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The Tyranny of Distance can be Overcome with Collaboration and Authentic Engagement

Jaclyn Birnie and Rachel Peake
Stroke Care Coordinators
Armidale & Tablelands Sectors; Peel & Mehi Sectors
Hunter New England LHD

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Hunter New England Local Health District

- Is the only district in NSW with
  - A major metropolitan centre and
  - A mix of several large regional centres and
  - Many smaller rural centres and remote communities within its borders.
- Provides services to approx 920,000 people.

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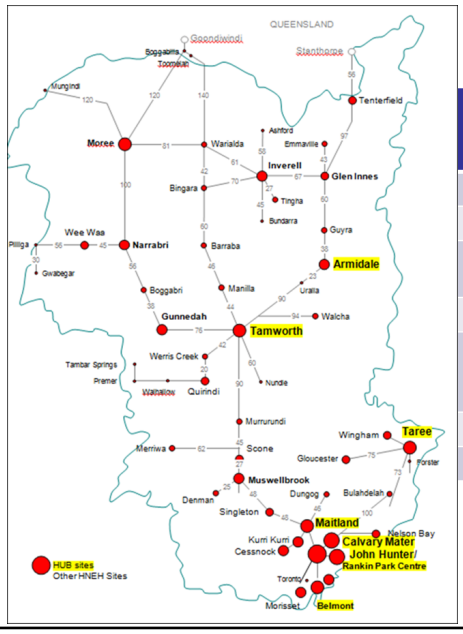

Hub hospital *Regional # Metro	Stroke Neurologists	Stroke Co-ordinator
*Armidale	0	1 FTE
*Tamworth	2 VMOs	1 FTE
*Taree (Manning)	0	0.8 FTE
*Maitland	0	1 FTE
#John Hunter	Stroke neurologist= 1.5 Neuro-interventionalist= 2	1 FTE (Neurology)
#Calvary Mater	0	0.5 FTE
#Belmont	0	0.5 FTE

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Stroke

- Stroke is a medical emergency requiring timely access to specialist clinical diagnostics and management.
- Access to timely specialist stroke care is limited in northern NSW.
  - Restricted access to time critical therapies.

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Evidence & awareness

- Growing evidence for hyper-acute stroke therapies

Thrombolysis

Strong recommendation

For patients with potentially disabling ischaemic stroke within 4.5 hours of onset who meet specific eligibility criteria, intravenous thrombolysis should be administered as early as possible after stroke onset (Wardlaw et al. 2014 [37]; Emberson et al. 2014 [38])

Strong recommendation

For patients with ischaemic stroke caused by a large vessel occlusion in the internal carotid artery, proximal middle cerebral artery (M1 segment), or with tandem occlusion of both the cervical carotid and intracranial large arteries, endovascular thrombectomy should be undertaken when the procedure can be commenced between 6-24 hours after they were last known to be well if clinical and CT perfusion or MRI features indicate the presence of salvageable brain tissue. (Nogueira et al. 2017 [71], Albers et al. 2018 [72])

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John Hunter Hospital Stroke Team

Previously led by Professor Chris Levi.

Now under the leadership of Professor Neil Spratt, Dr Carlos Garcia-Esperon and Dr Ferdi Miteff.

How can we help close this gap?

Support from
Executive Leadership Team
including Michael DiRienzo, Jane Kerr, Susan Heyman

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Service Gaps

- 2016 barriers to hyper-acute stroke treatment in rural/regional areas
  - No advanced imaging
  - Limited access to Neurologists
    - Tamworth Hospital out of reach for many towns in Northern NSW
  - Generalist staff: medical and nursing
  - No clear channel of communication between smaller sites and specialists
- Burden of travel on NSW Ambulance

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Collaborative approach

ACI NSW Agency for Clinical Innovation

Ambulance Service of New South Wales

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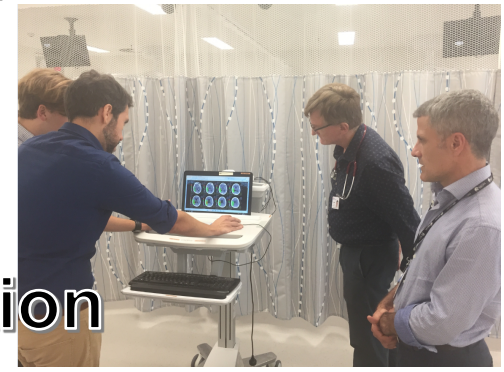
The journey begins…

1. Engagement
   - Site visits
     - Armidale 1 x 2016; 2 x 2017
     - Moree 1 x 2018
     - Tamworth 1 x 2017
   - Building relationships
   - Building trust



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2. Information sharing

- Face to face
- Invitations to visit JHH
  - Radiographers received training in CT perfusion imaging at JHH
  - Stroke Care Coordinator visit
- Videoconferencing
- Case reviews; evidence of outcomes, reasons to treat, reasons not to treat patients

Communication

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3. Technology

- Access to advanced brain images
- Scopia videoconference has allowed for mutual learning opportunities
- Videoconferencing
  - More interactive than a phone call
  - Saves repeat conversations
  - Allows interaction between specialist and patient/patient's family

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Communication

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Metropolitan perspective

- Appreciation of varied caseloads at rural site
- Recognise need for Generalist skills
- Provide Leadership to regional and rural sites
- Increase in specialist treatments e.g ECR

ECR

DESCRIPTION	2013	2014	2015	2016	2017	2018	2019 (AUG)
Manning	1	0	0	0	2	10	6
Tamworth					0	5	5
Armidale					0	6	4
Port Macquarie				0	2	9	5
Coffs Harbour				0	2	4	5
Moree						0	1
Maitland						0	3
Total per annum	1	0	0	0	6	34	29
Total	1	1	1	1	7	41	70

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Rural perspective

- Support has been ongoing since establishment.
- JHH Stroke Neurologists are always available to us.
- Involvement in research.
- Ongoing communication with Emergency Department Medical Staff and Physicians.

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Since 2016,

- Endovascular clot retrieval treatment window has expanded to up to 24 hours.
  - Benefits to rural and regional sites. Has a flow-on effect on Ambulance and Retrieval Services.
- Advanced brain imaging for acute stroke is vital for informed patient selection- DAWN trial.
  - ED physicians have increased confidence in patient selection.
- Ongoing process refinement- a single 1300 phone number.
- Further site integration into Telestroke, Moree joining in 2019.

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Within HNELHD,

- Telestroke has been a catalyst for strengthened relationships between regional and rural sites and John Hunter Hospital.
- Emergency Department medical officers and physicians have reported Telestroke to be a good learning opportunity.

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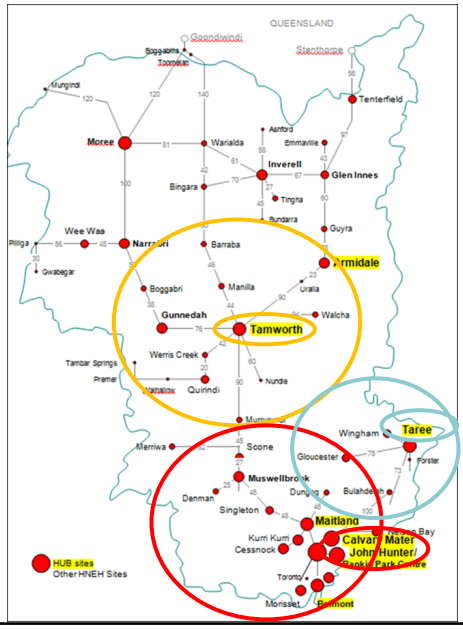
2015 – availability of reperfusion therapies



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2019 – availability of reperfusion therapies

✓Engagement

✓Information sharing

✓Technology

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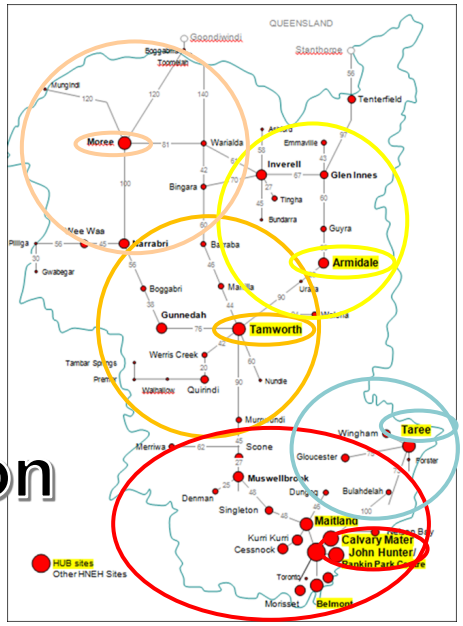

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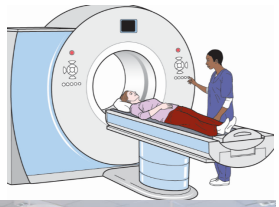
Thanks to all

- Emergency Departments
- Radiology Departments
- Medical officers and nursing staff
- Information Technology teams
- Stroke Coordinators



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With special thanks to

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- Tamworth: Dr Matt Shepherd, Rachel Peake, Dr James Hughes, Dr Lisa Dark, Radiography Department
- Armidale: Dr Mark Kelly, Jackie Birnie, Radiography Department, Emergency Department
- Moree: Paige Miller, Annabelle MacLennan, Medical Staff

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