Telemedicine and Stroke Thrombolysis

NI e-Health and Care Conference
09/10/14

Dr M McCormick
Stroke: Thrombolysis
Stroke Evolution
Time is Brain (meta-analysis)

- Updated meta-analysis including ECASS III and EPITHET

A Modified Rankin score 0-1

- Odds ratio estimated by model
- 95% CI for estimated odds ratio

Stroke pathway

1. Stroke
2. Symptom recognition
3. Contact emergency services
4. Transfer to hospital
5. Prompt A&E assessment
   - Stroke team assessment
   - Brain Scan
   - Thrombolysis

3-4.5 hours
<1 hour
2011: 24/7 service

Map of NI showing the Southern Health and Social Care Trust

Southern Health and Social Care Trust
Stroke (out of hours)
Thrombolysis pathway

1. FACE
2. ARMS
3. SPEECH
4. TIME
5. 999

Stroke Unit

Southern Health and Social Care Trust
## Imaging History

<table>
<thead>
<tr>
<th>Date and time</th>
<th>Status</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>04/09/2014, 12:34</td>
<td>Report Pri...</td>
<td>CT Brain</td>
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<td>18/08/2014, 10:59</td>
<td>Report Pri...</td>
<td>XR Chest</td>
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<td>CT Chest and abdomen...</td>
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<td>MRI Head with contrast</td>
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<td>Report Pri...</td>
<td>CT Brain with contrast</td>
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<td>29/07/2014, 07:23</td>
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<td>CT Brain</td>
</tr>
<tr>
<td>23/07/2014, 13:11</td>
<td>Report Pri...</td>
<td>CT Brain</td>
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</table>
Document View

Patient Demographics and Other Identifiers

Demographics
- Sex: Female
- Date of Birth (Age): 
- Address: 
- Phone: (mobile) (home)

GP Practice
- Name: 
- Clinic: Dr. & Partners
- Address: The Health Centre
- Phone: (028)

Combined Encounter History

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<thead>
<tr>
<th>Admission</th>
<th>Discharge</th>
<th>Diagnosis</th>
<th>Visit Type</th>
<th>Location</th>
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Imaging

Bleed

Early Ischaemic Change
Stroke Telemedicine

- Prior to patient arrival
  - CT
  - ECR
  - Medications
  - Bloods

- Patient assessment
  - Confirm diagnosis
  - Exclude mimics
  - Engage with patient and relatives
  - Advise treatment
Stroke Telemedicine

- Allowed 24/7 thrombolysis
  Complex cases (consultant led service)
- System Failures
  VC failure/PACS downtime
  Back-up plan (telephone/local hospital)
- Software upgrade (Far-end control)
- Clinical Governance
  Clinical record filed in patient notes (electronic)
Telemedicine (out of hours)

<table>
<thead>
<tr>
<th>Area</th>
<th>Population</th>
<th>Hospitals</th>
<th>Calls</th>
<th>Thrombolysis</th>
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<tbody>
<tr>
<td>Southern Trust</td>
<td>360,000</td>
<td>2</td>
<td>49</td>
<td>28 (57%)</td>
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<tr>
<td>Dublin Mid-Leinster</td>
<td>736,000</td>
<td>3</td>
<td>66</td>
<td>31 (47%)*</td>
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<td>East of England</td>
<td>3,000,000</td>
<td>10</td>
<td>336</td>
<td>130 (40%)</td>
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• What is the ideal population size for telemedicine to ensure regular VC consults

• Estimated from presentation
• VC video conferencing

Southern Health and Social Care Trust
The future
Thank-you

Neill Radford (IT Security and Comms Officer)