

# CODE STROKE



**TIME IS BRAIN**



4867 Sunset Boulevard  
Pathology, Blood Bank, Flow Cytometry,  
Laboratory Departments  
2023 Education

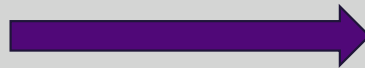
# CODE STROKE is an EMERGENCY

HOSPITAL PATIENT



PAGE CODE STROKE  
NEUROLOGIST 279-1000

VISITOR OR  
EMPLOYEE



CALL CODE BLUE x 3-3000

OUTSIDE HOSPITAL



CALL 911

**B**

**E**

**F**

**A**

**S**

**T**

Balance  
Loss

Eyesight  
Changes

Face  
Drooping

Arm  
Weakness

Speech  
Difficulty

Time to  
call 911



# LABORATORY ROLE

## CODE STROKE ANNOUNCED

### 1. RESPONSE AT THE LOCATION OF CODE STROKE

- Announce your presence – Make it Loud and Clear that you are from the Lab in any circumstance.
- This applies to inpatient floors and Emergency Department.

#### PATIENT NOT AVAILABLE / CT SCAN?

Follow up with the unit to see where patient is.  
Investigate if patient still needs lab draw

#### REPORT TO CODE STROKE AND TURNED AWAY?

Document full name of provider that informed you  
Reason lab not needed.

**LABORATORY RESPONSE TO CODE STROKE IS BEING TRACKED.  
CALLING TO CHECK DOES NOT COUNT AS A RESPONSE**

# LABORATORY'S ROLE

## CODE STROKE ANNOUNCED

### 2. ACTION – JOINT RESPONSIBILITY

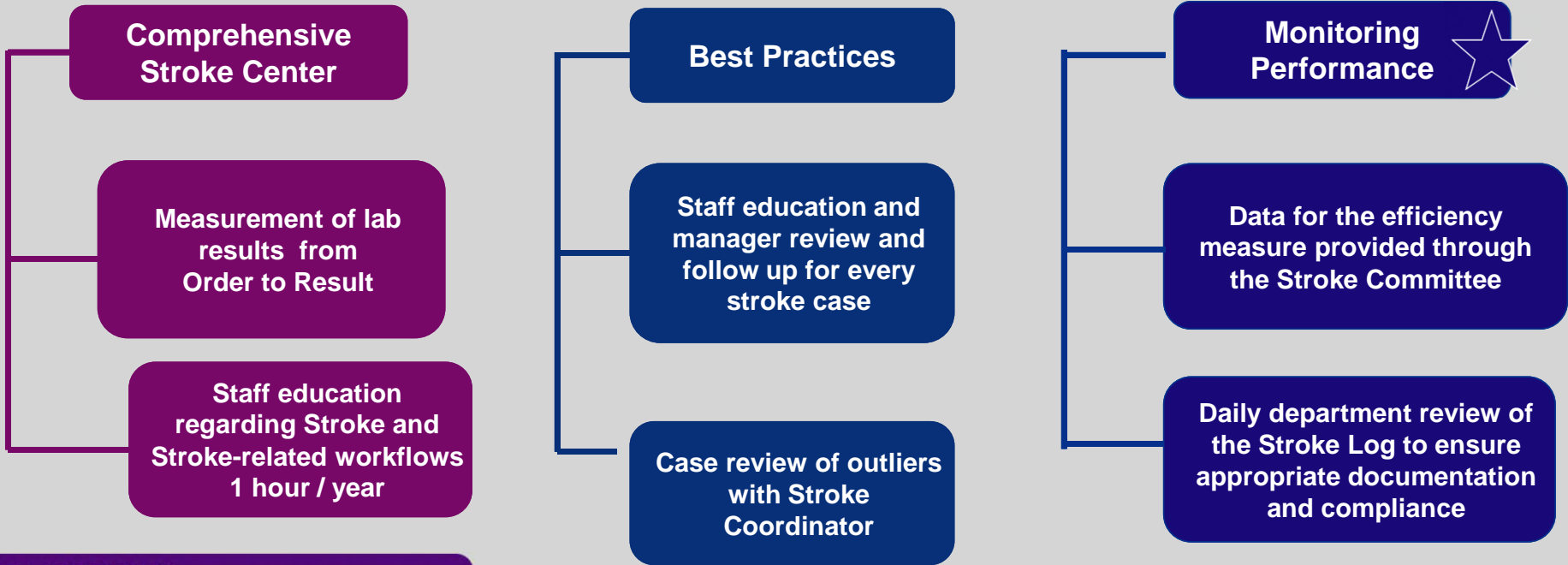
- Dispatcher may assign any Lab Asst from another floor, from Main Lab
- Patient Care Comes First!!!
- Issues and Concerns during a Code Stroke can be addressed later
- Breaks/Meal Coverage – Take care of the patient, inform dispatcher and management
- Document any issues and present to management or Lead CLS

# LOS ANGELES MEDICAL CENTER

PRIMARY STROKE CENTER



COMPREHENSIVE STROKE CENTER  
2023



LAMC LABORATORY  
PATHOLOGY, LABORATORY, TRANSFUSION SERVICE,  
FLOW CYTOMETRY, MEDICAL OFFICE BUILDINGS  
2023 CODE STROKE INSERVICE

## TRUE STORY

### LAMC LAB EMPLOYEE RECOGNIZES CODE STROKE IN A PATIENT .... A LIFE SAVED



2023 CODE STROKE INSERVICE  
LAMC – 4867 SUNSET BLVD  
LABORATORY



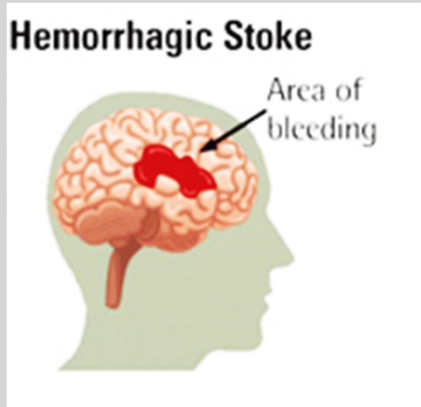
## BASICS OF A STROKE

Stroke occurs when **blood** flow to the brain is interrupted by blocked or burst vessel.

There are **2** types of stroke:

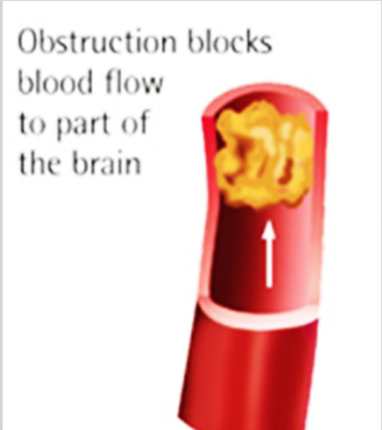
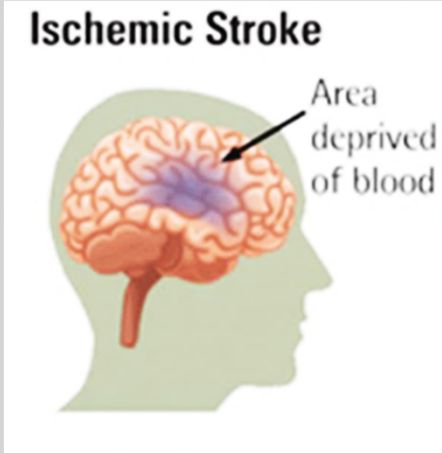
### HEMORRHAGIC STROKE

Occurs when blood vessels burst and cause bleeding into the brain.



### ISCHEMIC STROKE

Is defined as an injury and/or death of brain cells due to blockage with lack of blood flow in the brain to the affected area.





## Code stroke: Communication



**OVERHEAD ANNOUNCEMENT:  
“Code Stroke” + Patient Location only**



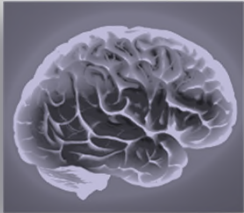
### CODE STROKE PAGER

- Located at the Dispatcher Desk. If removed from this area, this must be returned for the next shift.
- Both Dispatchers are responsible between shifts.
- The hand off between Dispatchers for each shift should account for the whereabouts of the pager, and are equally responsible if the pager is missing or there is no documentation or incorrect documentation of the handoff.
- The Dispatcher or the Coverage for Dispatcher should know the break and meal assignments of each lab assistant at any given time and is responsible for sending a lab assistant immediately.
- A manager should be notified for any issues with receiving a response

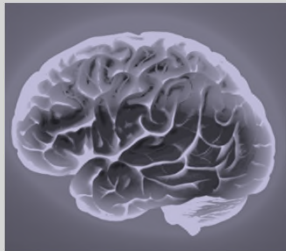


**Information on pager:  
(Name, Medical Record #, Location, Room #)**











# Brain Alert

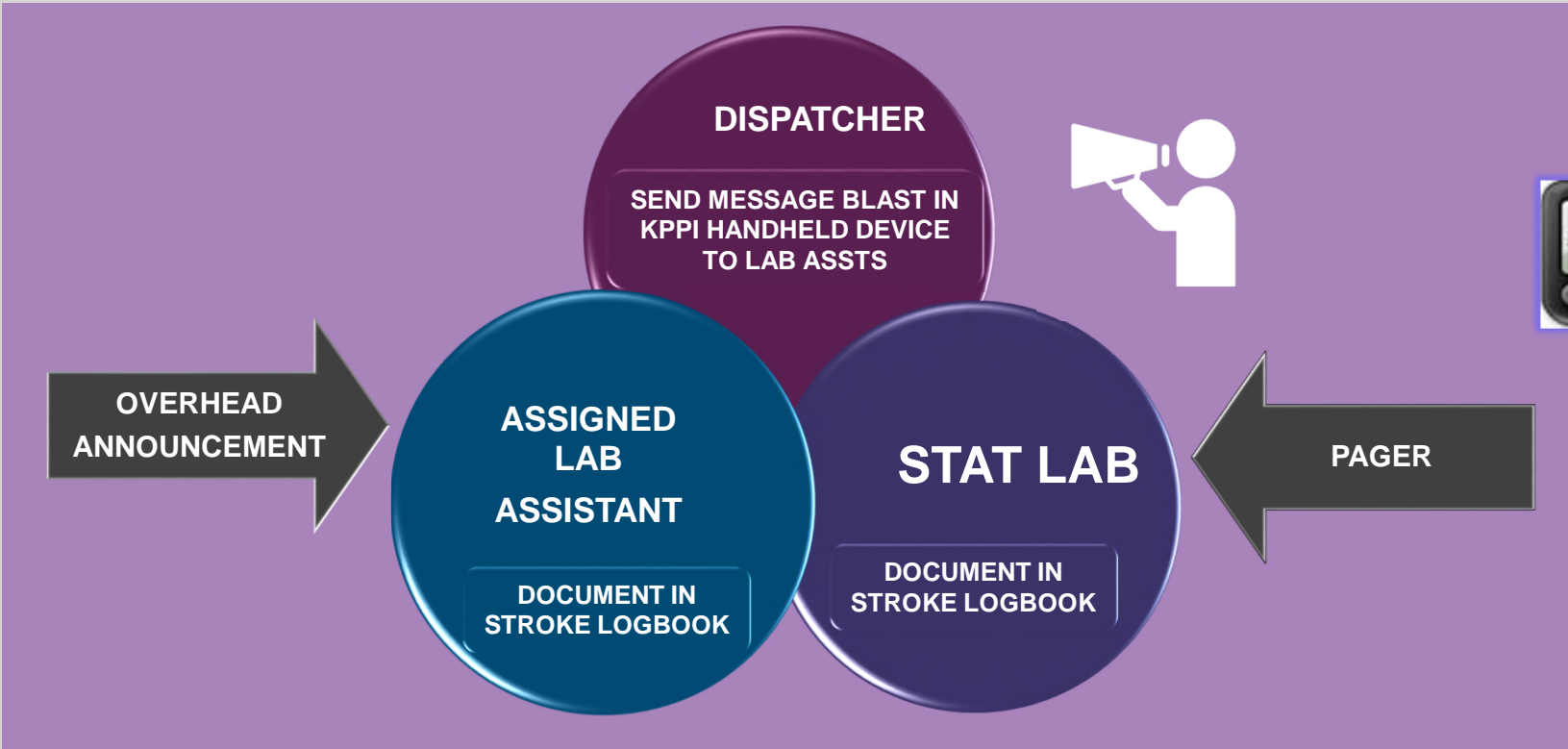


**“BRAIN ALERT”:  
NOTIFICATION OF POSSIBLE STROKE DOES MEET THE CRITERIA FOR  
HAVING A STROKE**

CODE STROKE	BRAIN ALERT
<p>✓ OVERHEAD ANNOUNCEMENT / PAGE </p>	<p>✗ OVERHEAD ANNOUNCEMENT / PAGE </p>
<p>✓ PHLEBOTOMY RESPONSE </p>	<p>✗ PHLEBOTOMY RESPONSE </p>
<p>✓ PHONE CALL FOLLOW UP FOR SPECIMEN </p>	<p>✗ PHONE CALL FOLLOW UP FOR SPECIMEN </p>
<p>✓ SPECIMEN RECD IN PURPLE BAG</p>	<p>✓ SPECIMEN RECD IN PURPLE BAG ONLY NOTIFICATION</p>
<p>✓ DOCUMENT IN STROKE LOG BOOK</p>	<p>✓ DOCUMENT IN STROKE LOG BOOK INDICATE “BRAIN ALERT”. COMPLETE AS MORE INFORMATION IS PROVIDED.</p>

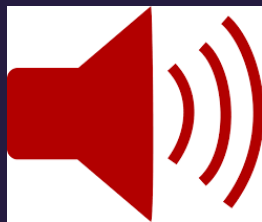
# Code stroke: COMMUNICATION

## JOINT AND SHARED ACCOUNTABILITY

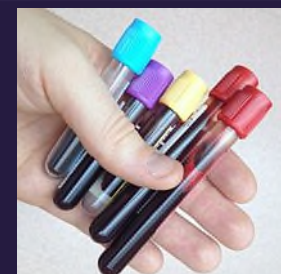
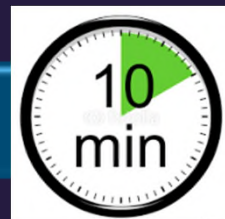


ANY ISSUES MUST BE ADDRESSED **IMMEDIATELY** – INVOLVE A MANAGER OR LEAD CLS

## Code stroke: COMMUNICATION



“CODE STROKE”



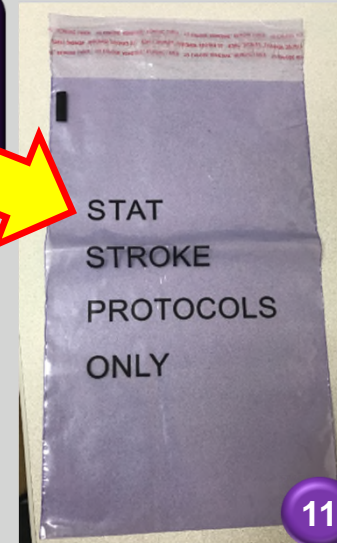
RECD IN LAB

SPECIMENS SHOULD BE IN LAB WITHIN 10 MINUTES OF ANNOUNCEMENT

SPECIMENS SHOULD COME IN DESIGNATED **PURPLE** BAG

### FOLLOW UP

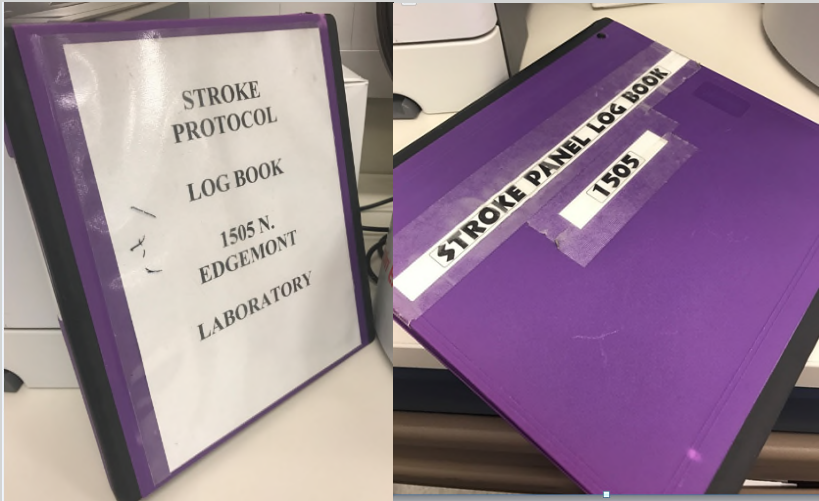
- CALL ED /RN
- CALL DISPATCHER
- CALL LAB ASST ASSIGNED



# Code stroke: COMMUNICATION

## DOCUMENTATION

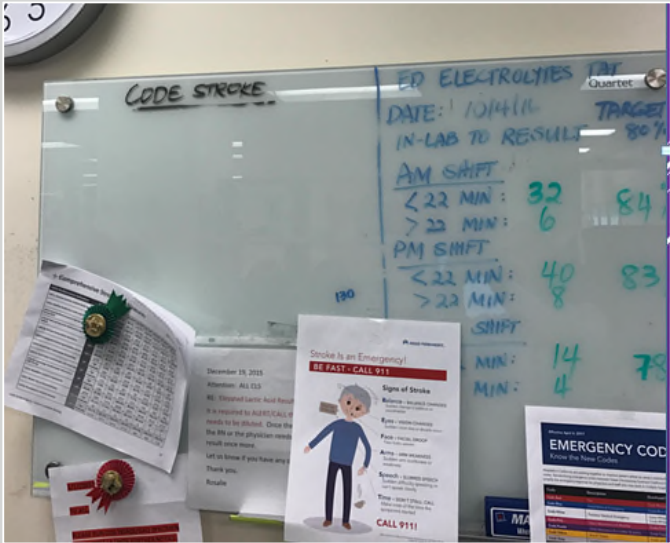
CODE STROKE BINDER  
– STAT LAB



- COMMUNICATE / DISCUSS
- IDENTIFY PATIENT NAME
  - ARRIVAL OF SPECIMEN
  - HAND OFF TO CLS



STAT LAB – “WHITE BOARD”



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**Code stroke: BARRIERS**

**ISSUES AND EXCEPTIONS:  
NOTIFY IMMEDIATELY**

<b>Dispatcher/ INPATIENT LAB ASSTS</b>	<b>PROCESSING – STAT LAB LAB ASSTS / REPS / CLS</b>	<b>STAT LAB CLS CALL RN/MD PROVIDER</b>
<p><b>LAB ASST –</b></p> <ul style="list-style-type: none"> <li>• CHALLENGES IN OBTAINING SPECIMEN</li> <li>• LOCATING PATIENT</li> <li>• PATIENT ACCESS</li> <li>• BREAK/MEAL COVERAGE CONCERNS (PATIENT CARE FIRST)</li> </ul>	<p><b>SPECIMEN LABEL ISSUES</b></p> <ul style="list-style-type: none"> <li>• NO LABEL , MISLABELLED</li> </ul> <p><b>SPECIMEN ORDER ISSUES:</b></p> <ul style="list-style-type: none"> <li>• WRONG ORDER OR INCORRECT ORDER</li> </ul>	<p><b>SPECIMEN HEMOLYZED</b></p> <ul style="list-style-type: none"> <li>• UNACCEPTABLE FOR TESTING</li> <li>• INVALID RESULTS</li> <li>• INSTRUMENT DELAY</li> <li>• PROCESS DELAY</li> </ul>
<p><b>Dispatcher –</b></p> <ul style="list-style-type: none"> <li>• NO RESPONSE FROM PHLEBOTOMIST</li> <li>• WORKFLOW CHALLENGES</li> <li>• TEAMWORK ISSUES</li> </ul>	<p><b>SPECIMEN ISSUES:</b></p> <ul style="list-style-type: none"> <li>• QNS</li> <li>• HEMOLYZED</li> <li>• DAMAGED IN PROCESSING</li> <li>• WRONG TUBE COLLECTED</li> <li>• MISSING A TUBE</li> </ul>	<p><b>INVALID RESULTS –</b></p> <ul style="list-style-type: none"> <li>• DO NOT WAIT TO REPEAT</li> </ul>

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**DO NOT DELAY COMMUNICATION**

# Code stroke: COMMUNICATION

## DOCUMENTATION

### CODE STROKE LOG

KAISER PERMANENTE v 2-2017

**CODE STROKE PATIENT LOG**  
LAMC LABORATORY

DATE: _____  Patient Information/Label:	TIME ANNOUNCED OVERHEAD	TIME PAGER ALERT RECD	TIME RECD Pneumatic Tube	Tubes Recd:  <input type="checkbox"/> Blue <input type="checkbox"/> Green <input type="checkbox"/> Lav <input type="checkbox"/> SST
			RECD in PURPLE BAG?	
	Communicate: Identify patient ID with Controller, Lab Asst, and STAT Lab staff Follow up with RN/Lab Asst if not recd in 10 min from announcement		<input type="checkbox"/> YES <input type="checkbox"/> NO	Recd By: _____

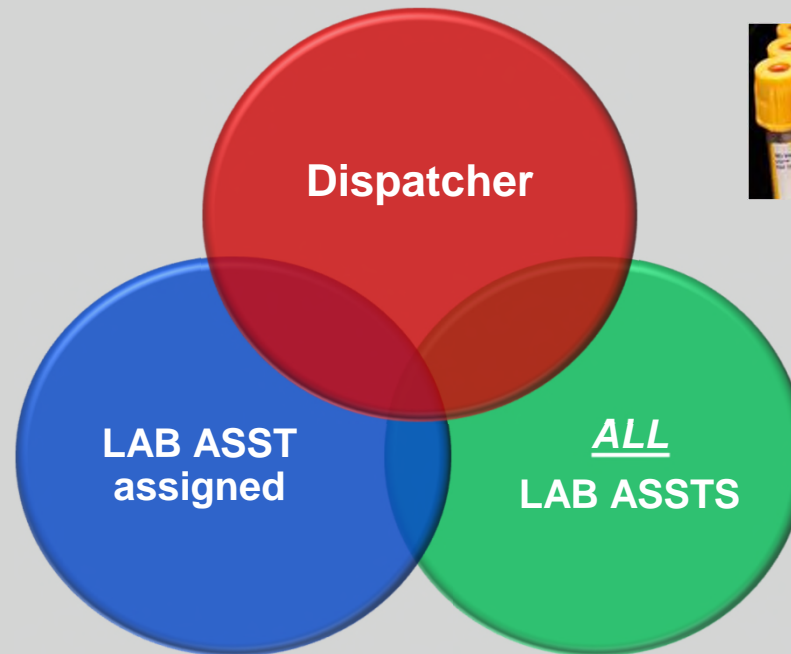
  

DATE: _____  Patient Information/Label:	TIME ANNOUNCED OVERHEAD	TIME PAGER ALERT RECD	TIME RECD Pneumatic Tube	Tubes Recd:  <input type="checkbox"/> Blue <input type="checkbox"/> Green <input type="checkbox"/> Lav <input type="checkbox"/> SST
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## Code stroke: PHLEBOTOMY RESPONSE

### JOINT AND SHARED ACCOUNTABILITY



LAB RESPONSE TO CODE STROKE IS BEING TRACKED & DOCUMENTED

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## Code stroke: phlebotomy response



REPORTING TO THE CODE STROKE



**ANNOUNCE YOUR PRESENCE LOUD AND CLEAR –  
MAKE SURE PROVIDERS KNOW THAT YOU ARE FROM THE LABORATORY**

**PATIENT NOT AVAILABLE? I.E. CT SCAN**

- FOLLOW UP WITH PROVIDER
- FOLLOW THE PATIENT TO COLLECT BLOOD

**LAB NOT NEEDED?**

- OBTAIN THE FULL NAME OF WHO INFORMED YOU
- DOCUMENT THAT PROVIDER'S NAME IN KPPI
- FOLLOW UP AND MAKE SURE DOCUMENTED IN MEDICOPIA
- INFORM Dispatcher, STAT LAB
- STAT LAB DOCUMENTS IN CODE STROKE LOG BOOK



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# Efficiency Measures - Lab

## + Efficiency Measures: Lab Resulted (Median- Minutes)

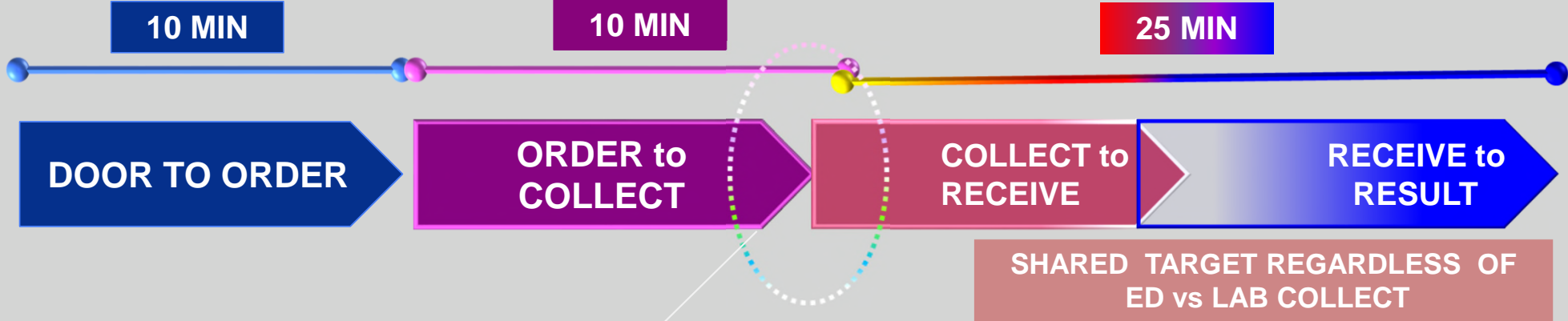


Efficiency Measures / ED	Target	Aug-2021	Sep-2021	Oct-2021	Nov-2021	Dec-2021	Jan-2022	Feb-2022	Mar-2022	Apr-2022	May-2022	June-2022	July-2022	12-month	2021 YE	2020 YE
Total ED Code Strokes		15	17	18	20	30	17	16	10	15	25	23	19	225	249	230
Door to Lab Resulted	# cases	14	16	16	17	25	17	15	8	12	18	17	13	32	34	34
	≤ 45min	29	32	34	34	33	29	36	28	26	32	31	34			

Efficiency Measures / Inpatient	Target	Aug-2021	Sep-2021	Oct-2021	Nov-2021	Dec-2021	Jan-2022	Feb-2022	Mar-2022	Apr-2022	May-2022	June-2022	July-2022	12-month	2021 YE	2020 YE
Total Inpatient Code Strokes		11	15	14	14	8	10	12	18	11	6	8	10	137	181	161
Symptom Recognition to Lab Resulted	# cases	2	6	6	3	2	5	9	5	4	2	3	8	70	74	69
	≤ 45min	95	84	78	131	62	83	75	61	65	65	54	65			

LAB EFFICIENCY MEASURE:  
CODE STROKE TURN AROUND TIME

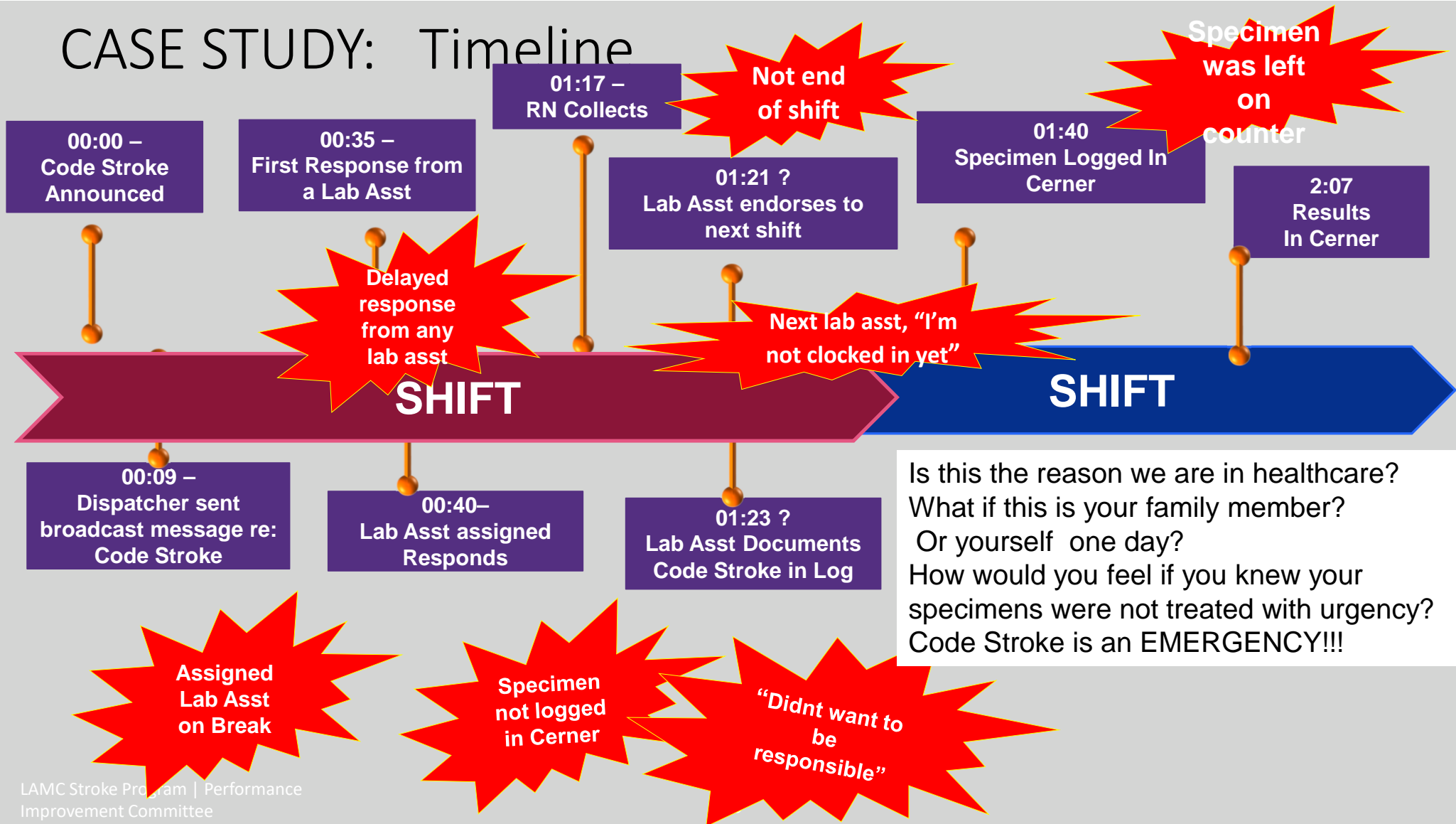
45  
MINUTES



The sooner the specimen is collected this increases chance to meet the target and also save a life.

Documentation is imperative when there are delays i.e. (CT Scan, RN dismissed the lab to collect – obtain the name)

# CASE STUDY: Timeline





## KNOWLEDGE CHECK

**True** or **False**:

In the Previous Case Study, what would be your answer to the following statements:

- ? Dispatcher could have identified a lab asst to collect the specimen and not wait so long for a response
- ? The Dispatcher could have informed a manager when they are challenged to send a lab asst
- ? The Lab Assistant should log Code Stroke in the book and receive specimens in Cerner
- ? The Lab Asst made a good decision in not logging in specimens in Cerner to avoid responsibility
- ? It is acceptable not to respond because this was the end of the shift and the next shift would arrive soon
- ? Communication was acceptable because the information was given to the next shift properly
- ? Those that are covering the floor where the Code Stroke patient is located while the assigned lab assistant is on their meal period, are not responsible for responding do the Code Stroke
- ? If a family member or a loved one was in the ED for a Code Stroke, I would feel confident with the same staff involved to handle and process the specimens and I would have done the same thing.



## KNOWLEDGE CHECK

LOS ANGELES MEDICAL CENTER HAS EARNED THIS DISTINCTION BY THE JOINT COMMISSION, THE FIRST AND ONLY SCAL KAISER PERMANENTE FACILITY TO ACHIEVE THIS?

A

FASTEST TURN AROUND TIME FOR RESULTS

B

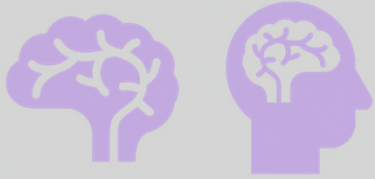
RAISED ITS CERTIFICATION FROM PRIMARY STROKE CENTER TO COMPREHENSIVE STROKE CENTER

C

FORMATION OF A STROKE COMMITTEE

D

BEST STROKE EDUCATION PROGRAM



## KNOWLEDGE CHECK

AS A REQUIREMENT FOR MAINTAINING COMPREHENSIVE CERTIFICATION, WHICH OF THE FOLLOWING IS TRUE FOR THE LABORATORY?

A

ALL EMPLOYEES SHOULD RECEIVE STROKE EDUCATION ANNUALLY

B

THE TURN AROUND TIME FOR LAB TESTS IS 45 MINUTES FROM DOOR TO RESULT.

C

THE PHLEBOTOMISTS IS REQUIRED TO RESPOND TO LOCATION WHERE THE CODE STROKE IS ANNOUNCED

D

ANY CHALLENGES IN OBTAINING SPECIMEN OR ANY REASON FOR DELAY SHOULD INVOLVE THE MANAGER.



## KNOWLEDGE CHECK

COMPLETE THE ACRONYM: BEFAST

**B** ALANCE

**E** YES

**F** ACE

**A** RMS

**S** PEECH

**T** IME



**ANY QUESTIONS?**

**REMEMBER: TIME LOST IS BRAIN LOST**

**THINK ABOUT IT !!!**



**TIME IS BRAIN!**

