

# WISCONSIN COVERDELL STROKE PROGRAM

## 911 Door to Needle

Regional systems of stroke care should be developed. These should consist of the following:

- Health care facilities that provide initial emergency care, including administration of IV Alteplase.
- Centers capable of performing endovascular stroke treatment with comprehensive periprocedural care to which rapid transport can be arranged when appropriate.

Prehospital Emergency

Emergency medical dispatcher receives call and dispatches EMS.

EMS arrives at patient location.

EMS performs prehospital stroke assessment and provides appropriate care.

EMS prenotifies Emergency Department (ED) of suspected stroke patient.

Hospital stroke team activated

Stroke team meets EMS upon arrival to ED

Arrive at hospital (directly to CT whenever possible)

If candidate, administer IV Alteplase

Continue appropriate care of patient

#### **EMS Best Practice—Minutes from EMS arrival:**

Up to 15 minutes on-scene care

#### **EMS Actions—Report to hospital:**

- Prenotification of suspected
- Signs and symptoms of stroke: neuro/stroke alert
- Verify CT scanner available
- Prehospital stroke scale results
- Vital signs

- Blood glucose
- Last known normal
- Family members
- Medications: anticoagulants are important
- Additional complaints and information
- Estimated time of arrival

#### **ED Best Practice**

#### Minutes from ED arrival:

- 25 minutes to CT completion
- 30 minutes to coagulation studies if there is suspicion of coagulopathy
- 45 minutes to CT interpretation
- 60 minutes to IV Alteplase bolus

#### **ED Actions**

#### Single call activates:

- Stroke team
- CT scanner cleared
- Stroke protocol and/or orders
- Stroke team:

#### ED physician rapid assessment

- National Institute of Health Stroke Scale (NIHSS) exam
- Complete inclusion and/or exclusion criteria for IV Alteplase
- Blood glucose

- Weight
- VSs and neuro checks
- Large bore IV
- Mixing of IV Alteplase as soon as recognized as a possible candidate

Time sensitive elements should be completed as quickly, safely, and efficiently as possible. Forty-five minutes from arrival to IV Alteplase bolus in 50 percent of treated patients is a reasonable goal to strive for.

### Quality Improvement Reviews

#### **EMS** and Hospital

- Open two-way communication of prehospital and ED processes.
- Review in-hospital processes and provide feedback to caregivers.



- Higashada, R, et al. Interactions Within Stroke Systems of Care: A Policy Statement From the American Heart Association/American Stroke Association.
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