Wagga Wagga Rural Referral Hospital

Stroke Forum: Reducing Unwarranted Clinical Variation

Thursday 28 April 2016
Audit results

- Pilot audit July 2013, audit Sept 2014
- Low Aspirin utilisation at 24 hours
- Speech assessment 24 hours rates low
- Patient inflows: Wagga as a hub site (55% inflow) and Griffith audit
- Low thrombolysis rates
- Reviewed in conjunction with multiple other audit activities
Strategy developed/ solution: Swallow

- Review of admission data: 30% of admissions occurring 5 pm Friday to Sunday
- Unit specific interest in cough reflex
- Review of cough reflex testing to supplement usual swallow assessment
- Area wide study of cough reflex testing as part of an updated swallow review
- Ongoing study of enhanced swallow assessment
Strategy developed/ solution: Lysis

- HETI funded research position
- Review of barriers to thrombolysis
- Identification of prehospital barriers which dominate
- Partnership with NSF for FAST awareness pilot project
Improving thrombolysis

<table>
<thead>
<tr>
<th>Admissions</th>
<th>&lt;4.5</th>
<th>&gt;4.5</th>
<th>Heard of FAST</th>
<th>Mimic</th>
<th>TIA</th>
<th>ICH</th>
<th>tPA</th>
<th>IS</th>
</tr>
</thead>
<tbody>
<tr>
<td>192</td>
<td>43</td>
<td>149</td>
<td>1</td>
<td>74</td>
<td>11</td>
<td>5</td>
<td>10</td>
<td>102</td>
</tr>
</tbody>
</table>
Barriers to Thrombolysis

Stroke Awareness

FAST awareness significantly associated with presentation to hospital <4.5 hours \( (p=0.013) \)

Of Ischaemic presentations

2012  3% FAST aware  22% arrived <4.5 hours

2013  9%  33% arrived <4.5 hours
Barriers to Thrombolysis

Action taken at stroke onset

Called an Ambulance 12.7% thrombolysed

Other Action
Barriers to Thrombolysis

Action taken at stroke onset

Called an Ambulance 12.7% thrombolysed

Other Action 0.6% thrombolysed
Strategy developed/ solution: Aspirin

- Review of pathway implementation
- Education of stroke champions in ED
- BPT education at commencement of training
- Personal feedback to admitting registrars if non compliant with pathway
Improvement Plan: Area

- Review of patient admission data to all sites
- Creation of Area committee for stroke care
- Create pathway for stroke unit access and transfer
- Telehealth support for Griffith as a thrombolysis site and early decant with Allied health and medical contact
- Streamline access to WWRRH Stroke Unit through single point of phone access
Strategy developed/ solution: Summary

- January education forum for BPTs commencing in the Network
- Area wide clinical pathway for stroke transfer and decanting. One stop access point for patient flow
- Telehealth Allied Health and medical support to decanting sites
- Partnership with NSF: 'FAST' education pilot
- Speech path project: cough reflex testing as part of acute assessment in hub and spoke sites

Use multiple audit tools for review
<table>
<thead>
<tr>
<th>Recommended care</th>
<th>2009 %</th>
<th>2011 %</th>
<th>2013 %</th>
<th>2015 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received stroke unit care</td>
<td>97.5</td>
<td>97.5</td>
<td>100.0</td>
<td>95.0</td>
</tr>
<tr>
<td>Swallow screened before food or drink</td>
<td>87.5</td>
<td>92.5</td>
<td>95.1</td>
<td>80.0</td>
</tr>
<tr>
<td>Brain imaging within 24 hours</td>
<td>92.5</td>
<td>94.9</td>
<td>92.7</td>
<td>89.2</td>
</tr>
<tr>
<td>Received intravenous thrombolysis (all ischaemic stroke)*</td>
<td>0.0</td>
<td>9.7</td>
<td>5.4</td>
<td>6.7</td>
</tr>
<tr>
<td>Received intravenous thrombolysis (all ischaemic stroke arrived within 3 hours)</td>
<td>0.0</td>
<td>28.6</td>
<td>11.1</td>
<td>25.0</td>
</tr>
<tr>
<td>Aspirin within 48 hours if ischaemic stroke</td>
<td>48.6</td>
<td>68.0</td>
<td>46.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Assessed by physiotherapy within 48 hours #</td>
<td>80.0</td>
<td>83.8</td>
<td>85.4</td>
<td>66.7</td>
</tr>
<tr>
<td>Assessed by occupational therapy within 48 hours</td>
<td>62.2</td>
<td>64.9</td>
<td>50.0</td>
<td>64.7</td>
</tr>
<tr>
<td>Assessed by speech pathologist within 48 hours</td>
<td>75.0</td>
<td>73.7</td>
<td>75.0</td>
<td>82.9</td>
</tr>
<tr>
<td>Mood assessed during admission</td>
<td>-</td>
<td>0.0</td>
<td>36.6</td>
<td>88.9</td>
</tr>
<tr>
<td>Incontinent patients with continence plan</td>
<td>25.0</td>
<td>0.0</td>
<td>36.7</td>
<td>16.7</td>
</tr>
<tr>
<td>Discharged on antihypertensives (all patients)</td>
<td>66.7</td>
<td>94.4</td>
<td>100.0</td>
<td>84.6</td>
</tr>
<tr>
<td>Antiplatelet on discharge if ischaemic stroke</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Received behaviour change education #</td>
<td>81.2</td>
<td>91.9</td>
<td>100.0</td>
<td>88.9</td>
</tr>
<tr>
<td>Care plan provided #</td>
<td>57.1</td>
<td>100.0</td>
<td>100.0</td>
<td>29.0</td>
</tr>
<tr>
<td>Received care training #</td>
<td>57.9</td>
<td>47.1</td>
<td>100.0</td>
<td>-</td>
</tr>
</tbody>
</table>

* 2015: new exclusion in denominator for documented contraindications
# 2015: new exclusion in denominator if patient refused
# Improvement Plan: Outcomes

<table>
<thead>
<tr>
<th>Acute Stroke Clinical Care Standard Indicator</th>
<th>Your site % or median</th>
<th>National benchmark %</th>
<th>National average n (%) or median (IQR)</th>
<th>National ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment in the emergency department</td>
<td>56%</td>
<td>81.4</td>
<td>1294 (38)</td>
<td>31 / 94</td>
</tr>
<tr>
<td>Median time (mins) of brain scan from arrival to ED ^</td>
<td>0:31</td>
<td>N/A</td>
<td>1:32 (0:46-3:05)</td>
<td>N/A</td>
</tr>
<tr>
<td>Thrombolysis in ischaemic stroke (with exclusions) *</td>
<td>7%</td>
<td>30.7</td>
<td>23 (8)</td>
<td>50 / 72</td>
</tr>
<tr>
<td>Thrombolysis in ischaemic stroke for those who arrive within 4.5 hours of symptom onset</td>
<td>14%</td>
<td>54.2</td>
<td>198 (24)</td>
<td>50 / 65</td>
</tr>
<tr>
<td>Thrombolysis within 60 mins of hospital arrival</td>
<td>50%</td>
<td>66.4</td>
<td>59 (26)</td>
<td>10 / 30</td>
</tr>
<tr>
<td>Median door to needle time ^</td>
<td>-</td>
<td>N/A</td>
<td>1:18 (0:54-1:50)</td>
<td>~/21</td>
</tr>
<tr>
<td>Median time from onset to thrombolysis ^</td>
<td>-</td>
<td>N/A</td>
<td>2:30 (2:03-3:39)</td>
<td>N/A</td>
</tr>
<tr>
<td>Admission into a stroke unit</td>
<td>95%</td>
<td>94.7</td>
<td>2474 (67)</td>
<td>11 / 85</td>
</tr>
<tr>
<td>90% of acute hospital care on a stroke unit</td>
<td>55%</td>
<td>67.5</td>
<td>1579 (39)</td>
<td>24 / 85</td>
</tr>
<tr>
<td>Swallow screen given before oral intake</td>
<td>80%</td>
<td>83.9</td>
<td>1950 (58)</td>
<td>15 / 111</td>
</tr>
<tr>
<td>Assessment for rehabilitation by a physiotherapist within 24-48 hours of hospital admission #</td>
<td>67%</td>
<td>84.2</td>
<td>2761 (68)</td>
<td>61 / 112</td>
</tr>
<tr>
<td>Rehabilitation therapy within 48hrs of initial assessment</td>
<td>94%</td>
<td>95.4</td>
<td>2399 (82)</td>
<td>30 / 110</td>
</tr>
<tr>
<td>Treatment for a rehabilitation goal commencing during an acute hospital admission</td>
<td>84%</td>
<td>97.1</td>
<td>2648 (87)</td>
<td>72 / 112</td>
</tr>
<tr>
<td>Care training</td>
<td>-</td>
<td>79</td>
<td>219 (48)</td>
<td>~/79</td>
</tr>
<tr>
<td>Care support needs assessment</td>
<td>-</td>
<td>85.1</td>
<td>271 (29)</td>
<td>~/82</td>
</tr>
<tr>
<td>Risk factor modification advice before leaving the hospital</td>
<td>89%</td>
<td>87.4</td>
<td>1273 (36)</td>
<td>14 / 108</td>
</tr>
<tr>
<td>Antithrombotic on discharge if ischaemic stroke</td>
<td>100%</td>
<td>98.9</td>
<td>1756 (97)</td>
<td>1 / 112</td>
</tr>
<tr>
<td>Antihypertensives on discharge (all)</td>
<td>85%</td>
<td>86.1</td>
<td>1629 (73)</td>
<td>17 / 112</td>
</tr>
<tr>
<td>Discharged on antihypertensive medication (haemorrhagic stroke)</td>
<td>-</td>
<td>77.5</td>
<td>137 (66)</td>
<td>~/73</td>
</tr>
<tr>
<td>Discharge on statin, antihypertensive and antithrombotic medications (ischaemic stroke)</td>
<td>80%</td>
<td>83.5</td>
<td>1120 (64)</td>
<td>21 / 111</td>
</tr>
<tr>
<td>Discharge on oral anticoagulants for atrial fibrillation (ischaemic stroke)</td>
<td>67%</td>
<td>80.5</td>
<td>304 (62)</td>
<td>41 / 95</td>
</tr>
<tr>
<td>Written care plan</td>
<td>29%</td>
<td>91.8</td>
<td>1486 (36)</td>
<td>85 / 106</td>
</tr>
</tbody>
</table>

* Thrombolysis rates not incorporating exclusions, as historically reported by the National Stroke Audit and by the Australian Stroke Clinical Registry (AusSCR) is 7% of all ischaemic stroke patients

^ Sites who have submitted <4 valid times (RH-MM) have been excluded from this indicator

# Reported as <48 hours
Implementation approach

- Co register different audit activities
- ACI/NSF/TIPS/SITS/Unit Database
- Support key staff
- Education, clinical development
- Clinical trials with audit components/resources
- TIPS/QASC/NSF
- Look for the Freebies
- Trial resources/HETI research training
What have we learnt?

- Security and engagement of staffing is critical.
- Need for a streamlining of audit is desperately needed.
- Networking within and across LHD boundaries improves opportunities to enhance performance.
- Repeating the same message is challenging. A functional pathway will help.
- Recognition of success within a service is key.
- Success in smaller sites may be easier to achieve.
Thanks

- Katherine Mohr, Stroke Care Coordinator
- Jill Ludford, Chief Executive MLHD
- Wendy Cox, Area DMS MLHD