealth
Addressing Health Equity Across Essentia Health

- HPSAs
- Serving Native Americans - MN & WI (Deer River - 33% Native American)
- Poverty areas
- Mental Health Services
- Rural equity
Tele-Opioid Tapering
Sobering Statistics

78

Americans die every day from an opioid overdose.

At least half of all opioid overdose deaths involve a prescription opioid.

Source: Centers for Disease Control and Prevention
An American Issue

of the world’s prescription opioid supply is consumed in the U.S.

Source: Manchikanti, Laxmaiah, MD Pain Physician 2007; 10:399-424• ISSN 1533-3159
Provider to PharmD Process

Process Flow

- Provider determines appropriate patient to taper and sends referral for PharmD taper
- PharmD creates taper plan, meets with patient and communicates plan to provider
- PharmD meets with patient every 1-4 weeks until goal achieved
- PharmD visit to Provider visit ratio is 6:1
- Provider visits for COAT tapers could triple without PharmD assistance
Tele-Home Monitoring
Why Heart Failure?

Prevalence
- Affects 5.8 million in the U.S.
- Over 650,000 new patients annually
- The lifetime risk of developing HF is 20% for Americans ≥40 years of age.
- HF is the most frequent cause of hospitalization in elderly (> 65 y/o)

Prognosis
- 1/2 of people who develop HF die within 5 years of their diagnosis
- Less than 25% are alive at 10 years
Patient Outcomes: Admissions to a higher level of care

Control

TelehomeCare

0% 20% 40% 60%
References


Questions...

Maureen.Ideker@essentiahealth.org
Telemedicine across the care continuum

Minnesota e-Health Summit 2017
Marsha Waind, Telehealth Manager
Telemedicine through Open Connections Model

• Altru Mission: *Improving Health, Enriching Life*

• Altru Vision: Deliver world-class care to the residents of our region
Grand Forks licensed Beds : 322
Inpatient Discharges: 14,829
50% Inpatients were discharged back to rural area outside of Grand Forks/EGF
Altru Regional Clinics = 11
North Dakota = 3
Minnesota = 8
» Allergy
» Cardiology
» Dermatology
» Diabetes Care
» Gastroenterology
» Genetic Counseling
» Infectious Disease
» Dietitian Services
» Nephrology
» Neurology
» Oncology
» Orthopedics
» Pain Management
» Palliative Care
» Pediatrics
» Podiatry
» Prosthetics
» Psychiatry & Mental Health Counseling
» Pulmonology
» Renal Dialysis Care
» Speech Therapy
» Sports Nutrition
» Surgical consult/follow-up
» Urology
» Weight Management & Health Coaching
» Wound Care

Newest Service: Teleprimary Care
Primary care coverage of small rural Clinics to increase access and avoid closure
Altru Telemed Patient Locations

- Rural Hospital: 17
- Altru Clinics: 10
- Skilled Nsg Facilities: 3
- Residential: 3
- Non-Altru Clinics: 10
Why connect to these locations?

• Professional Shortage areas
  – HPSA

• Underserved populations
  – FQHC, Detention Centers, Group homes

• Minority Population
  – Spirit Lake Health Center, Fort Totten
Why? Improved outcomes with telehealth

<table>
<thead>
<tr>
<th>Percentage Reduction</th>
<th>Description</th>
<th>Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td>Reduction in mortality</td>
<td>Darkins 2008</td>
</tr>
<tr>
<td>25%</td>
<td>Reduction in bed days</td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td>Reduction in ER admissions</td>
<td></td>
</tr>
<tr>
<td>19%</td>
<td>Decrease in hospital admissions</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td>Reduction in ER visits</td>
<td></td>
</tr>
</tbody>
</table>

1. Telehealth Services in the Department of Veterans Affairs, Darkins 2008
2. Whole Systems Demonstrators; An Overview of Telecare and Telehealth, BMJ / UK Department of Health 2009
Altru Telemedicine Growth

Total encounters to 2008-2016 = 15,520
Telemedicine Services at Altru

2016 top Service Lines by Volume

- Oncology
- Psychiatry
- Renal Dialysis
- Infectious Disease
- Nephrology
- Dermatology
- Hosp Psych Inpatient
- Wound
- Orthopedics
- Urology
- Diabetes
- Podiatry
- Allergy
- Cardiology
- Pain Mgt.
- Pulmonology
Patient Volumes at Location type 2016

- Altru: 3129
- Rural Hosp/Clinic: 896
- Nsg Home: 193
- Other: 20

Improving Health, Enriching Life
Altru Telemedicine 2016
Top Sites by Volume

- Devils Lake
- Roseau
- Warroad
- Cavalier
- Grafton
- Langdon
- Rugby
- Crookston
- Thief River
Story of 1 rural clinic and the telemedicine that grew there
Altru Clinic
Devils Lake, ND
FINALLY! PART OF CARE DELIVERY
Devils Lake Clinic
Telemed Encounters

1st nurse hours for telemed: 2011
Telemed Room: Sept 2012
2nd Telemed Nurse and Room: Aug 2016
### The ROI of Telemed for 1 Clinic

<table>
<thead>
<tr>
<th>Revenue</th>
<th>1223 encounters</th>
<th>Revenue related to Telemedicine encounters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility fee</td>
<td>$28.00 x 1223 encounters</td>
<td>$34,244.00/ yr</td>
</tr>
<tr>
<td>Lab fees kept local as ordered by Telemed*</td>
<td>$5,808/month</td>
<td>$69,696.00/yr</td>
</tr>
<tr>
<td>Imaging</td>
<td>48 Ortho patients /yr</td>
<td>?</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$103,940.00/ yr</strong></td>
</tr>
</tbody>
</table>

*only accounts for labs same day as telemedicine encounter
## ROI for 10 Clinics over 1 year

<table>
<thead>
<tr>
<th>Revenue</th>
<th>3087 Altru Clinic encounters in 2016*</th>
<th>Revenue related to Telemedicine encounters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility fee</td>
<td>$28.00 x 3087 encounters</td>
<td>$86,436.00/ yr</td>
</tr>
<tr>
<td>Lab fees kept local as ordered by Telemed for 1 month April 2016 for 10 clinics*</td>
<td>$5808.00/month</td>
<td>$333,352.00/yr</td>
</tr>
<tr>
<td>Imaging</td>
<td>48 Ortho patients /yr</td>
<td>?</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td><strong>$419,968.00/ yr</strong></td>
</tr>
</tbody>
</table>

*5223 total encounters at all locations in 2016*
### ROI for SNF or CAH???

<table>
<thead>
<tr>
<th>Cost Savings</th>
<th>$$$$$$$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 less van ride</td>
<td>Van driver; aide; gas/wear</td>
</tr>
<tr>
<td></td>
<td>86 yr old transported 2.5 hrs 6 weeks post hip fracture for 15 min visit</td>
</tr>
<tr>
<td>1 less ambulance ride</td>
<td>Driver, aide or 2</td>
</tr>
<tr>
<td></td>
<td>What does it cost hospital when they lose out on admit because ambulance is out of town?</td>
</tr>
<tr>
<td>Professional Networking and care planning</td>
<td>Invaluable</td>
</tr>
<tr>
<td></td>
<td>Rural care nurse is involved in developing a care plan</td>
</tr>
<tr>
<td>Revenue by keeping 1 patient in CAH BED?</td>
<td>$$$$$$</td>
</tr>
</tbody>
</table>
Bringing healthcare to patient
Marsha Waind
Telehealth Manager

mawaind@altru.org