

# Door in Door out: Time not Wasted



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[myMosaicLifeCare.org](http://myMosaicLifeCare.org)

MAYO  
CLINIC

CareNetwork  
Member

# Mosaic Life Care



5325 Faraon, St. Joseph, Missouri, 64506

## Mosaic Life Care

- Not for Profit
- Sole Provider  
Community Hospital
- 351 Licensed Beds
- Private Rooms
- Over 4200 employees



## Stroke Center (Integrated)

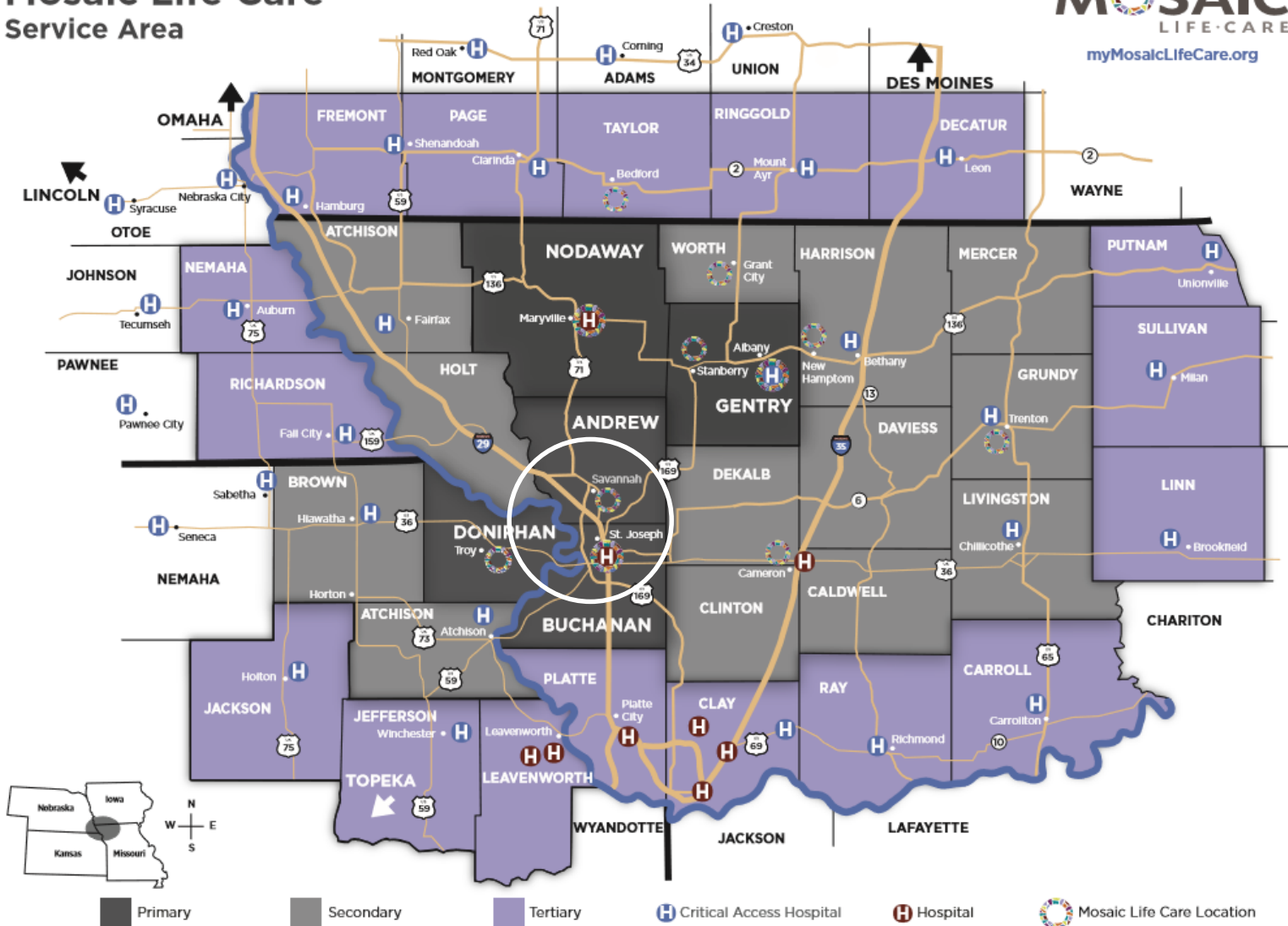
- 36 Bed Emergency Dept/ 21 Bed Critical Care Unit
- 30 Bed Ortho/Neuro Unit/ 48 Bed Step Down Unit
- 48 Bed Rapid Observation/Telemetry unit

# Service Areas

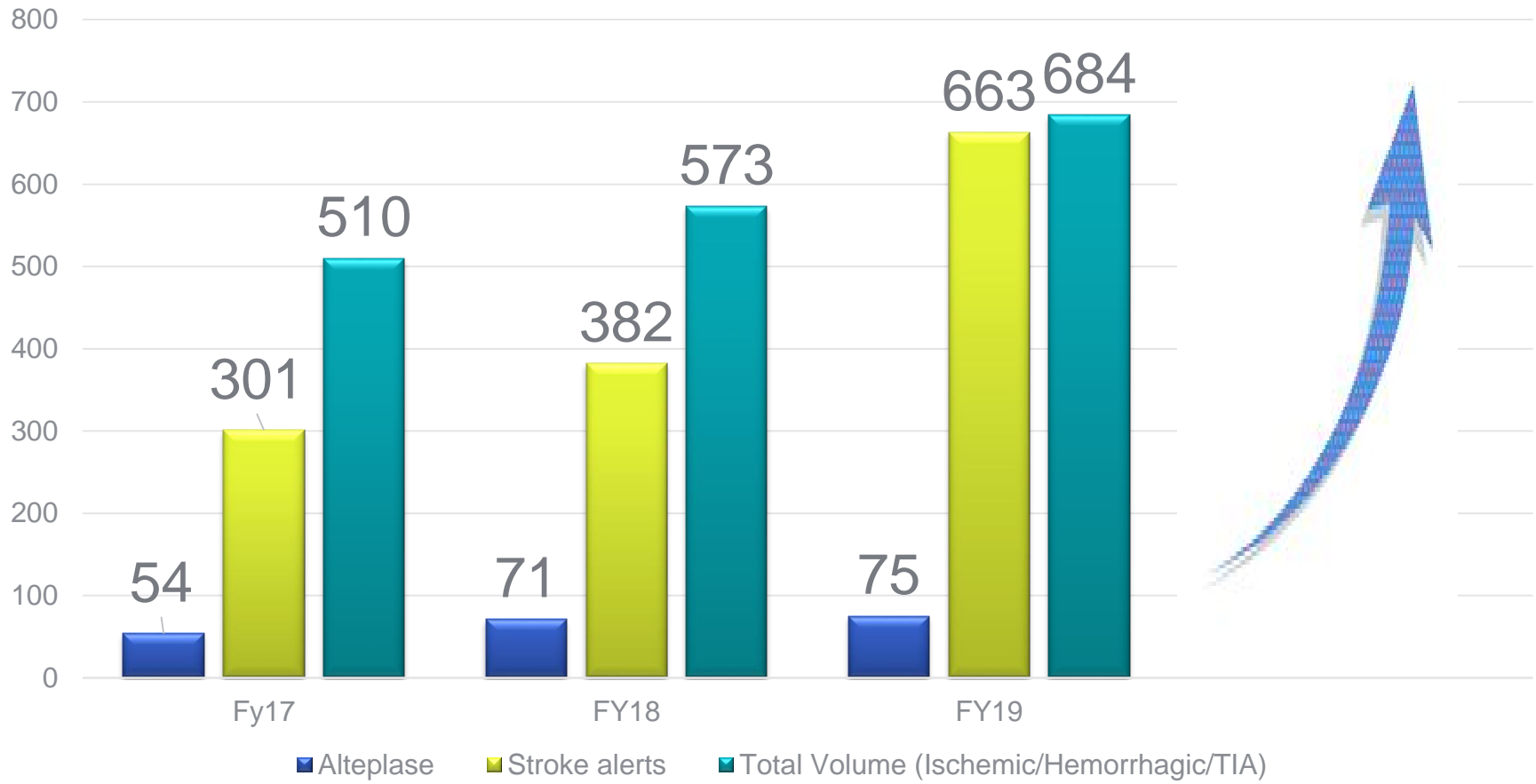
Mosaic Life Care  
Service Area

MOSAIC  
LIFE·CARE

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## Volumes through the years



# Reasons for Volume Increase

- Community Education
- EMS Education
- Nursing and Provider Education
- Changes with guidelines due to incredible studies
- Organizationally--Stroke alerts called up to 24 hours of LKWT
- Broadened symptoms from FAST to BEFAST





# Measuring Times over the years (2017-2019)

- Door to CT = was 22 minutes, now 14 minutes
- Door to Alteplase = was 55 min, now 32 minutes
  - (fastest is 7 minutes last year and this year is 8 minutes)
- Door In/Door Out = was over 200 minutes, now 80-90 minutes
- Average transfers = 5-8 month
- Average Alteplases = 5-10 month
- Alteplase given = 16-17% of cases



# Process Improvements

## Community Education

- Local events/TV/Billboards/Social Media
- Local Stroke support group started and taught FAST at AHA/ASA Heart walk
- Stroke Registrar talked at local event for people over 70 (450 people attended)
- **Percent of POV vs EMS = was 60 v 40%, now 30 v 70%**

## EMS Education (Local and surrounding agencies)

- Medical Director and Stroke Registrar completed multiple educations around stroke topics (2-3 Times/Year)
- Timely Feedback to the EMS (send every stroke alert information back to EMS)





# Process Improvements cont'd

## Nursing Education

- ED Orientation (1 hr)
- Critical Care Class (1.5 hr)
- Inpatient Stroke Class (4 hr)
- Stroke series—Restaurant (1hr, 6 times/year)
- Bi-state Stroke consortium (AHA/ASA =7hrs, Mosaic = 4 hr, Members offering = 4 hr)
- Online offerings

## Provider Education

- Orientation discussion
- Bi-state Stroke consortium (AHA/ASA =7hrs, Mosaic = 4 hr, Members offering = 4 hr)
- Online offerings



# Process Improvement cont'd

## Guideline changes

- Stroke alert process to 24 hours not 6
- Updated Order sets to reflect newer guidelines/timeframes



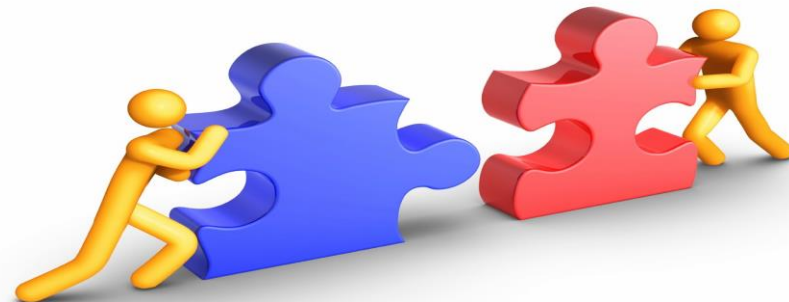
## Other Changes

- Started CT Perfusions and purchased RAPID software (Clouding to Level I)
  - Results assisted with more appropriate transfers to comprehensives
  - Average transfers = 5-8 month
  - **Notifying EMS/Lifenet groups for transport—having them on standby**
- Education to Rapid Response Nurses
- Added Alteplase/Stroke box and IV pump in CT for quicker response to starting boluses and infusions—designated only for stroke alert patients

# Put It Together

Becoming Successful is putting all of this together and working on it

- Stroke Registrar and other Trauma/Stroke staff attend all stroke alerts during work hours
  - Maintains a walking PI piece and real-time education/debriefing
  - Extra hands for ED staff if short
  - Assist with reminders of timeframes
    - Don't spend too much time on EKG's
    - Not too many attempts at IV's
    - You only need Monitor/BP/Glucose to get initial CT of Head
- Buy-in from Nurses and Providers
  - Newer nurses and providers increase opportunities for teaching, understanding and comfortability
  - Changes the Culture in ED



DTN Stroke Alert Report

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Action	Actual time Arrived at	Minutes elapsed	Goal time in minutes
Patient Arrival			
ED arrival to Code Stroke activation			15
ED arrival to initial doctor evaluation			10
Neurologist Notified			15
ED arrival to CT initiated			20
ED arrival to CT results			45
ED arrival to Lab results			45
ED arrival to Alteplase bolus			45
Onset to Alteplase bolus			270

Encounter Number:	
Date of Birth:	
Pt. Name:	
Age/Gender:	
Arrival Diagnosis	
Arrived Via:	
Arrival Date:	
ED NIHSS:	
LKWT:	
ED physician:	
ED Nurse:	
Neurologist:	
Transferred:	
Interventions:	
DC Disposition:	
Any Deficits:	
DC Diagnosis:	

<u>EMS</u>	
Pre-Arrival Symptoms	
Scene Time:	Minutes
Total Time:	<u>Mintues</u>

Feedback:  
Nurse  
ED Physician  
Neurologist  
EMS agency

	YES	NO
Stroke Alert Charted		
ED Stroke Alert Initiated		
Admission O.S. Initiated		
Swallow Eval/Dysphagia Screen completed prior to diet		
Stroke Education charted		
NIHSS completed by whom	Dr	RN

STANDARDS OF CARE	PREVENTABILITY	CORRECTIVE ACTION (s)	
<input type="checkbox"/> 1= Routine, acceptable care provided	<input type="checkbox"/> Unanticipated w/ <u>opportunity for improvement</u>	<input type="checkbox"/> Unnecessary	
<input type="checkbox"/> 2= Acceptable care, minor deviation from practice guidelines	<input type="checkbox"/> Anticipated w/opportunity for improvement	<input type="checkbox"/> Trend <input type="checkbox"/> Education	
<input type="checkbox"/> 3= Questionable care, practice <u>guidelines not followed</u>	<input type="checkbox"/> Event/mortality w/o opportunity for improvement	<input type="checkbox"/> Guideline/Protocol <input type="checkbox"/> Counseling	
<input type="checkbox"/> 4= Unacceptable care, inconsistent with practice guidelines/standards of care		<input type="checkbox"/> Case Review Presentation <input type="checkbox"/> Process Improvement Team	
<b>Comments:</b>          		<input type="checkbox"/> Referred to Quality <input type="checkbox"/> <u>Other:</u>	
		<b>COMPLICATIONS</b>	
		<input type="checkbox"/> Grade 1- Alteration from course, <u>non life threatening</u>  <input type="checkbox"/> Grade 2-Potentially life threatening, no residual disability, requires/required invasive procedure  <input type="checkbox"/> Grade 3-Residual disability, organ resection, persistence of life threatening condition exists  <input type="checkbox"/> Grade 4- Death	
<b><u>Signature:</u></b>			
<b><u>Date Reviewed:</u></b>			

# Summary

- Educate the community, surrounding EMS agencies, nurses and providers (you know the village quote 😊)
- Buy-in from the EMS agencies, nurses and providers will make times quicker and without hesitation (goes back to the education opportunities)
- Don't re-invent the wheel!! We work with the KC comprehensives pretty closely and appreciate their input and feedback







**Thank  
You!!!**

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