



# Reducing Time to Treatment for Acute Stroke Patients in Cork University Hospital

## Quality Improvement Project

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THE BAD NEWS IS  
TIME FLIES.

THE GOOD NEWS IS  
YOU'RE THE PILOT.

- MICHAEL ALTSHULER



# Background

- Stroke is the **2nd leading cause of death** in developed countries and the **top cause of adult disability** in Ireland (HSE, 2022).
- European forecasts predict Ireland's stroke burden could rise by up to **59% within the next decade** (SAFE, 2024).
- **Every minute** saved in stroke treatment improves functional outcomes and quality of life.

# How did the project begin?

- In March 2025, the Cork University Hospital Stroke Team began joint discussions with the National Ambulance Service.
- A key delay was identified in **Door-to-CT times** for suspected stroke patients.
- This project is based both on the 'Helsinki Method' for reducing treatment delays in acute stroke.

## Three Priority Outcomes

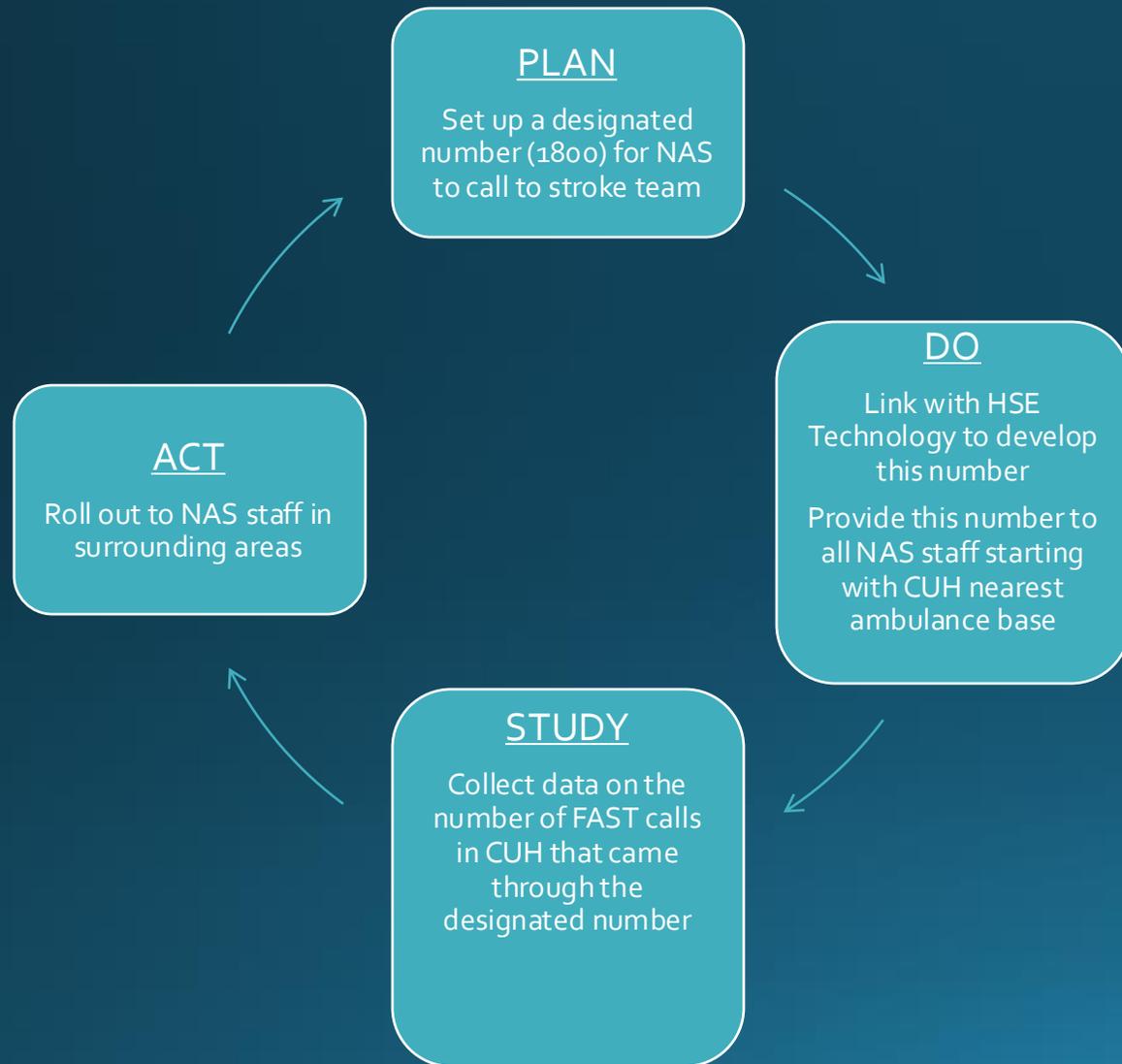
Reduce Time On Scene

Reduce Time from Door to CT

Reduce Door to Treatment Time



# QI Methods -PDSA



## Other interventions used with PDSA cycles

1. Developed a pre registration form - **'Code Stroke Passport'**.
2. Pre booking **FAST CT scan**.
3. Paramedic **education**.
4. **Hospital wide education**, including radiology, ED and admin staff.

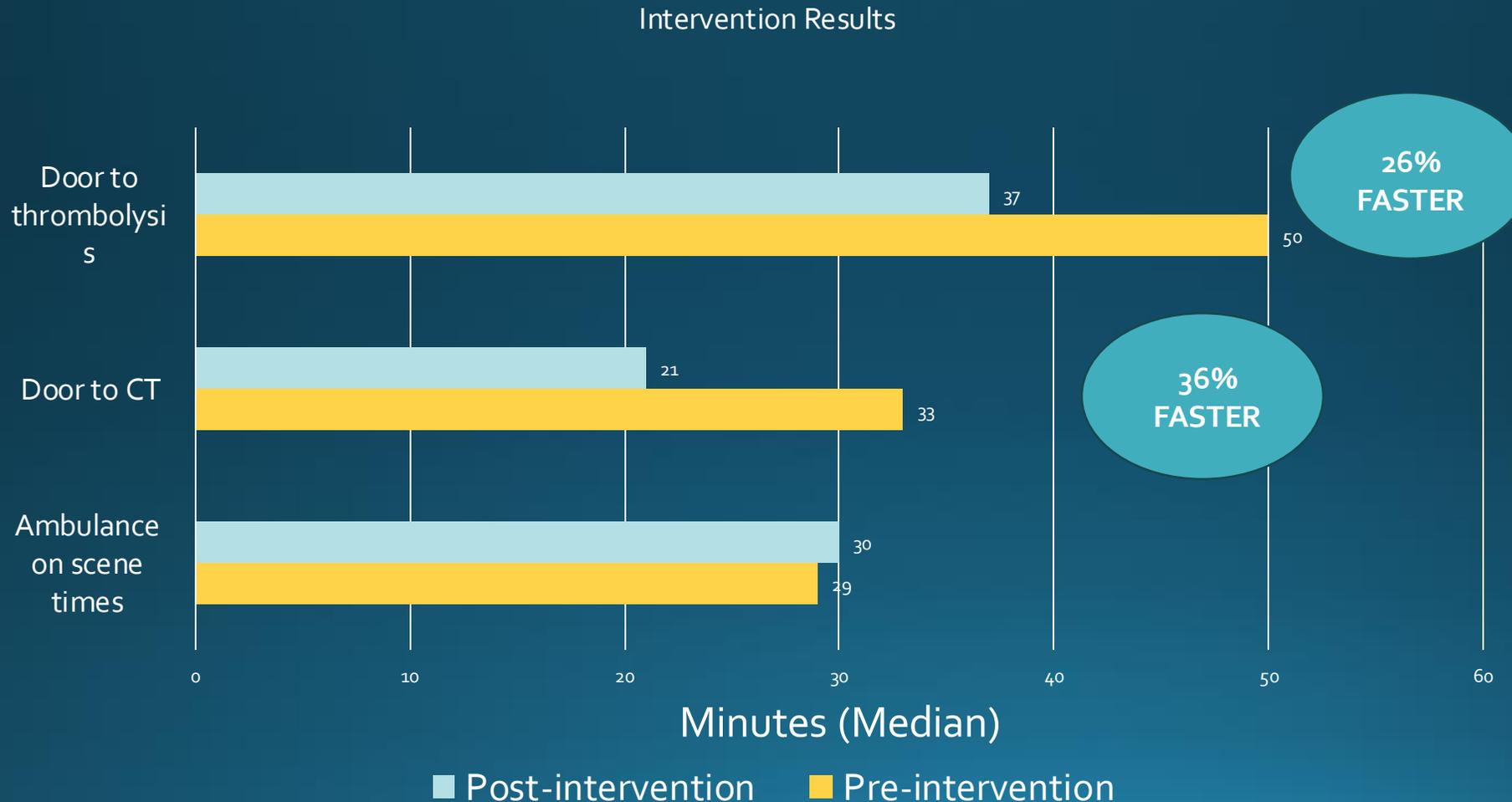
# Clinical examples

- **84-year-old female**
- **FAST-positive stroke symptoms** and rapidly declining consciousness at scene
- **Paramedic Pre-Hospital Coordination**
- Paramedics activated the **Stroke Passport** and pre-alerted the CUH Stroke Team during transport
- Hospital record review identified a **recent Stage 4 cancer diagnosis** and documented wishes - avoid life-prolonging interventions
- **On Arrival at CUH**
- Patient arrived unconscious and was transferred directly to CT
- Imaging confirmed a **large intracerebral haemorrhage**
- With prior clinical information available, the team made a rapid decision **not to intubate**
- Care pathway shifted immediately to **palliative management**

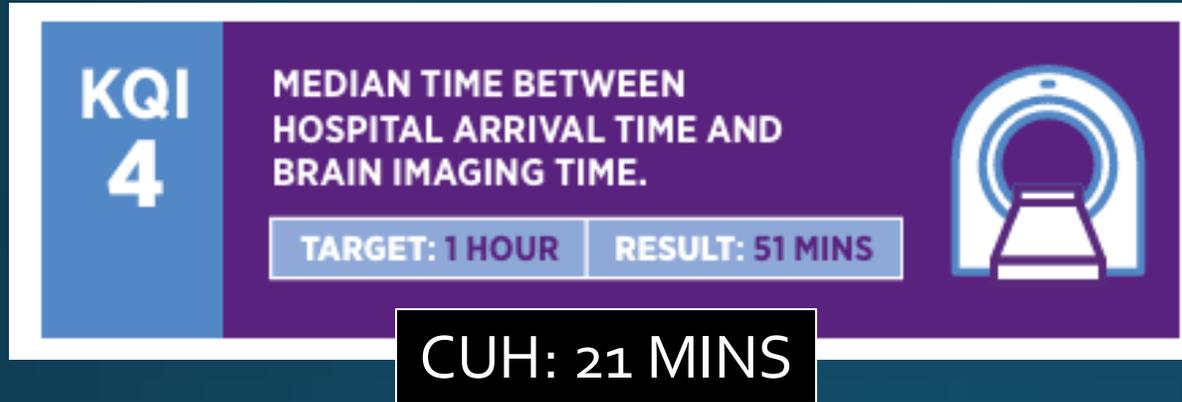
- **67-year-old male**
- **FAST-positive stroke**, presenting with **aphasia** and **right hemiparesis**
- **Paramedic Pre-Hospital Coordination**
  - Stroke Team review identified **known atrial fibrillation** without anticoagulation
  - Stroke Team pre-booked **CT** and prepared **thrombolysis kit**
- **Outcome**
  - **Door-to-CT:** 16 minutes
  - **Thrombolysis:** <30 minutes from arrival
  - **Hospital Stay:** 4 days on Stroke Unit
  - **Discharge:** Returned to baseline function

# Project Results – Time Improvements

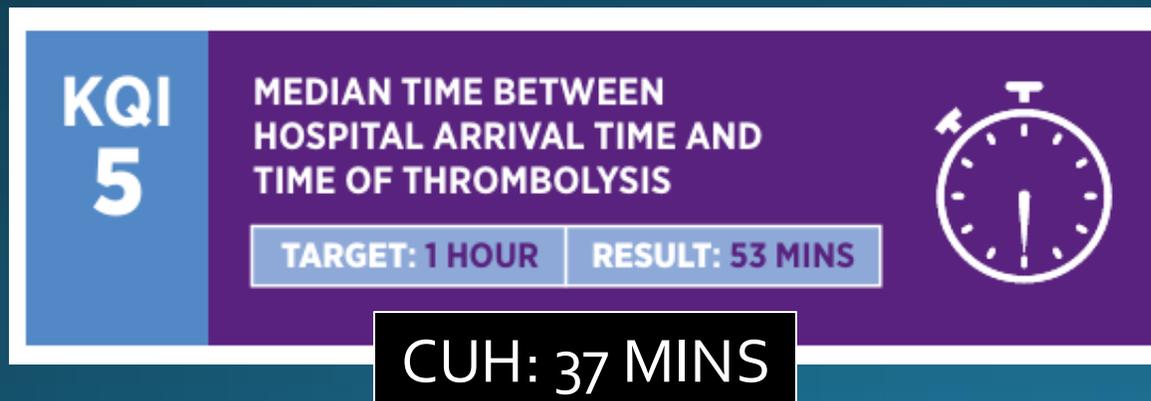
Significant reductions in Door-to-CT and Door-to-Thrombolysis times without affecting on-scene care.



# Comparison to National Standards



59% FASTER than national average



30% FASTER than national average

# What's next?

## Project Highlights:

1. Great teamwork with growing stronger links between different services
2. Cost Neutral implementation
3. Resource Neutral approach
4. Patient at the centre

## Brainstorming ideas

Can the on-scene time with paramedics be reduced?

Developing an electronic version of the Stroke Passport?

Can patients be directly transported from ambulance to CT department?

Identification of LVO patients by paramedics using Act FAST theory

Can paramedics take blood samples en-route to further reduce hospital times?