



Improving recovery from acute stroke through pre-hospital ambulance treatment (INTERACT4) – March 2022



The George Institute
for Global Health

Facts:

- Stroke affects nearly 17 million people in the world each year. In developing countries, it is the second-largest contributor to loss of healthy lives (disability-adjusted-life-years or DALYs) after ischaemic heart disease, and the third largest in developed countries.
- Elevated blood pressure is very common (>60%) after the onset of acute stroke, and predicts poor outcomes.

Project cycle:

2019 – 2023

Partners:

*The George Institute for Global Health
Shanghai East Hospital, Tongji University, China
The First Affiliated Hospital of Chengdu Medical College, China
Sichuan Academy of Medical Sciences · Sichuan Provincial People's Hospital*

Supporters:

*National Health and Medical Research Council (NHMRC), Australia
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Shanghai Pudong Health Bureau, China
Shanghai Science and Technology Development Foundation, China
Chengdu Science and Technology Bureau, China
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Principal Investigators

*Prof Craig Anderson Prof Jie Yang
Prof Gang Li Prof Lily Song*

Background:

- Treatments to improve recovery from acute stroke are more effective if given as early as possible.
- Initiating blood pressure (BP) lowering treatment in patients with suspected acute stroke before hospital arrival could improve recovery by decreasing intracerebral haemorrhage (ICH) bleeding in the brain, and reducing any delay in clearing clots that might be blocking blood vessels in the brain following acute (ischaemic) stroke.
- The limited number of studies examining pre-hospital BP lowering treatment after acute stroke have shown it is safe but have not shown any clear benefits.

Aims:

- This study will determine whether controlling BP in patients with suspected acute stroke by initiating treatment in the ambulance improves the chances of recovery without any serious harms, compared to the normal process of controlling BP when patients arrive at hospital.

Methods:

- A multi-centre, ambulance-delivered, prospective, randomised, open treatment, usual care controlled, clinical trial of pre-hospital initiated BP lowering treatment in 3,116 'hypertensive' patients with suspected acute stroke at 50+ sites in China.
- Patients are randomised via a mobile phone digital system to receive intensive BP lowering with an intravenous drug.
- After the collection of in-hospital clinical and management data and seven-day outcomes, trained blinded assessors conduct telephone or face-to-face assessments of physical function and quality of life in participants at 90-days.

Impact:

- This is the largest pre-hospital clinical trial for a new treatment strategy for acute stroke.
- It will improve stroke care in ambulances and provide reliable evidence to improve medical emergency systems in China.
- The results will foster similar BP lowering treatments in ambulance services globally and emphasise the importance of rapid control of BP when patients arrive in the emergency departments of hospitals.
- The treatment will potentially save lives and reduce disability among hundreds of thousands of patients who experience a stroke, or the warning symptoms of a stroke, annually around the world.

Contact:

To find out more about the INTERACT4 study and its principal investigators Prof Craig Anderson, Prof Gang Li, Prof Jie Yang, Prof Lily Song or The George Institute, please contact +86 10 8280 0577 or media_china@georgeinstitute.org.cn

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