



JOHN HUNTER HOSPITAL ACUTE STROKE RESEARCH AND INNOVATION TEAM

Pioneering Stroke Care Innovation for Regional and Rural Healthcare

The John Hunter Hospital Acute Stroke Research and Innovation Team has pioneered breakthrough innovations in stroke care technology, pharmacotherapies, and care models over the past 20 years, transforming access to life-saving treatments in regional and rural healthcare settings. Our team leads nationally and internationally in stroke care innovation, specialising in advanced brain imaging, telestroke services, prehospital care protocols, and next-generation thrombolytic therapies that deliver the most powerful treatments known to medicine.

PARTNERSHIP CAPABILITIES

- **Advanced Multimodal CT Brain Imaging:** First nationally to introduce cutting-edge brain imaging into rural hospitals for reperfusion therapy decision assistance
- **Telestroke Care Platforms:** First nationally and internationally to use advanced imaging to guide telestroke delivery
- **Prehospital Triage Protocols:** First nationally to develop and prove benefits of prehospital triage and bypass protocols
- **Lightweight Brain Imaging Devices:** First internationally to deploy portable brain imaging in prehospital settings with telestroke support
- **Next-Generation Thrombolytic Therapy:** First to evaluate tenecteplase in both standard 4.5-hour and extended time windows

PROVEN IMPACT

- **Clinical Practice Changes:** Tenecteplase testing led to national and international guideline changes, becoming the preferred approved acute stroke thrombolytic therapy
- **Expanded Access:** Advanced brain imaging technology spread to smaller hospitals, opening reperfusion therapy access to hard-to-reach regional and rural communities
- **National Implementation:** Proven prehospital triage and bypass protocols rolled out and scaled up nationally
- **Cost-Effective Care:** Therapies not only save lives but reduce death dependency and healthcare costs
- **Workforce Development:** Programs support education and training of stroke expert medical, nursing and allied health workforce
- **Regional Economic Impact:** Projects support the regional economy through partnerships with industry

REVOLUTIONISING STROKE TREATMENT WITH TENECTEPLASE

Our groundbreaking research on tenecteplase has fundamentally changed stroke care globally. Through rigorous clinical trials, we demonstrated that tenecteplase is superior to the previous standard treatment (alteplase) in terms of both efficacy and safety. This represents the first major advance in intravenous thrombolytic therapy since 1995, with our findings influencing national and international guidelines for acute ischaemic stroke care and transforming everyday clinical practice worldwide.



CONTACT US:

Christopher Levi

Executive Director Research and Innovation
Hunter New England Local Health District

Christopher.Levi@health.nsw.gov.au