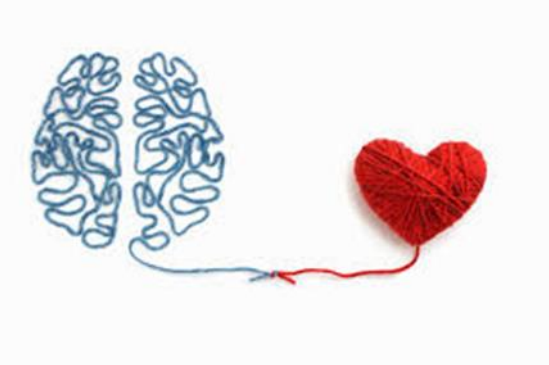
Stroke awareness at LHCH e-learning package

Learning Objectives

- Why is stroke management important
- Incidence of stroke after cardiac intervention
- Recognising a stroke
- Acute management of stroke
- LHCH stroke protocol
- Multidisciplinary Stroke Team



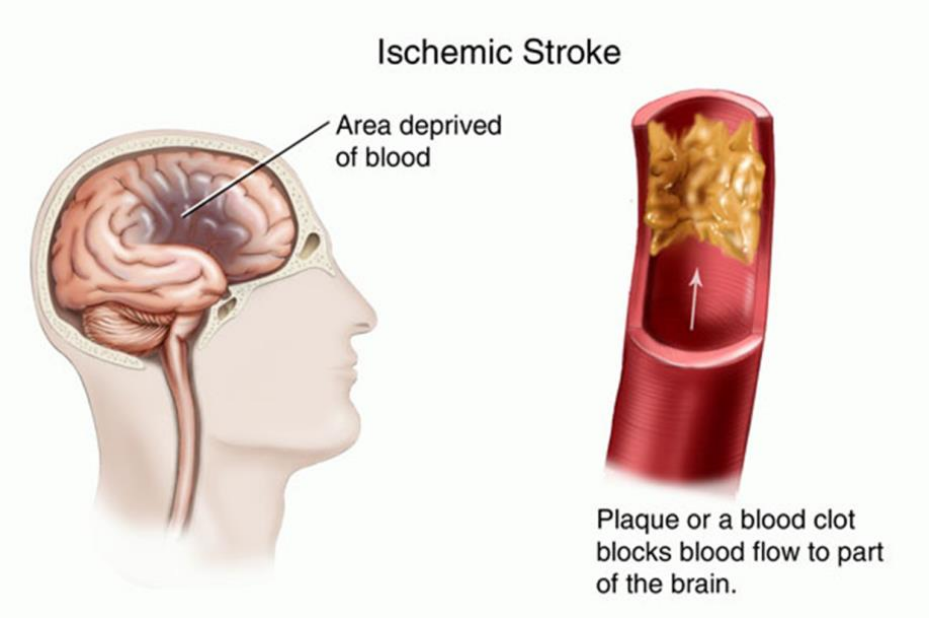
Why is stroke management important?

- Stroke is a heart attack of the brain
- 4th most common cause of death (WHO, 2018)
- One of the leading causes of preventable disability and death
- Approximately 100,000 people suffer a stroke within the UK each year, which equates to around ‘one every 5 minutes’ (Stroke Association, 2018).

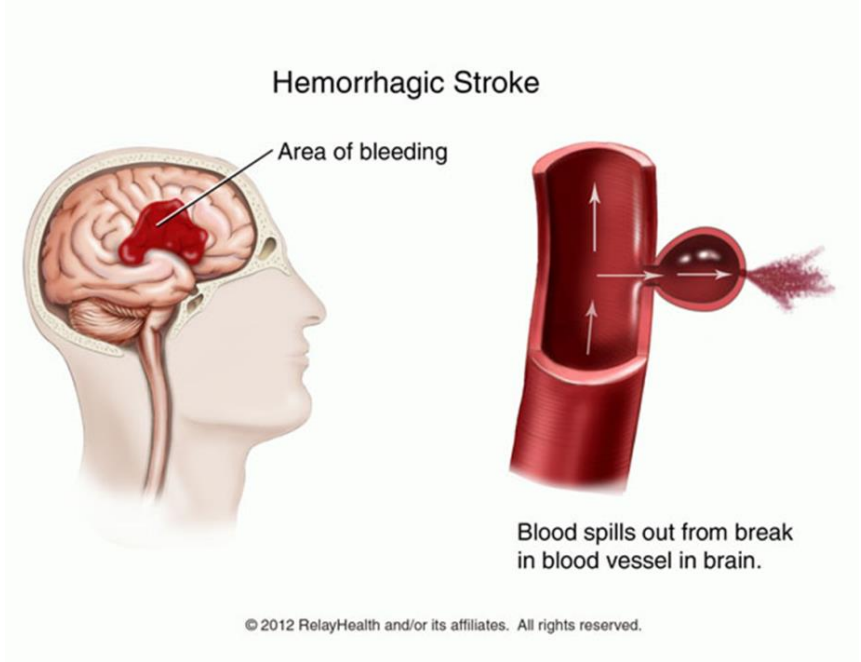
Quality Stroke Care improves patient outcomes

- *Early* diagnosis with adequate *treatment* of these complications is proven to *improve outcomes* after *stroke*
- There are 1.2 million stroke survivors in the UK (Stroke Association, 2020)

What is a Stroke?



About 85% of strokes are ischaemic



About 15% of strokes are caused by haemorrhage

What is a Stroke?

- **Sudden** onset of a **focal** neurological deficit, lasting more than 24 hours (or leading to death) due to either **infarction** or **haemorrhage**.

What is a Stroke?

- A stroke occurs when the blood supply to parts of the brain are interrupted, usually due to a blocked (ischemic) or burst (hemorrhagic) blood vessel.
- The blood supply carries oxygen and nutrients which are essential for the brain to function normally. When oxygen and nutrients can no longer reach parts of the brain, vital brain cells are damaged and may die
- The onset of stroke is sudden and the effects on the body are immediate
- It is similar to what happens in the blood vessels leading to the heart when someone has a heart attack

Stroke after Cardiac Intervention

- Johns Hopkins Data (2001-2004)

Procedure	
CABG	4.1%
Valve	3.1%
CABG/Valve	7.9%
CABG/other	7.2%
Aortic repair	8.7%
Other	3.6%

- LHCH Data (2016/2017)

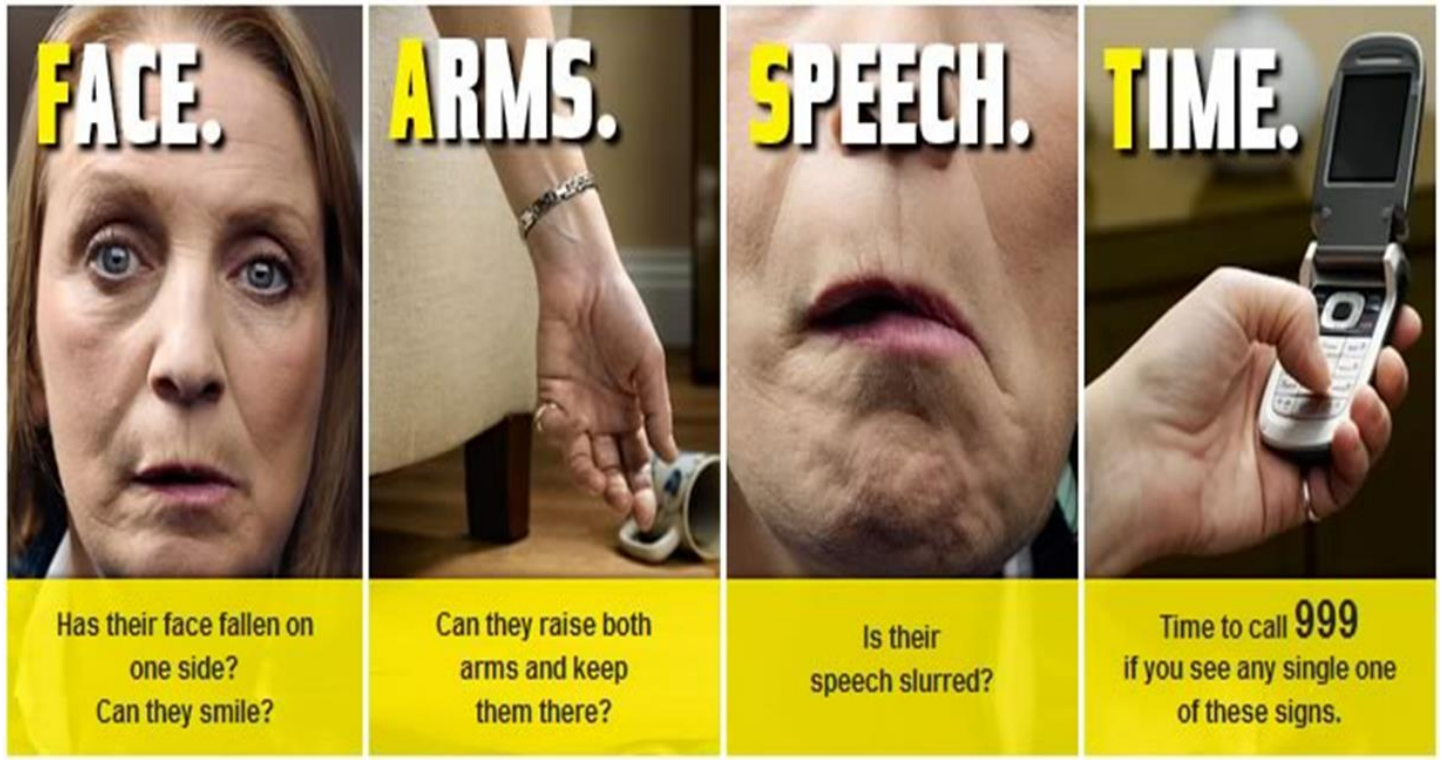
	No of Procedures	No of Strokes	%
Isolated CABG	1656	27	1.6
CABG & Valve Procedure	447	25	5.5
CABG & Other	19	0	0.0
Valve Procedure	1023	44	4.3
Aortic Surgery	359	31	8.6
Other Procedures	109	5	4.6
All Cardiac	3613	132	3.7

Recognising a stroke

- Common symptoms include:
  - Weakness, numbness, clumsiness or pins and needles on one side of the body (e.g. face, arm or leg).
  - Slurred speech or difficulty finding some words
  - Loss of, or disturbed vision in one or both eyes
  - Acute unsteadiness or incoordination in the whole body or just a limb.
- The effects a person may experience following a stroke will depend on the area of the brain that has been damaged and the extent of that damage.
- No two people will experience exactly the same problems

Recognising a Stroke

National Campaign by Public Health Englang – ACT F.A.S.T



Recognising a Stroke at LHCH

S Suspect a stroke? ACT FAST

T Telephone RLUH Switchboard - stroke consultant or stroke specialist nurse

R Recognise timeline - when was patient last 'normal', will determine if eligible for intervention.

O Organise head CT / angiogram / transport as advised by RLUH.

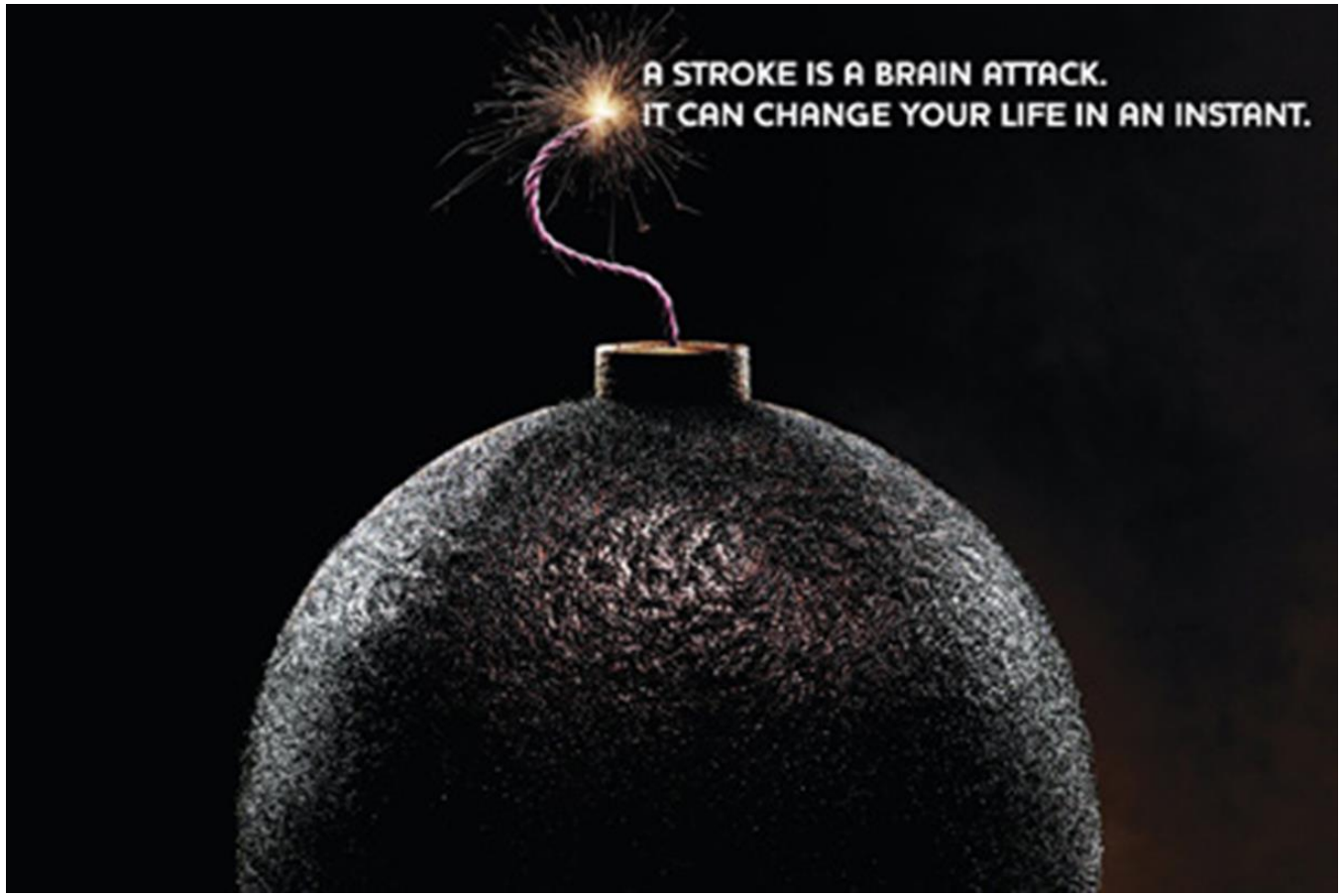
K Keep patient nil by mouth.

E Enter referral: stroke MDT on EPR.

How is stroke diagnosed?

- **CT Scanning**
  - Is usually one of the first tests carried out
  - A CT scan will help determine whether the stroke has been caused by insufficient blood flow (ischaemic stroke) or a ruptured blood vessel (haemorrhagic stroke)
  - It is vital to be able to establish whether the stroke was caused by a blockage or a bleed as the drug management is very different for each of these.
  - A CT scan carried out within a couple of hours of an ischaemic stroke may not show any abnormalities but a haemorrhage shows up immediately; there are also some parts of the brain which a CT scan does not image well
  - A CT scan should be carried out immediately once a patient is suspected of having a (new) stroke

Acute Management



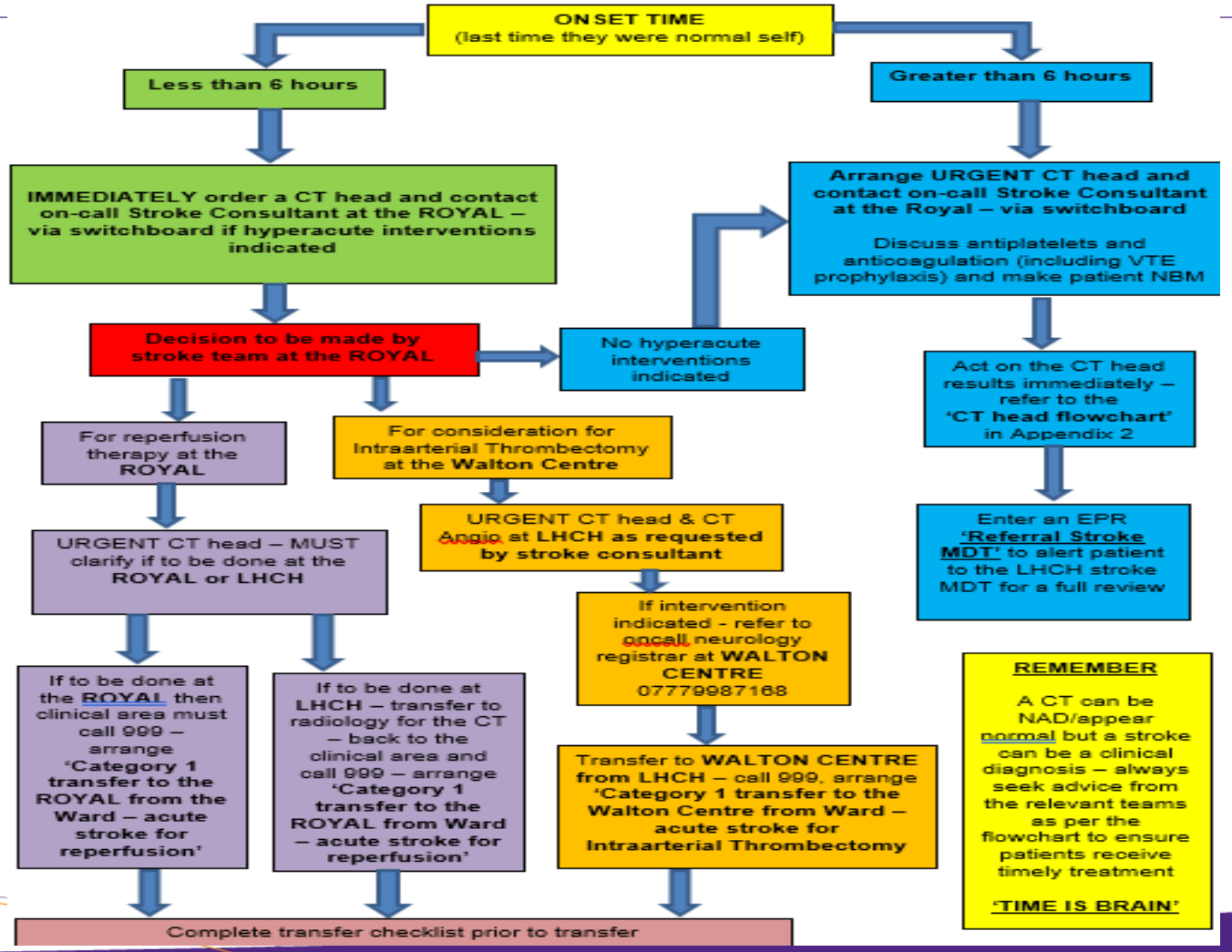
Acute Management

- Every minute in which a stroke is untreated, the average patient loses **1.9 million** brain cells (neurons).
- Each hour delay in treatment, the brain loses as many brain cells as it does in almost 3.6 years of normal aging.

Acute Stroke Management

- Follow guidance from LHCH Stroke Protocol:
  - Urgently contact RLUH Stroke consultant/Stroke specialist nurse (via switchboard) – 24 hour cover
  - Urgent CT Head
  - Fasting glucose and cholesterol
  - 24 hour ECG (if NOT known to have AF already)
  - Aspirin 300mg ASAP (PO/PR/NG)
  - Nil by Mouth
  - Inform LHCH stroke team (Bleep 2108 and complete EPR Referral: Stroke MDT)

Stroke Pathway at LHCH



Why Nil by Mouth?

Swallowing is a complex process involving brain and nerve control. In stroke, problems can arise from:

- **Weakness** in the muscles of the mouth, throat or airway
- **Sensory** changes in the mouth, throat or airway
- Difficulty with **coordination** of the finely tuned movements of swallowing.

The prevalence of dysphagia in the acute phase of stroke is **40-78% of patients** (Martino 2005)

Dysphagia = Swallowing impairment

NICE, RCP and LHCH policy states: All suspected stroke patients must have their swallow screened ***before*** taking any oral medications, diet or fluids.

There are now **trained swallow screeners** at LHCH who can screen swallowing outside of SALT hours. They are mostly ANPs and outreach nurses and have had specialist training for screening.

! **Appropriate identification and management of dysphagia reduces morbidity, mortality and improves quality of life**

LHCH Stroke team

- Based offsite at RLBUHT: 0151 706 2000
  - Stroke Consultant / Fellow
  - Stroke Nurse Consultant

- Based onsite:
  - Physiotherapy (Bleep 2108)
  - Occupational Therapy (Bleep 2107)
  - Speech and Language Therapy (Bleep 2757)
  - Pharmacy
  - Dietetics