The Future of EMS Stroke Care

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Of 302 patients treated within 90 minutes of onset with tPA vs placebo in the NINDS study, only 2 were randomized within 60 minutes of onset, and 41 were randomized between 60-80 minutes. The rest were randomized between 81-90 minutes after onset.
Steps in Establishing the MSU

Who is inside?

- Licensed Vascular Neurologist with an ACLS Certification
- Critical Care/ER trained Registered Nurse with ACLS certification
- Licensed Paramedic with ACLS certification
- Licensed CT radiology technician with BLS certification
- Telemedicine Doc!!
BEST-MSU enrollments- First Two Years
*(as of December, 2016)*

- **190** Treated with rt-PA *(2.85/wk, 135/yr)*
- **90** More Transported *(but not treated)*
  - ICH
  - Sz
  - Too mild
  - Uncertain onset time
  - Other (tumor, cerv. spond.)
- Avg. on-scene time- **21 min**

- Symptom onset to t-PA treatment
  - **42%** 0-60 min *(vs 0% control)*
  - **37%** 61-80 min *(vs 20% control)*
  - **21%** 81-270 min *(vs 80% control)*
### Cost Projection

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Cost of CT Scanner</td>
<td>$ 375,000</td>
</tr>
<tr>
<td>Ambulance Retrofit</td>
<td>$ 60,000</td>
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<tr>
<td>TM equipment</td>
<td>$ 30,000</td>
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<tr>
<td>Cost of added paramedic and TM coverage X 5 yrs</td>
<td>$1,000,000</td>
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<tr>
<td>Total fixed and continuing costs for 1 MSU X 5 yrs</td>
<td>$1,465,000</td>
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Less than the cost to sustain an endovascular program!

Lifetime cost per stroke: $ 200,000

Therefore, cost neutral if:

**1 MSU results in 7 more patients completely recovering over 5 yrs**