



**HEALTH**  
UNIVERSITY OF UTAH

# **TELESTROKE: STAYING RELEVANT IN A COMPETITIVE MARKET**

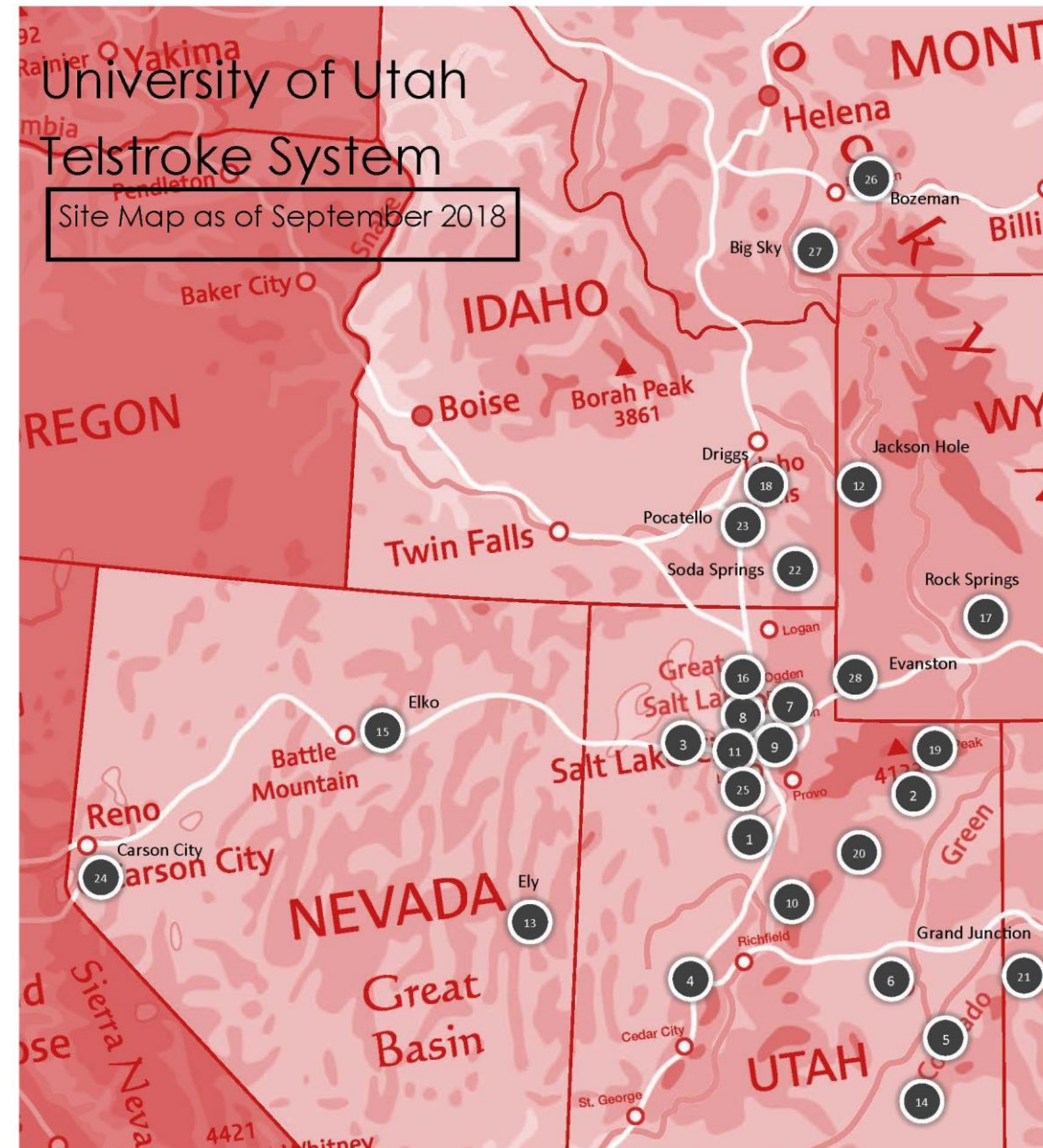
***JALEEN SMITH, BS, JENNIFER MAJERSIK, MD, ERIN EKSTROM, BSN  
UNIVERSITY OF UTAH HEALTH***

# DISCLOSURES

- No presenter or team member has a financial disclosure or conflict of interest

# HISTORY OF THE UUH TELESTROKE PROGRAM

- Began in 2003 with Central Valley Medical Center
- Network now spans 6 states and 26 (2 pending) spokes  
-One of the largest spanning networks in the US
- 8 attending providers and 2 fellows taking 24/7 call
- Provided tPA to 53% of Acute stroke cases in 2017



# WHAT AFFECTS A NETWORK GROWTH?

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- Market Demand

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- Program Quality

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- Market Demand
- Program Quality
- Program Offerings

# WHAT AFFECTS A NETWORK GROWTH?

- Market Demand
- Program Quality
- Program Offerings
- Site Engagement




# QUALITY INITIATIVES

- Monthly Calls (2015)
- Quality Tracking Program (2015)
- Monthly/Quarterly Metric Reporting and Benchmarking (2015)

Metric	Goal
Door to CT	15 min
Door to Call	15 min
Door to Camera	15 min
Call to Camera	30 min
Door to Bolus	60 min
DIDO	75 min

# QUALITY IMPROVEMENT PROJECTS

- Door-in-Door-Out
  - Critical metric associated with clinical outcomes
  - State-wide effort led by State Stroke task force
  - UUH results submitted to ISC 2019 - decreased times 192 min to 90 min in the targeted group

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## Tips and Tricks for Improving your Door-In-Door-Out Times (DIDO)

University of Utah Health's, TeleStroke program is launching a new quality improvement initiative. This latest improvement effort will be on improving Door-In-Door-Out times (the time from arrival at a primary stroke center or stroke receiving facility to transfer for higher level of care). There is now overwhelming evidence that endovascular treatment is effective up to 24 hours. Timely, efficient treatment, and transfer continues to be important for patients who present at a primary stroke center, or stroke receiving facility.

**What you can do:**

- Empower staff to initiate TeleStroke earlier in the process.
- Immediately send the non-contrast head CT. No need to wait for a full Radiology read.
- Implement use of a Large Vessel Screening Scale by nursing at triage.
- Activate EMS/ flight team as soon as a decision for tPA or transfer is made.

**What we are doing:**

- Quicker identification and initiation for tPA administration on eligible patients.
- Internally improving transfer protocols and wait times for transfer patients.

If you have any further questions or ideas, please contact:  
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801-587-9935

# ADDITIONAL PROGRAM OFFERINGS

- Dedicated Staff
- Project ECHO, Stroke Case Review
- Educational Opportunities and Training
- Online Training

# PHYSICIAN LIAISONS, DEDICATED STAFF



Dr. Jennifer Majersik  
Associate Professor of Neurology,  
TeleStroke Program Director  
Nevada, and Select Utah and  
Wyoming Sites



Dr. Peter Hannon  
Assistant Professor of Neurology,  
Nevada and Select Utah and  
Montana, Southern and Central Utah  
Sites



Dr. Lee Chung  
Assistant Professor of Neurology,  
Idaho and Select Utah and Wyoming  
Sites



Jaleen Smith  
TeleStroke Coordinator  
All Sites



# PROJECT ECHO, STROKE CASE REVIEW

## STROKE ECHO



### "SHORT CIRCUIT:" BEST PRACTICES FOR TELESTROKE CONSULTATION

LEE S CHUNG, MD & PETER M HANNON, MD  
FEBRUARY 22, 2018



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FREE TO JOIN! EMAIL [JALEEN.SMITH@HSC.UTAH.EDU](mailto:jaleen.smith@hsc.utah.edu)

PLEASE JOIN US FOR  
**STROKE  
ECHO**  
EXTENSION FOR COMMUNITY HEALTHCARE OUTCOMES

Thursday, February 22nd  
12:00-1:00PM MST

TOPIC:  
"SHORT CIRCUIT:"  
BEST PRACTICES FOR  
TELESTROKE CONSULTATION  
PRESENTED BY DR. PETER HANNON, MD  
AND DR. LEE CHUNG, MD


Our Comprehensive Stroke Center, with Project ECHO, has created a live, interactive video conference to highlight the latest stroke advances through regional case review  
This is an easy and **FREE** way for your facility's staff and physicians to earn Continuing Education credits over a lunch hour!

TO SIGN UP AND FOR MORE INFORMATION, PLEASE CONTACT OUR TELESTROKE COORDINATOR TODAY!

Jaleen Smith  
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[jaleen.smith@hsc.utah.edu](mailto:jaleen.smith@hsc.utah.edu)

Disclosure: Neither the speaker(s), planner(s), nor anyone in control of content for Stroke Case Conference have any financial relationships with commercial products or services discussed today.  
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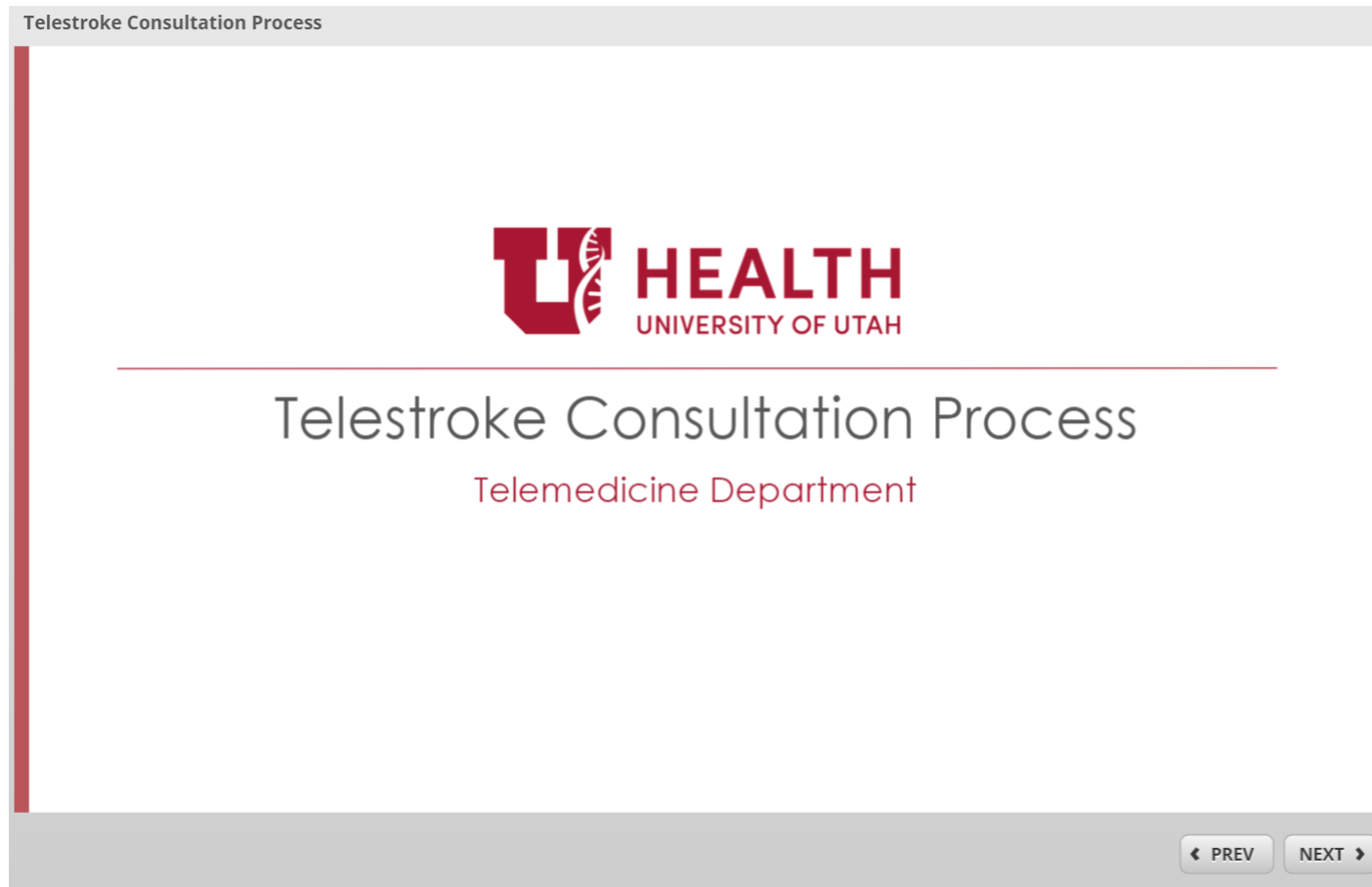
Education Geared Towards  
RN . MD . DO . NP . MA . PT . LPN . OT . SP . PA

# OTHER EDUCATIONAL OPPORTUNITIES





# ONLINE TRAINING



# ONLINE TRAINING


Telestroke Consultation Process

Telest

Telestroke Consultation Process

## Why is the Telestroke Process So Important?

When a patient is having a stroke, 1.9 million brain cells are lost every minute....



[< PREV](#) [NEXT >](#)



# ONLINE TRAINING

Telestroke Consultation Process

Telestroke Consultation Process


Telestroke Consultation Process

## Why is the Tele


When a patient is l  
cells are lost every

## Let's Introduce Our Players


In the Telestroke process, we have several key players we need to discuss. Each of these players will be represented in this lesson with the same colors so you can easily recognize them.



The patient's bedside staff are in green.



The patient's ED physician or APP is in blue.



The University of Utah Health (UUH) telestroke expert is in white.

Telest

← PREV NEXT →

# ONLINE TRAINING

## Telestroke Consultation Process

Telest

## Telestroke Consultation Process

### Why is the Tele

When a patient is l  
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## Telestroke Consultation Process

### Let's Intro

In the Telestroke  
discuss. Each o  
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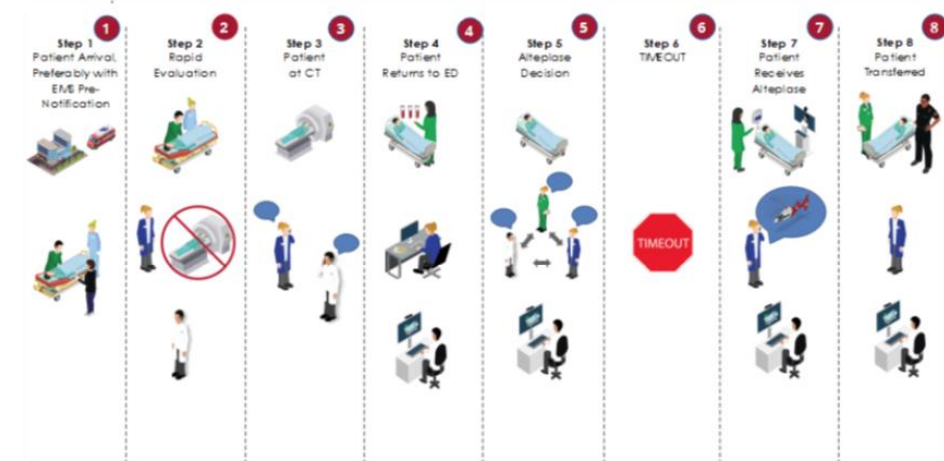


The patient's bedside  
in green.

## Telestroke Consultation Process

### Why is the Telestroke Process So Important?

Simultaneous processes streamline the workflow. Know what you need to do at each step to make sure you're not the bottleneck. We'll go over each step of the process in this lesson.



◀ PREV

NEXT ▶

# ONLINE TRAINING


NEXT MODULE!





# SITE ENGAGEMENT





## TeleStroke News

**Hospital Name** January 2018

**Happy New Year Everyone!**

Below, your metrics for the entire year of 2017 are listed as well as the network average. I want to thank each and every one of you for helping us continue to gather these every month and for working to improve your acute care times. **We lowered our average door to tPA time by 10 minutes in 2017!** With continued effort in 2018, we are hoping our network can reach the national standard of DTN in under 60 minutes! Please also, don't hesitate to contact me if you have any questions.

Network Summary	Door to CT	Door to Call	Door to Camera	Call to Camera	Door to tPA	Door In Door Out
Average	14 min	36 min	48 min	12 min	73 min	149 min

Month	Door to CT	Door to Call	Door to Camera	Call to Camera	Door to tPA	Door In Door Out
Jan						
Feb						
Mar						
Apr						
May						
Jun						

Month	Door to CT	Door to Call	Door to Camera	Call to Camera	Door to tPA	Door In Door Out
Jul						
Aug						
Sep						
Oct						
Nov						
Dec						



## TeleStroke News



**Utah Stroke Task Force Recommendations for Improving Door-In-Door-Out Times**  
Dr. Jana Wald, MD  
Associate Professor of Neurology

**CALL TO ACTION**

We now have overwhelmingly positive evidence that endovascular treatment (EVT) for large vessel occlusion (LVO) up to 24 hours from stroke symptom onset is effective. This is exciting news for our patients and hospitals must have efficient processes in place to rapidly identify, treat, and transport patients with suspected LVO to appropriate care.

We know from pooled data of the recent trials showing the remarkable benefit of adding endovascular therapy (EVT) to best medical management (including alteplase if eligible), that stroke patients with LVO have better outcomes the earlier EVT is started. Our region's stroke receiving facilities hold the key to the processes that decrease DIDO time and get patients to an EVT-capable center sooner, so processes focused on decreasing DIDO are among the most important early interventions to reversing the devastating consequences of large vessel stroke.

**The Utah Stroke Task Force has created a list of recommended strategies for reaching our goal door-in-door-out (DIDO) time of < 75 minutes:**

1. EMS Pre-notification to the receiving hospital when a patient has a suspected LVO in the field.
2. Implement use of a LVO screening scale by nursing at triage in the emergency department.
3. Notify nearest EVT capable center of patient with suspected LVO within 10 minutes of triage.
4. Take patient directly to CT upon arrival at facility.
5. If using telestroke, call for telestroke evaluation while patient is in CT.
6. Implement Target: Stroke @ strategies that will help achieve alteplase door to needle times in <45 minutes for patients with LVO.
7. Identify clear pathways for transferring the patient from your facility to an EVT capable facility:
  - Bip-and-go (Same EMS unit that brought patient from field is qualified to transport patient to EVT capable center)
  - EMS transfer at your hospital until CTA performed and LVO confirmed
  - Bip-and-get (Different EMS unit dispatched to transport patient to EVT capable center i.e. Air, ACLS transport needed)
  - transport team mobilized PRIOR to imaging confirmation of suspected LVO if the patient will need transport to a higher level of care regardless
8. Collect, measure, and report Door-In-Door-Out and Door-to-Decision times.

**UPCOMING EVENTS:**

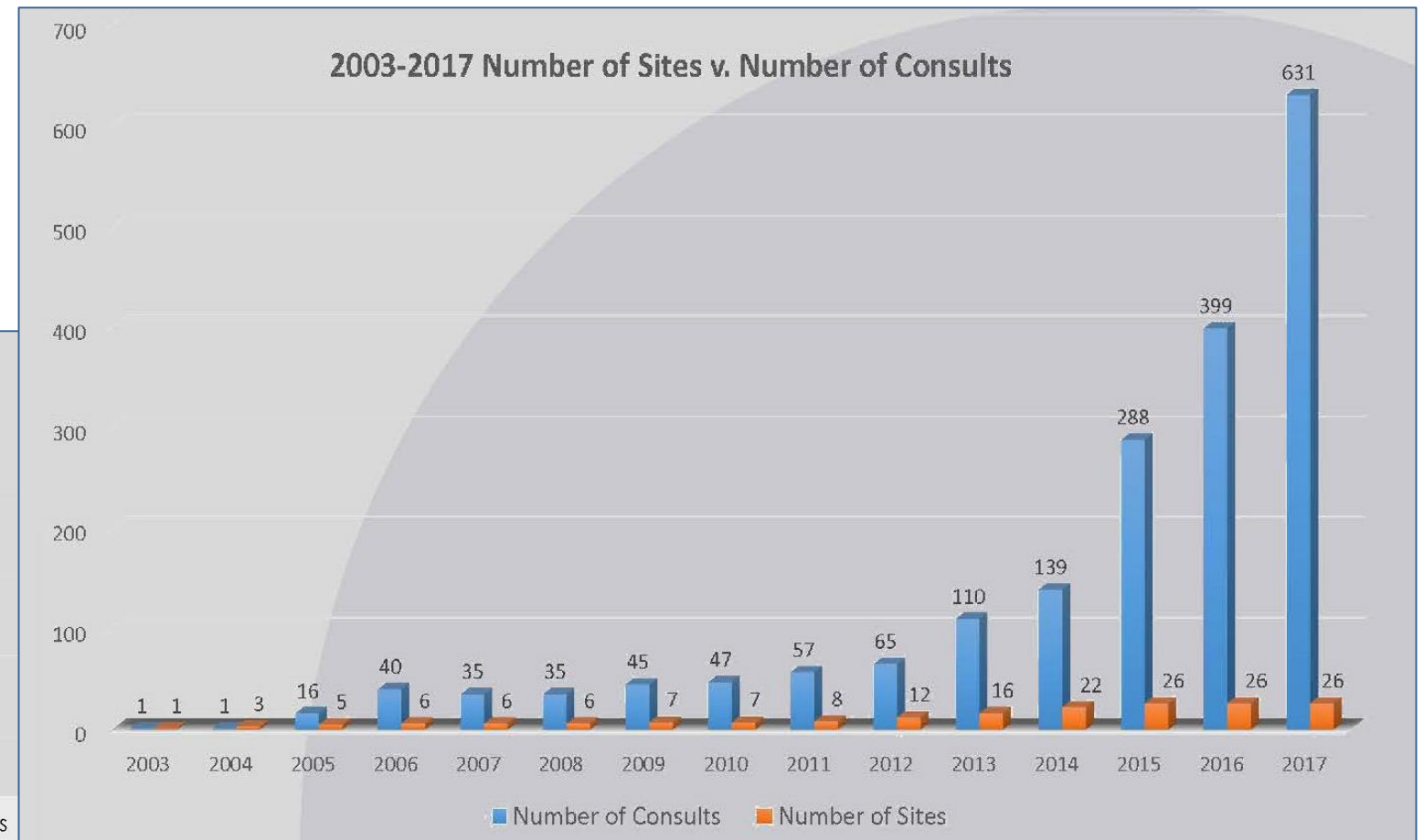
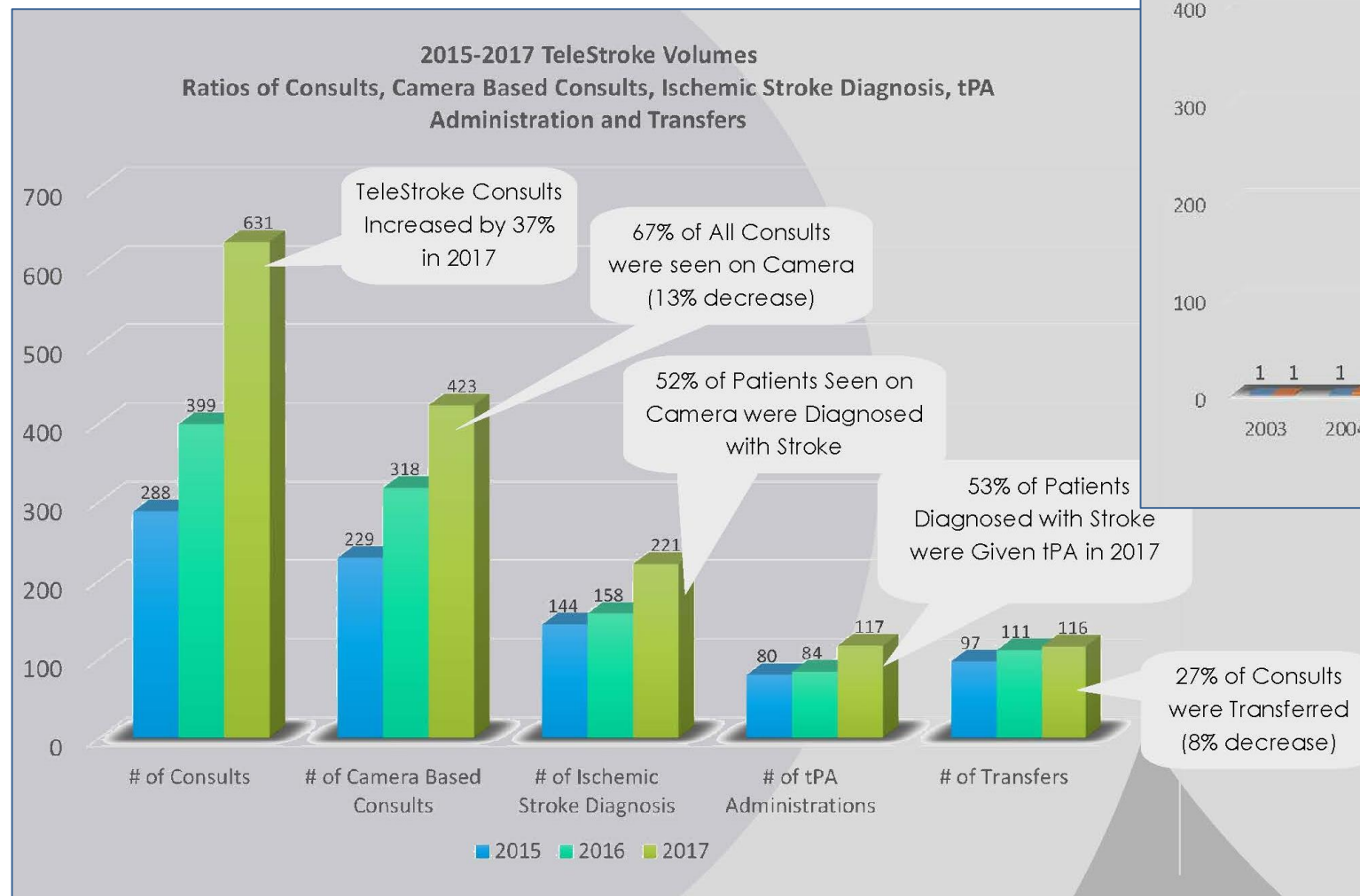
Stroke ECHO  
May 3rd, 12:00 PM  
Title TBD

Elaine J. Skalabrin  
Stroke Symposium  
May 18th, 7:00AM-2:00PM  
Marriott City Center, SLC, UT

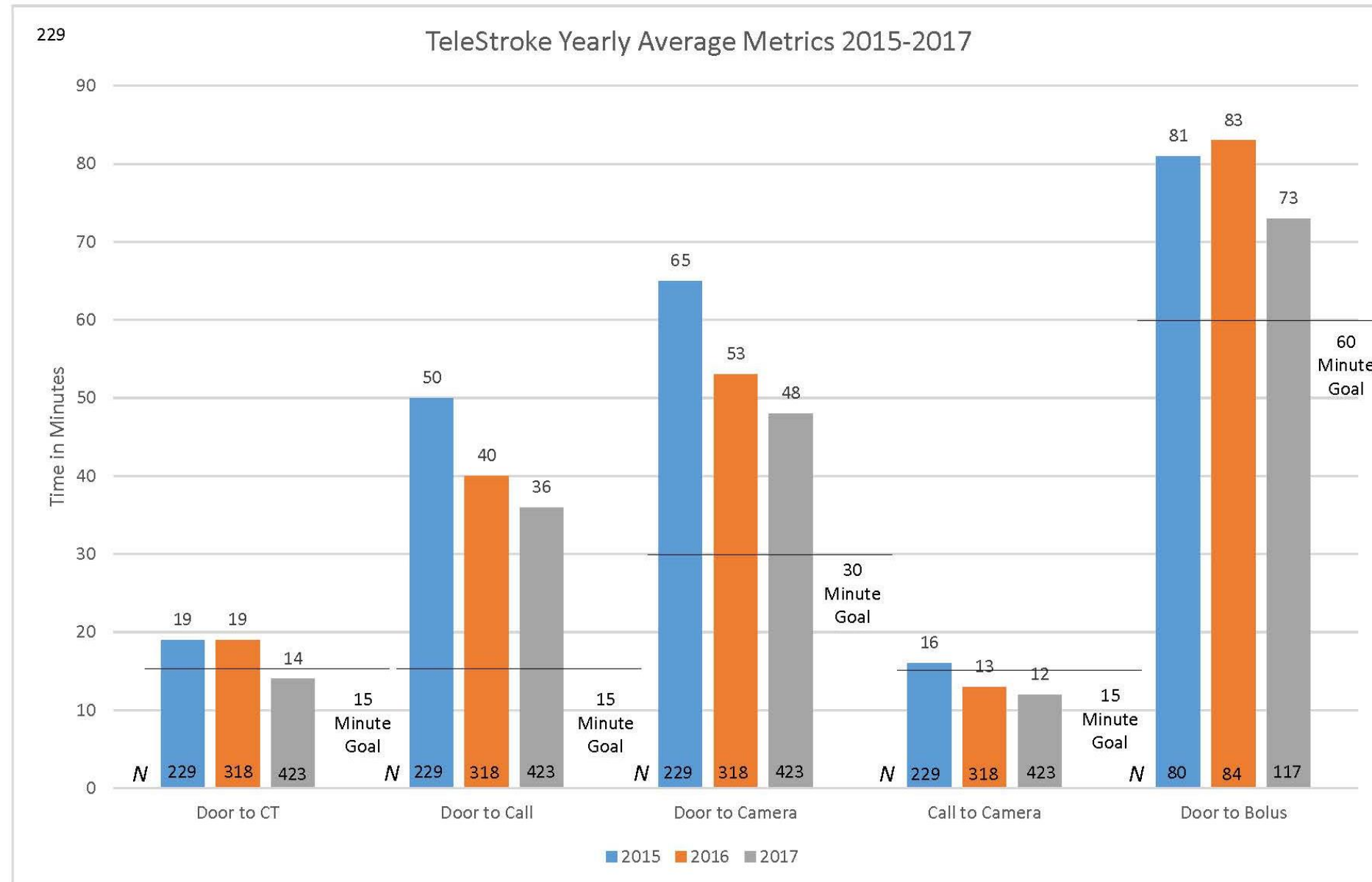


**CONGRATULATIONS TO BOZEMAN HEALTH**  
For being our door to tPA champions this quarter with an average of 44 minutes for the month of January!

# GROWTH AND IMPROVEMENT WITHIN OUR NETWORK



# GROWTH AND IMPROVEMENT WITHIN OUR NETWORK





# FUTURE WAYS TO ENHANCE YOUR TELESTROKE OFFERINGS

- Medical Directorship, Supporting Stroke Designation
- Building relations with 3<sup>rd</sup> party CSC
- Supporting enhanced image capabilities
- Expanding services

THANK YOU