

CENTER FOR CONNECTED CARE

# A System Wide Approach to Telemedicine

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# **About Mayo Clinic**

- Nonprofit committed to Clinical Practice, Education and Research
- >63,000 employees
- >4,500 physicians
- > 1.3 million patients a year from all 50 states and > 136 countries
- "No one is big enough to be independent of others"

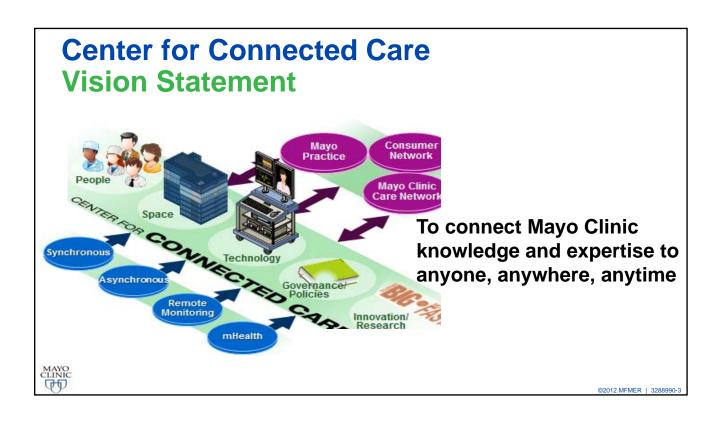
  W.W. Mayo
- 3 Destination Centers (Arizona, Florida and Minnesota)

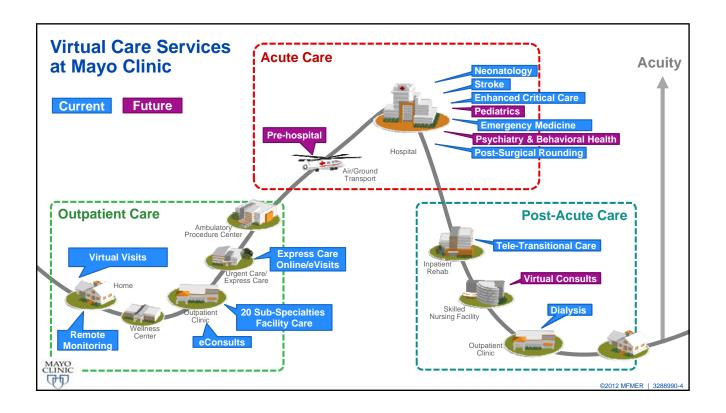


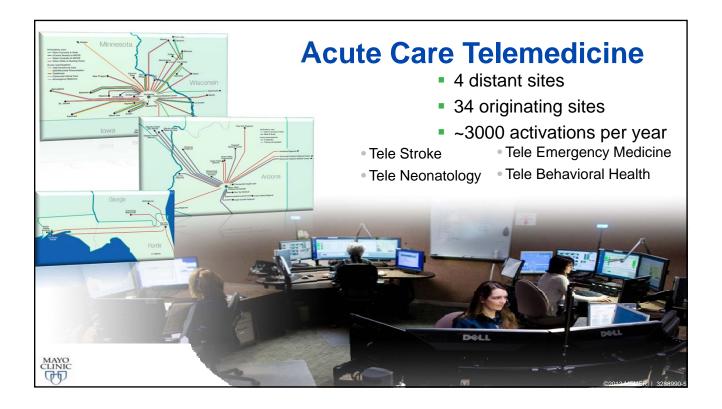
**Primary Value:** 

The needs of the patient come first

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# **Convergence on Technology Product**

### Why:

- Multiple products with high failure rates
- Technical and operational support house within the clinical departments

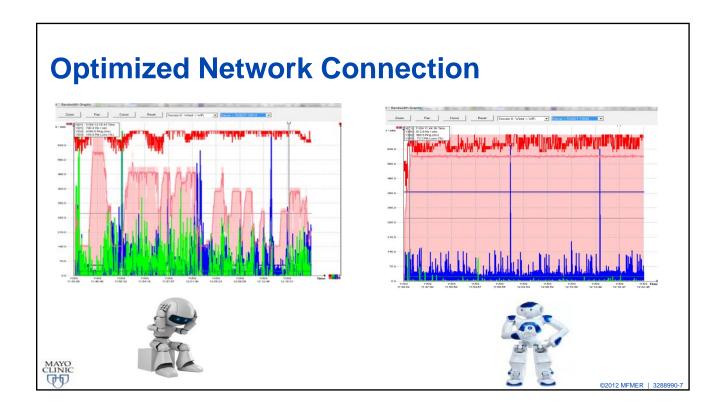
### What did it take:

- Buy-In from multiple shared services teams
- IT approvals for products that fell outside of the traditional model
- Partnerships across 5 IT units, Connected Care product team, and InTouch Health
- Held > 85 training sessions



Trained > 500 staff





# **Results**

- Standardization of products across all acute care telemedicine services
- Deployment to 39 Emergency Departments and Labor and Delivery units across Arizona and Midwest
- Implemented 24x7 support model
- Standardized contract and service level agreement language
- Enabled administrative operations convergence
- Enabled clinical service activation centralization

# Technical Issue Trend 30.0% 25.0% 20.0% 15.0% 10.0% BASELINE POST CONVERGENCE

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# **Convergence of Administrative Operations**

- Why:
  - Multiple, similar administrative processes across different departments
  - Redundancy within projects
  - All implementations "Started from Scratch"
- What did it take:
  - Centralized oversight within the Center for Connected Care
  - Standardization of documentation, billing, reporting, credentialing, processes
  - Coordination groups:
    - Emergency Telemedicine Convergence Group: multi-departmental oversight for product convergence project in 2016
    - Acute Care Telemedicine Coordinating Group: multi-departmental coordination group for new acute care telemedicine initiatives in 2017

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## Results

- Dedicated implementation and support resources for the acute care telemedicine product line
- Diffusion toolkit developed to standardize processes and timelines to increase efficiency of implementations
- Standardized training, education programs, and learning content for care teams and providers
- 78 care team training sessions with 420 care team staff trained in 4 weeks
- Streamlined processes to support licensing, credentialing and privileging of telemedicine providers

### **Provider Satisfaction** 100.00% 90.00% 80.00% 70.00% 60.00% 50.00% 40.00% 30.00% 20.00% Baseline 10.00% ■ Post-Go Live Outling of Author Levellers, were good To The State of th ■ PGI Thru lune ©2012 MFMER | 3288990-



# **Contributing Success Factors**

- Proactively resolving issues before care teams are aware
- Stabilization of the product and proactive monitoring of the network and endpoints increases availability and reliability
- Partnership with IT\* and InTouch Health has improved stability of the endpoints at Mayo Clinic campuses
- Continuous feedback to the practice regarding upcoming system outages and communication to use back-up plans
- Clinical service training at implementation with access to ongoing and ad hoc training
- Mock calls and simulation center access for telemedicine providers
- Simulated service activations for new care team members

# **Centralization of Service Activation**

- Why was it needed:
  - Same care teams calling different numbers for acute care telemedicine services
- What did it take:
  - Establishment of a discrete phone number that prioritizes calls within the call center.
  - Establishment of decision trees that assist in meeting the target turn around time.



- All Midwest activations centrally managed through the Admissions and Transfer Center
- Projected enterprise-wide activation centralization by June 2018



# **Convergence Impact on Telestroke**

### Growth

Stability of the products and formalized training resulting in a 50% increase in volumes to the Midwest telestroke program

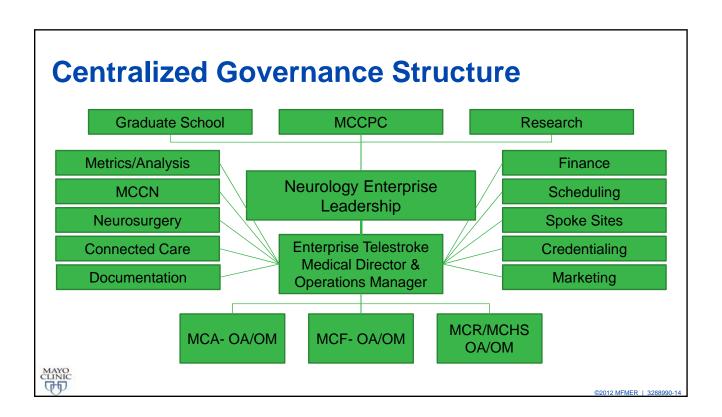
### Standardization

All neurologists using the same products Standardization of clinical algorithms

### Transition

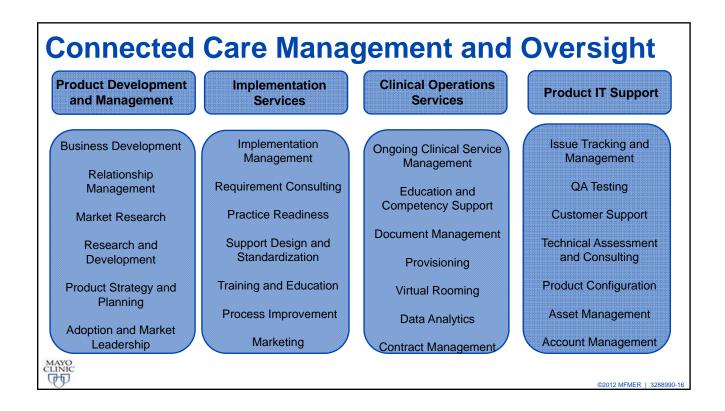
Ability to move from 3 regional services to 1 enterprise program in 2018 Convergence of clinical staffing

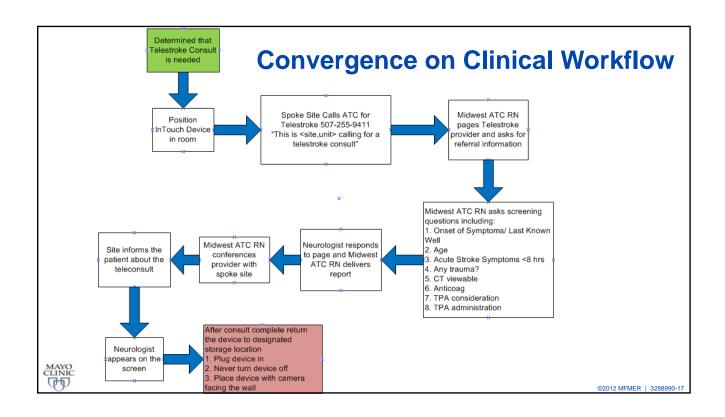
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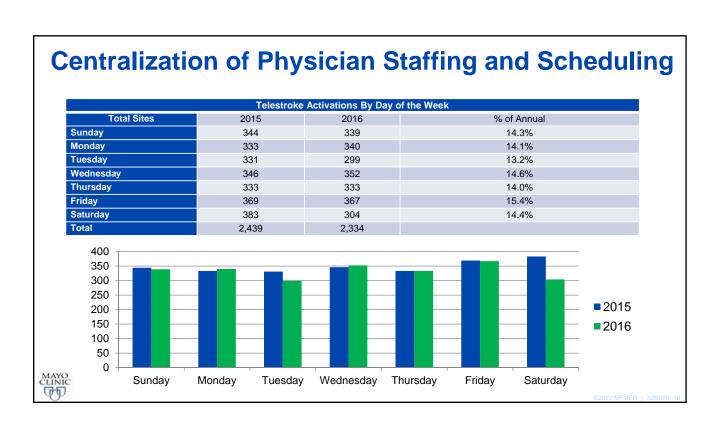


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### **Clinical Practice Management and Oversight Clinical Program Clinical Metrics & Clinical Operations Service Delivery Quality Outcomes** Adoption **Practice Strategy** Telemedicine Development Patient Measures Practice Relationship Consultation Management Service Prioritization **Provider Measures Space Availability** Service Promotion Clinical Practice **Service Quality** and Marketing Engagement Clinical Staffing Models Assurance Medical Training and Clinical Service Staff Scheduling Evidence-based Education Oversight Research Documentation and Practice Relationship **Billing Compliance** Management with **Partners**







# **Convergence on Quality Measures**

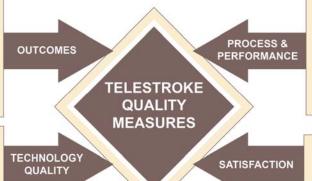
### PATIENT CHARACTERISTICS

 Age, gender, time-to-treatment
 NIHSS score at first presentation and arrival after transfer PATIENT OUTCOMES

- · Time of arrival and departure for transfer, arrival time at receiving hospital

  • Preliminary and final discharge diagnosis
- · Hospital length of stay, in hospital complications, mortality
- mRS and NIHSS at discharge and discharge location TREATMENT RATES
- · Alteplase administration/total telestroke consults
- IV alteplate protocol adherence
- Symptomatic and asymptomatic intracranial hemorrhages Mortality at 7 days and 90 days
- Record any technical failure and limitation
   Communication problems

- · Limitations, delays, or inability to perform a telestroke consults



- The time of consult notification
- Phone response
   Video consult initiation
   Patient arrival
- · CT scan
- Diagnosis
- Decision making
- Initiation of intravenous alteplase bolus or the decision not to treat TRACKING TRANSFERS

- Time of transfer
   Destination facility
   Time of arrival

### **OPERATIONAL FAILURES**

- · Work flow issues
- Violations of security of protected health information policies
   CT images quality

**BACKUP SYSTEM** 

 With provider, staff, technology, and interaction PROVIDER

Overall experience

Network operation adequacy

Dumitrascu O, Demaerschalk B, Telestroke, Current Cardiology Reports 2017



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# **Conclusion**

**Progressing from Service Line to Enterprise** has required convergence and centralization of technology, people, operations, governance, and evaluative strategies

