Reducing door-to-needle time for alteplase in telestroke: optimizing pharmacist-nurse communication and decreasing alteplase mixing time

GABRIEL V. FONTAINE, PHARMD, BCPS1 • KRISTY VEALE, RN2 • ISABEL PANDE, PHARMD, MBA, BCPS3 • ROBERT HOESCH, MD, PHD4

1Intermountain Medical Center, Department of Pharmacy • 2Neurosciences Institute TeleHealth • 3Intermountain Healthcare Department of Pharmacy • 4Medical Director Neurosciences Institute & Intermountain Medical Center

BACKGROUND & PROBLEM STATEMENT

• Alteplase should be administered as quickly as possible in patients with acute ischemic stroke (AIS) as reducing the alteplase door-to-needle (DTN) time may improve mortality, functional outcomes, and reduce intracranial hemorrhage (ICH).
• We aimed to reduce the DTN time in stroke patients receiving alteplase by focusing on reducing the time it took from the provider decision to give alteplase, to the delivery of prepared alteplase to the patient bedside.

METHODS

We aimed to reduce the DTN time in stroke patients receiving alteplase by focusing on reducing the time it took from the provider decision to give alteplase, to the delivery of prepared alteplase to the patient bedside – order-to-delivery (OTD) time.

RESULTS

We identified 20 pharmacists from 20 different hospitals to lead the OTD reduction initiative.

FIGURE 2: Developing the Stroke TeleHealth OTD reduction process

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identify 1 pharmacist lead from each hospital</td>
</tr>
<tr>
<td>2</td>
<td>Initial meeting to discuss “Time is Brain” and DTN/OTD reduction</td>
</tr>
<tr>
<td>3</td>
<td>Improve DTN times by reducing OTD time</td>
</tr>
<tr>
<td>4</td>
<td>Stroke TeleHealth patient updates</td>
</tr>
</tbody>
</table>

Examples of Processes Implemented at Different Hospitals

1. Properly identifying which health care provider (nurse, physician, pharmacist) is responsible for each step of the emergency department stroke process
2. Switching to pharmacist mixing alteplase in a decentralized location
3. Notifying central pharmacy technicians and pharmacists of the potential need for alteplase and to prepare for mixing ahead of time

DISCUSSION

The authors of this presentation do not have financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

REFERENCES: Available upon request