



THE WARREN ALPERT  
Medical School  
BROWN UNIVERSITY

# Rhode Island STROKE SYMPOSIUM

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Triage and Stroke Care in the ED  
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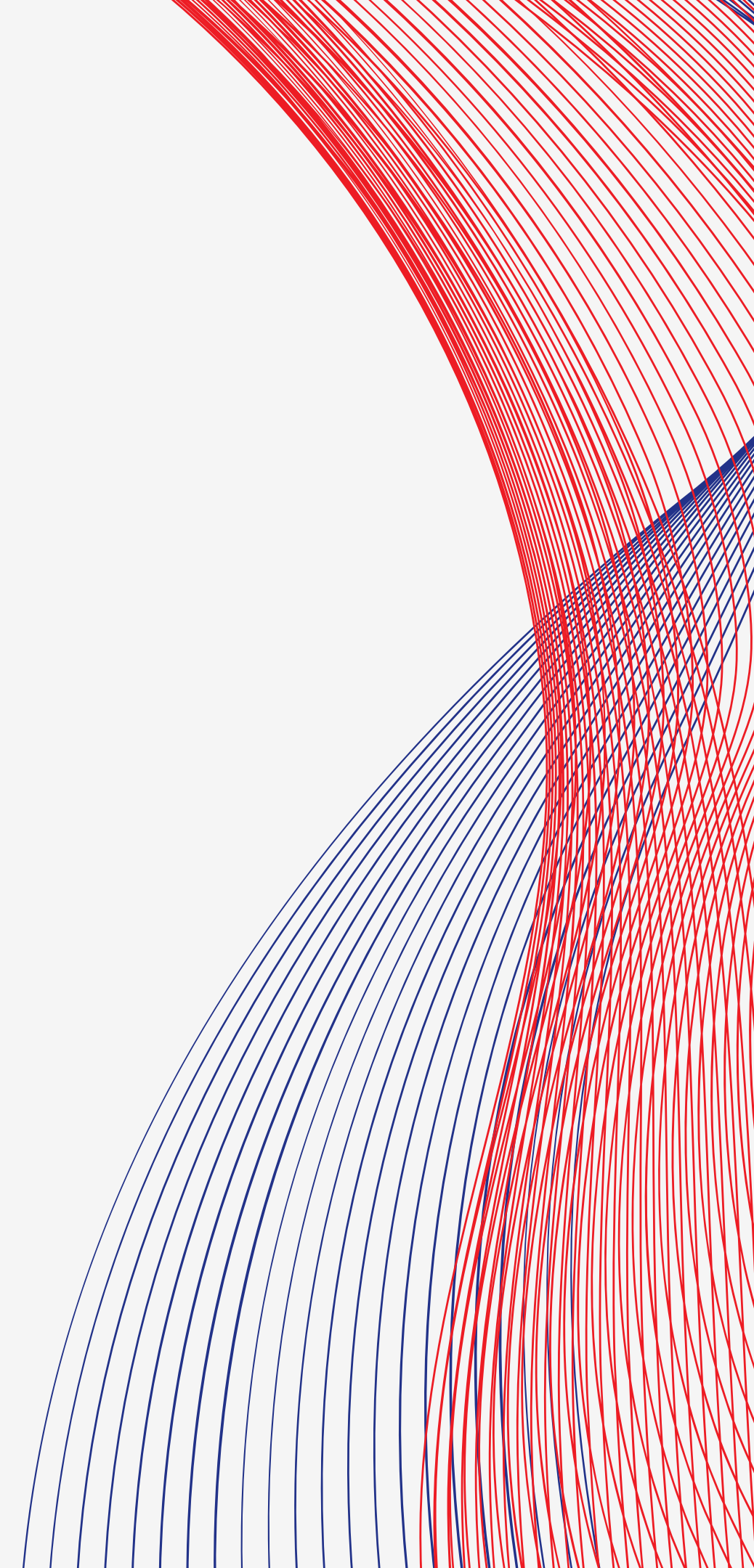
# DISCLOSURE

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- I have NO relevant financial relationships to disclose
- My talk will not include any off-label discussion

# Triage and Stroke Care in the Emergency Department

Andrew Buksar MSN, RN, CEN



# Where were we prior to the 1990's?



Public recognition



Early EMS activation



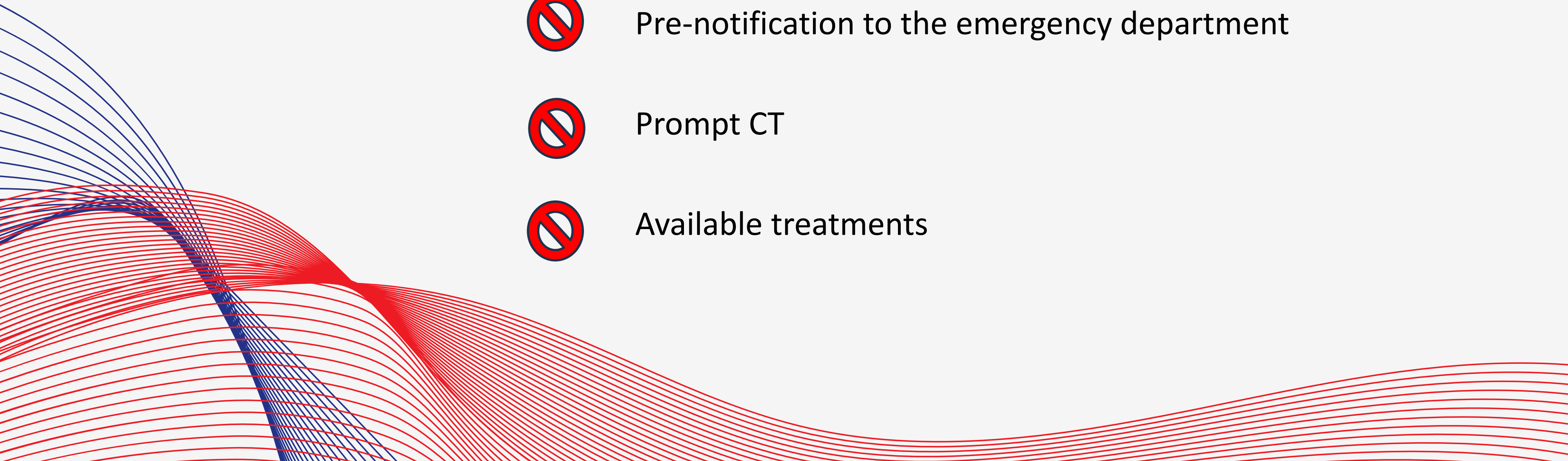
Pre-notification to the emergency department

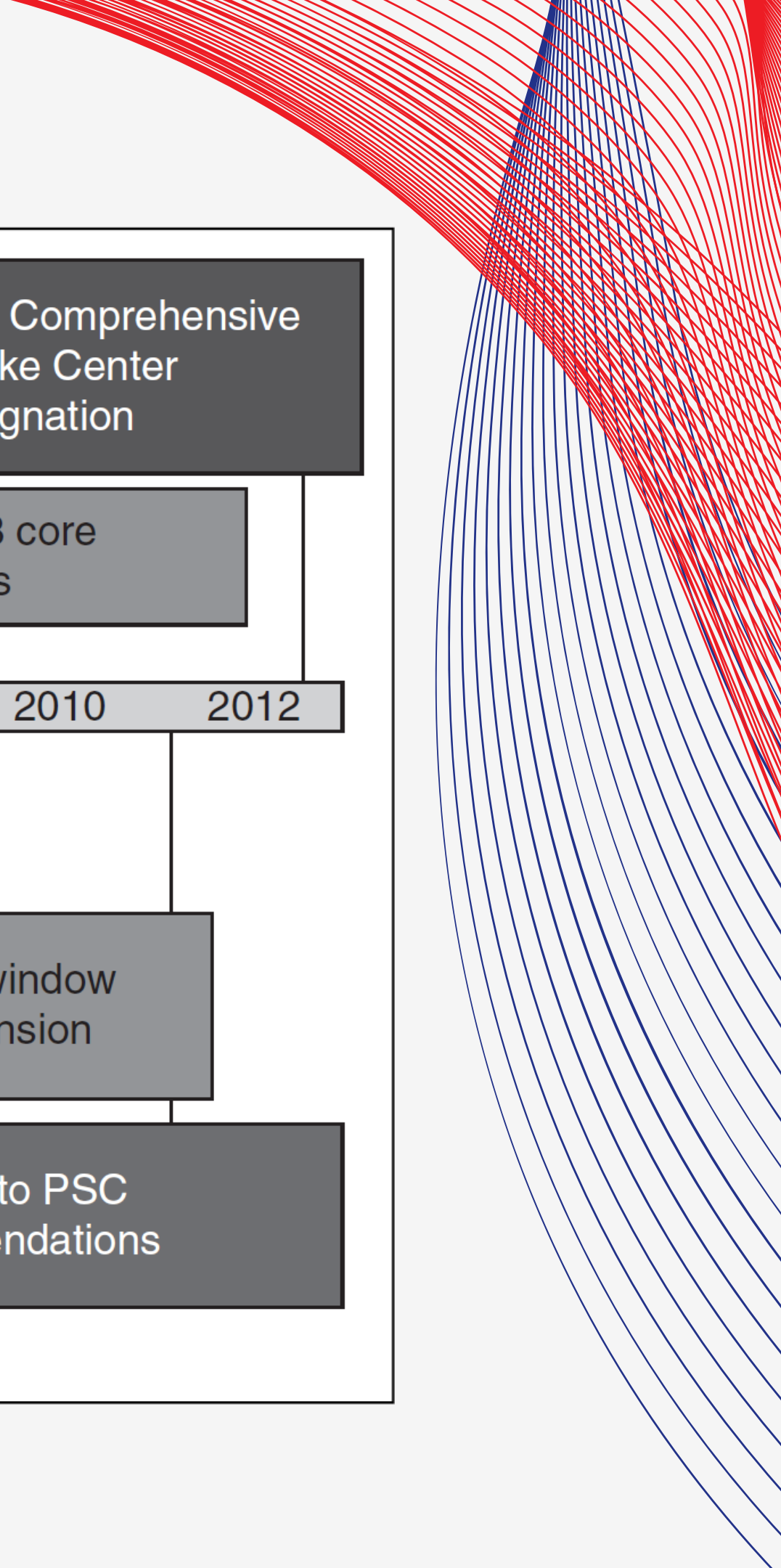
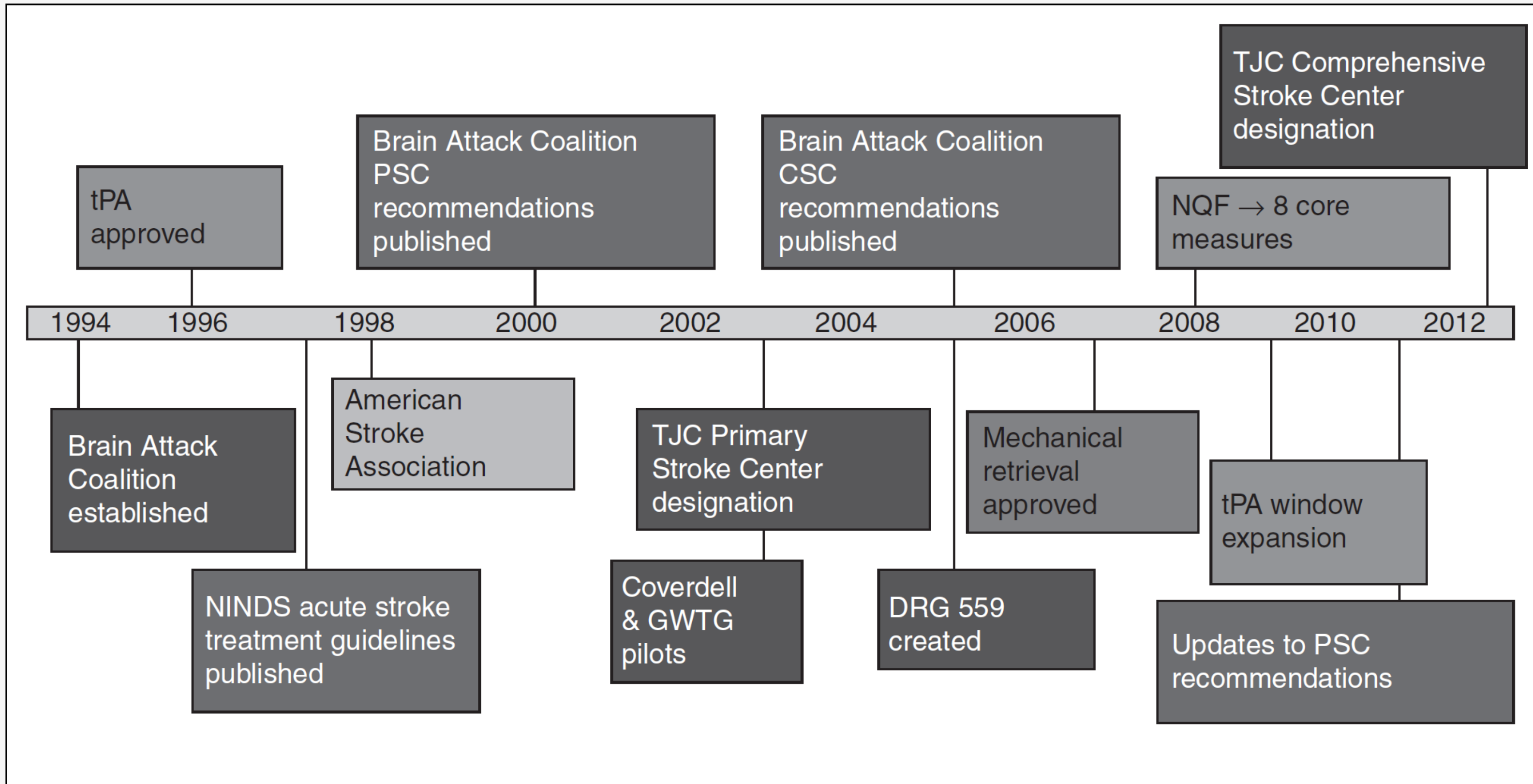


Prompt CT



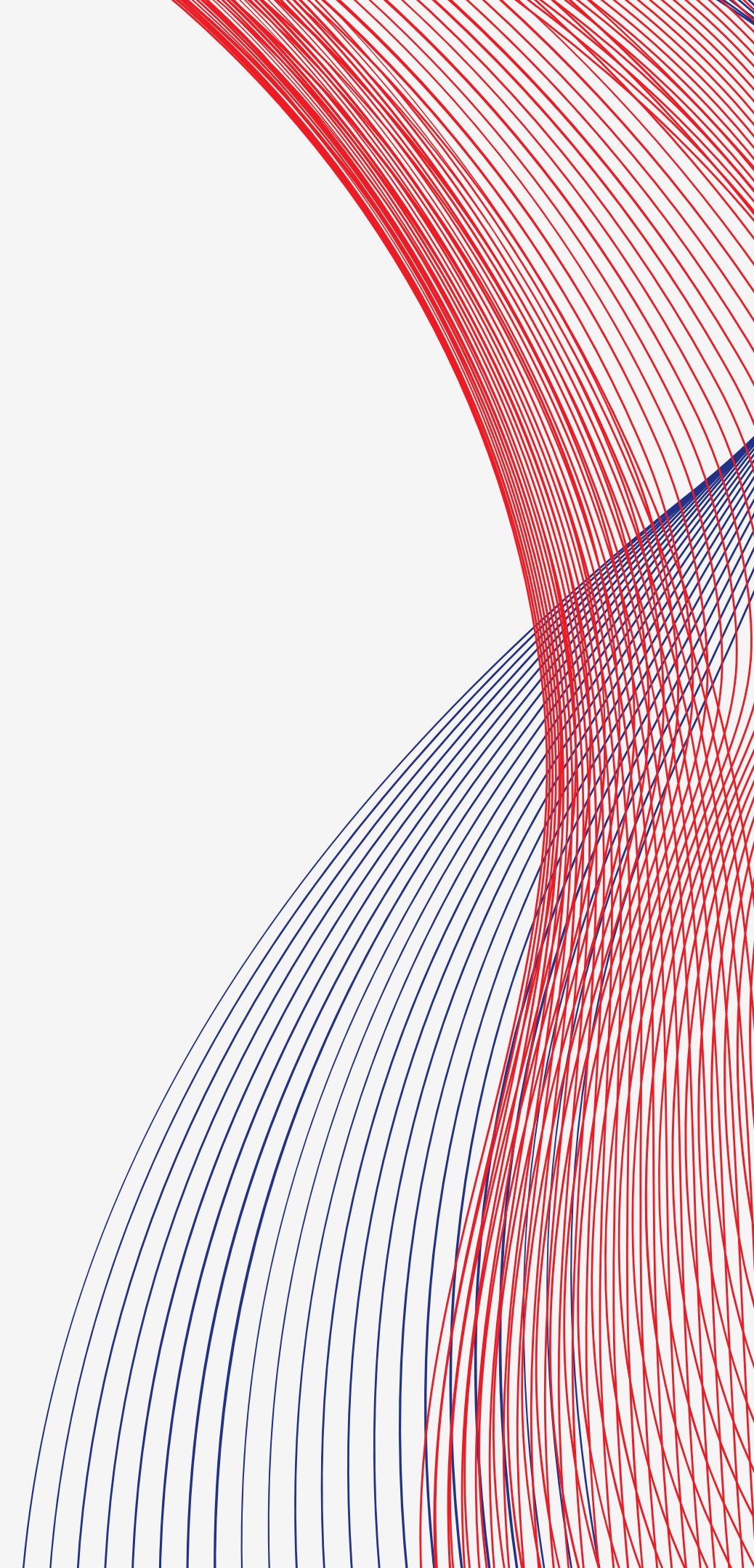
Available treatments





# What makes a difference?

- A well-coordinated stroke network
- EMS identification and diagnosis, rapid transport of patients to designated stroke centers, and seamless communication among medical professionals.
- The organization of stroke services within hospitals
- The delivery of appropriate post-acute care and rehabilitation services, which are integral in reinstating functional capabilities and augmenting overall quality of life.



# Stroke Chain of Survival

Detection

- Recognition of stroke signs and symptoms

Dispatch

- Call 9-1-1 and priority EMS dispatch

Delivery

- Prompt transport and prehospital notification to hospital

Door

- Immediate ED triage

Data

- ED evaluation, prompt laboratory studies, and CT imaging

Decision

- Diagnosis and decision about appropriate therapy

Drug

- Administration of appropriate drugs or other interventions

# What we do in the emergency department...

- Triage
- Stroke team activation
- Diagnostic imaging
- Diagnosis and decision about therapy
- Administration of appropriate therapy





# How do we make ED treatment better?

- Educate hospital and prehospital care providers
- Improve access to stroke information for providers
- Simplify stroke pathways
- Have standardized protocols, but allow flexibility to meet patient needs
- Encourage parallel processing
- Can we do some steps outside of the ED?



Triage

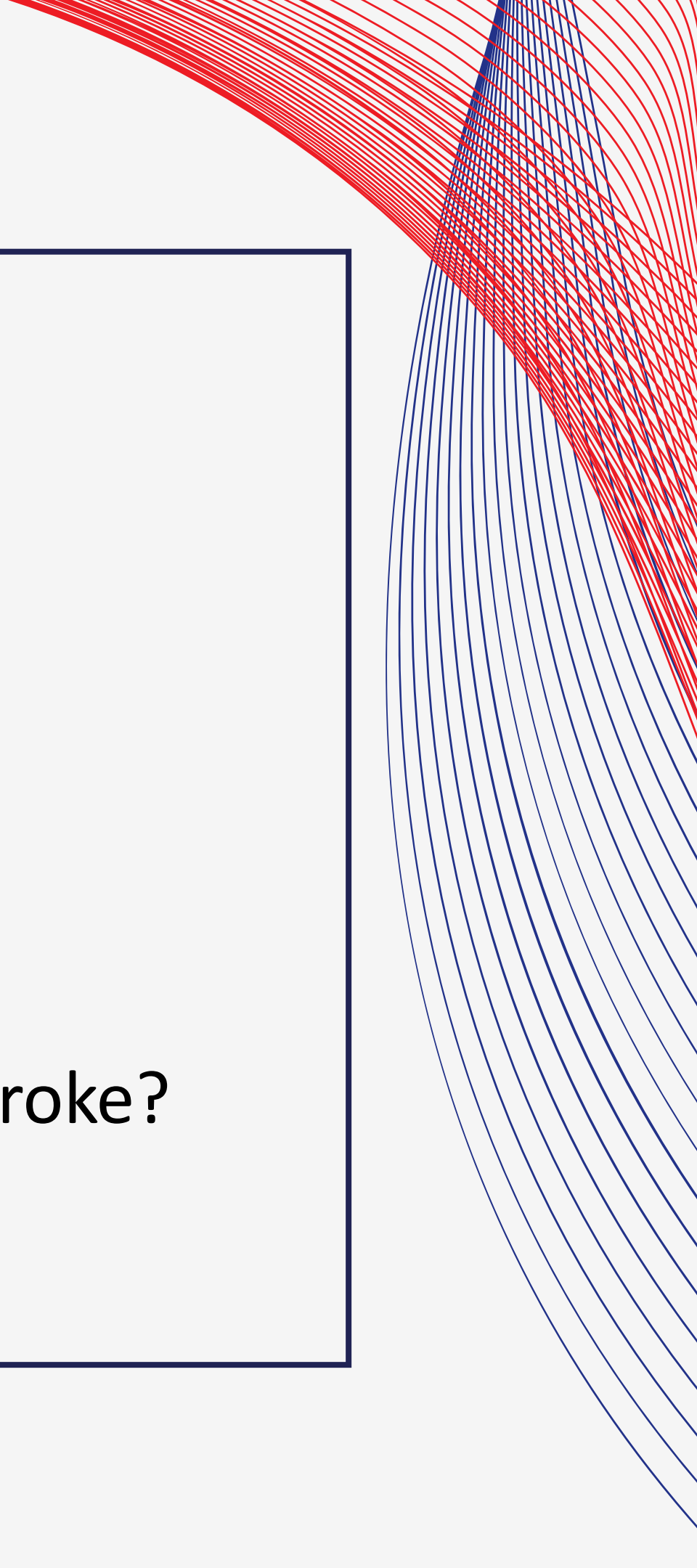
Administration

# Improving Stroke Care in the ED

- Educate the public and health care workers
  - Prompt recognition and activation of the stroke system of care
- Prompt EMS evaluation and transport to PSC or CSC
  - Maximize communication with prehospital notification
  - Mobile stroke unit – cost effectiveness?
- Maximize the benefits of thrombolytics
  - Give it to more people, give it to them faster
- Maximize the benefits of thrombectomy
  - Recognize ELVO faster, get people to thrombectomy faster

# Improving Stroke Care in the ED

- Advance Telemedicine
  - Prehospital assessment
  - Use of AI
  - What about your cell phone or tablet?
- Move transcranial doppler-sonography to EMS
  - Its small, low cost, portable, and can perform repeated measurements
- POC testing biomarkers
  - Could a blood test help reveal if someone is having a stroke?



**B**

**E**

**F**

**A**

**S**

**T**



**BALANCE**

LOSS OF BALANCE,  
HEADACHE  
OR DIZZINESS

**EYES**

BLURRED VISION

**FACE**

ONE SIDE OF THE  
FACE IS DROOPING

**ARMS**

ARM OR LEG  
WEAKNESS

**SPEECH**

SPEECH DIFFICULTY

**TIME**

TIME TO CALL  
FOR AMBULANCE  
IMMEDIATELY

*Thank You!*

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