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## IRISH NATIONAL AUDIT OF STROKE

A critical review of national stroke data for Ireland  
from 2013 to 2021

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MINUTES CAN SAVE  
INDEPENDENCE

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**NOCA** National Office of  
Clinical Audit

**IRISH NATIONAL AUDIT OF STROKE**  
A critical review of national stroke  
data for Ireland  
from 2013 to 2021

**‘Has anything happened?’**

**31<sup>st</sup> January 2023**

**INAS** Irish National  
Audit of Stroke



Tweet us at  
**@noca\_irl**

# CELEBRATING OVER 10 YEARS OF STROKE DATA



Prof Joe Harbison

Prof Emer Shelley

Prof Peter Kelly

Carmel Brennan

Paul Marsden

Phil Dunne

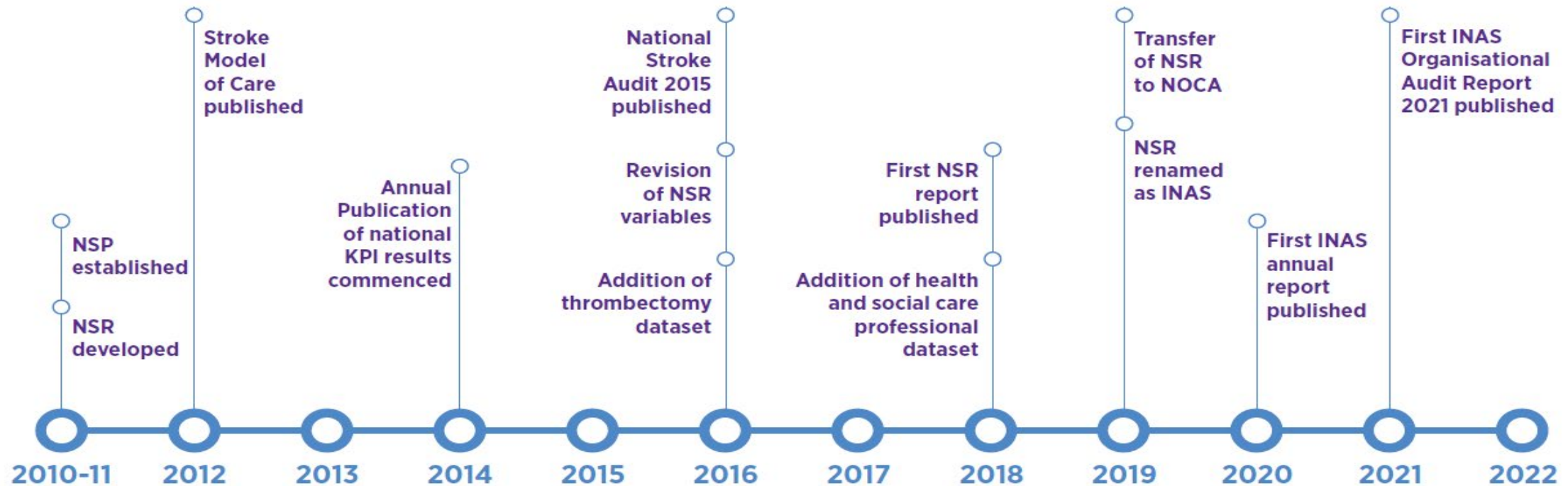


STROKE

National Stroke Programme



# EVOLUTION OF STROKE DATA



# THE IRISH NATIONAL AUDIT OF STROKE



Joan McCormack  
Cardiovascular Audit Manager



Olga Brych  
Data Analyst



Claire Prendergast  
HSCP Representative INAS  
Governance Committee



Dr Tim Cassidy  
Chairperson  
INAS Governance Committee

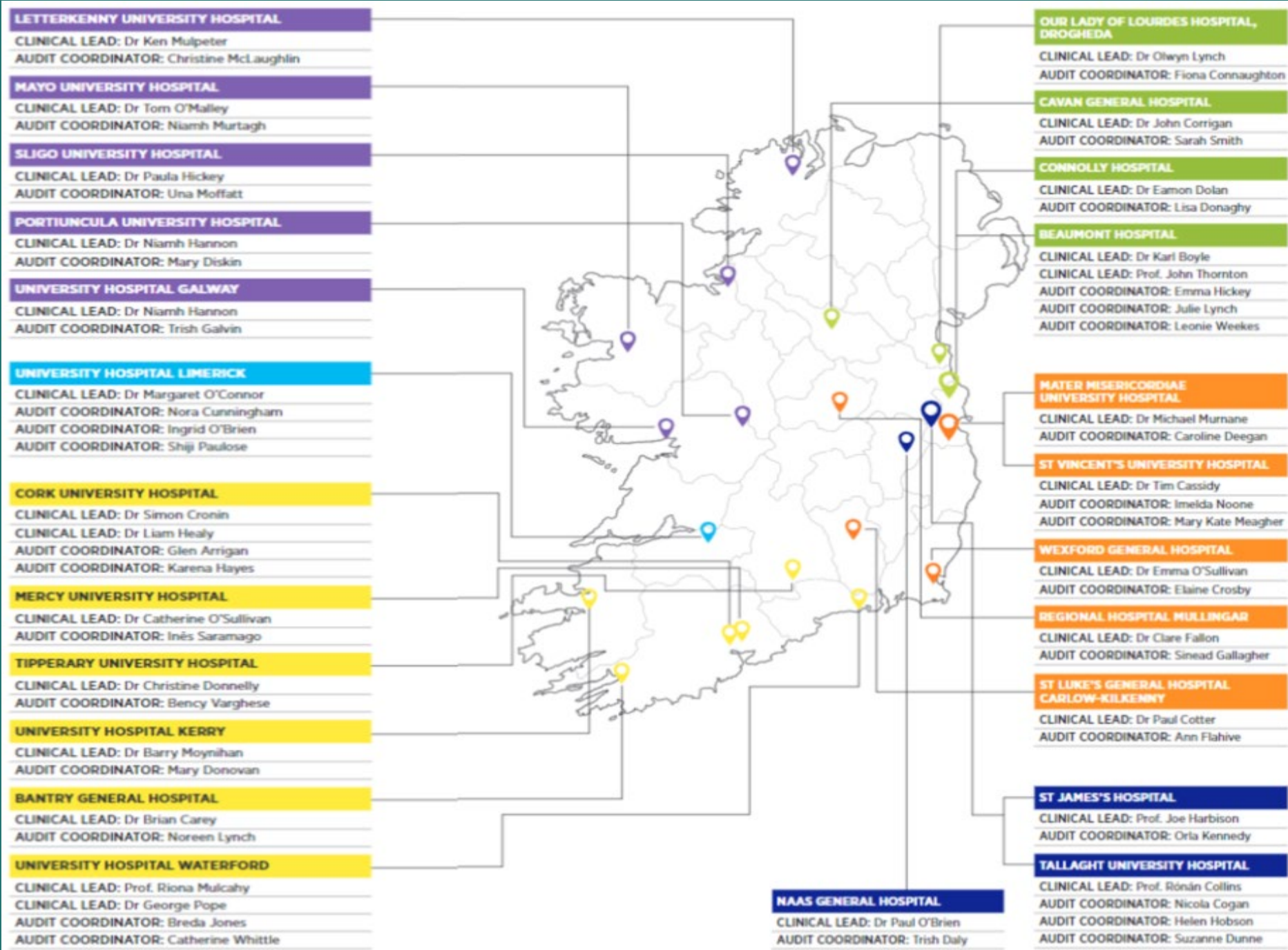


Prof Joe Harbison  
Clinical lead  
INAS Governance Committee



Public and Patients Representatives  
Martin Quinn  
Karen Kinsella





26 Clinical Leads

33 CNSs and ANPs

And all who have  
been and gone

Thank you for your  
dedication to  
stroke services,  
stroke data and  
most importantly  
stroke patients

## IRISH NATIONAL AUDIT OF STROKE ORGANISATIONAL AUDIT 2021

### ORGANISATION OF EMERGENCY STROKE SERVICES



**24 STROKE UNITS**

An increase from 21 stroke units in 2015



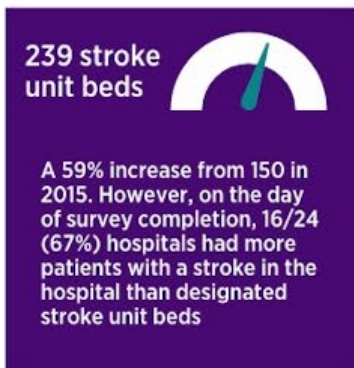
2 endovascular thrombectomy (EVT) stroke centres provide a thrombectomy service for acute stroke 24/7



### ORGANISATION OF HUMAN RESOURCES



### ORGANISATION OF STROKE UNITS



### ORGANISATION OF EARLY SUPPORTED DISCHARGE SERVICES



# Massive amount of data collected since 2013

- 172 page report
- 268 page appendices.
- 34,630 inpatient episodes for stroke.
- 3,244 people thrombolysed
- 1,840 transferred to a thrombectomy centre
- Changes in management practices esp anticoagulation.
- Some changes in demographics, ?related



# KEY FINDINGS 2013-2021



2nd leading  
cause of  
death  
in Ireland



34,630  
cases recorded  
between  
2013 & 2021



56% MALE  
Median age  
72 years



44% FEMALE  
Median age  
78 years





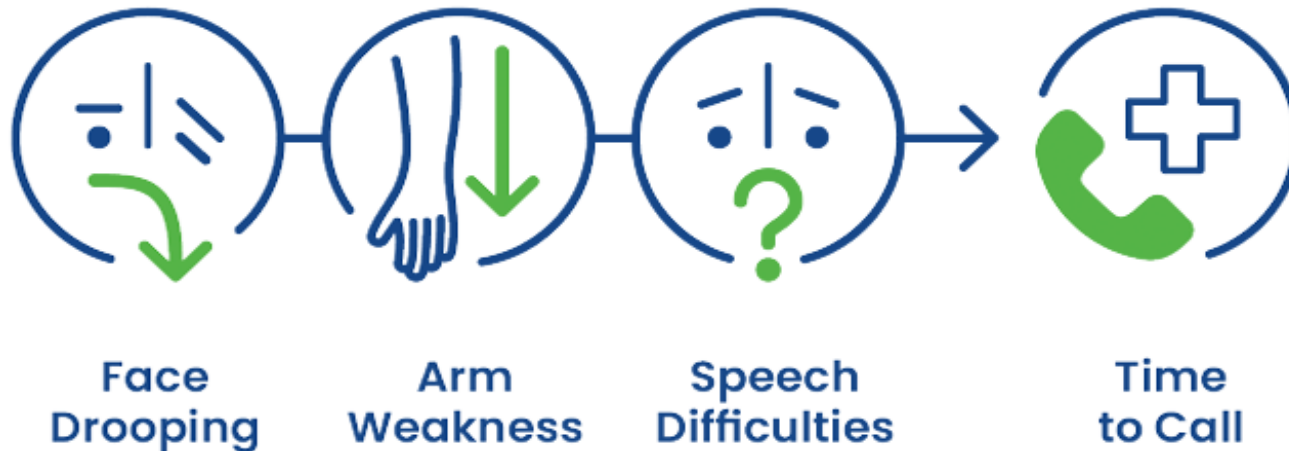
# We seem to be missing some strokes?

- Our number of Hospitalised stroke patients  $\approx$ 6,000/year
- Extrapolating UK & NI data we potentially should have  $\approx$ 7,800-8,200 hospitalised strokes / year.
- Our Audit number verified on Portal and HIPE.
- >95% of admissions into Audited Hospitals.
- Some explanation from Subarachnoid Haemorrhage.
- ?Private / Non-INAS hospitals
- ? Non presentation.
- ??Non-identification.

## TIME IS BRAIN

### STROKE IS A MEDICAL EMERGENCY WHICH REQUIRES URGENT TREATMENT.

The sooner a person arrives to hospital, is assessed by a doctor and receives a brain scan, the less damage is likely to happen. This results in better outcomes and less disability.



The proportion  
of patients who  
arrived at hospital  
within 3 hours of onset  
of stroke symptoms  
decreased

2013 **59%**  
2021 **46%**

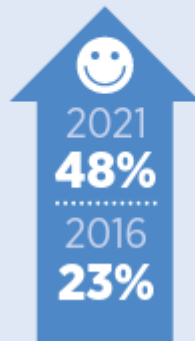


In 2021: ≈750-800 less people presenting in an ideal window for treatment.

## EMERGENCY CARE TRENDS



The proportion of patients who saw a doctor within 10 minutes **increased** from 23% in 2016\* to 48% in 2021



The proportion of patients who had a brain scan within 1 hour increased from 20% in 2013 to 48% in 2021



## EMERGENCY TREATMENTS



IV thrombolysis rate - 11% in 2013 **decreased** to 10% in 2021 - Target 12%



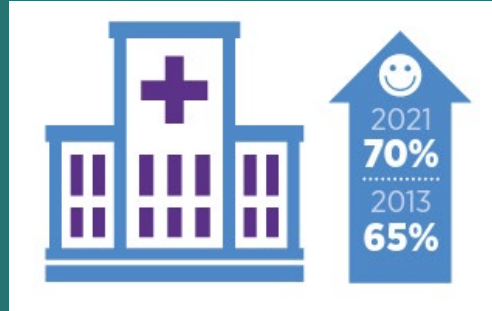
The proportion of patients who received thrombolysis within 1 hour **increased** from 25% in 2013 to 56% in 2021



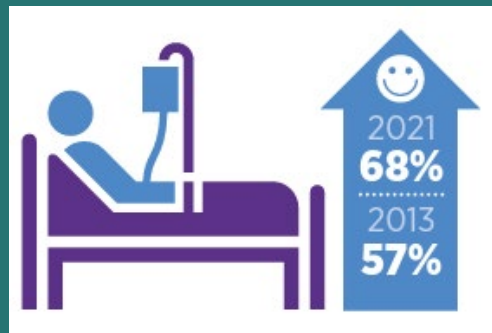
Thrombectomy rate - 4.8% in 2016\* **increased** to 9.5% in 2021



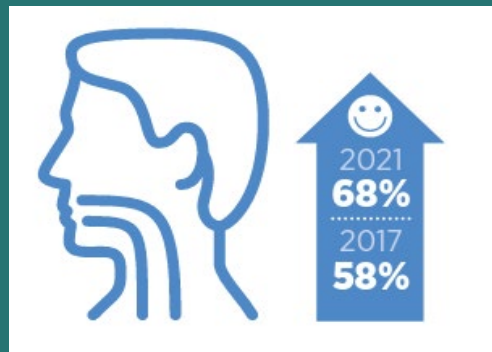
# STROKE UNIT CARE



There was an increase in the proportion of patients with a stroke admitted to a stroke unit from 65% in 2013 to 70% in 2021 - Target 90%



For patients with a stroke who were admitted to a stroke unit there was an increase in the proportion of their total hospital stay spent in a stroke unit from 57% in 2013 to 68% in 2021 -Target 90%



The proportion of patients with a stroke who received swallow screening increased from 58% in 2017\*\* to 68% in 2021

## OUTCOMES



The median\*\*\* hospital length of stay has **reduced** from 11 days in 2013, to 8 days in 2021



Mortality for ischaemic stroke has **reduced** from 10.1% in 2013 to 7.2% in 2021 = 29% reduction.



There was an **increase** in the proportion of patients discharged home with Early Supported Discharge (ESD) from 2% in 2017\*\* to 10% in 2021

## THE HEALTH AND SOCIAL CARE PROFESSIONAL (HSCP) DATASET 2021

### PHYSIOTHERAPISTS

**Physiotherapists** reported that only 51% of patients with a stroke received sufficient therapy.



51%

### OCCUPATIONAL THERAPISTS

**Occupational therapists** reported that only 38% of patients with a stroke received sufficient therapy.



38%

### SPEECH AND LANGUAGE THERAPISTS

**Speech and language therapists** reported that only 46% of patients with a stroke received sufficient therapy.



46%

## 2021 Data

19 Hospitals participating

11 Stroke teams providing data from all three disciplines

- ✓ 2013 Physiotherapy cases
- ✓ 1344 Occupational therapy cases
- ✓ 1239 Speech and language therapy cases

## KEY RECOMMENDATIONS

### RECOMMENDATION 1

The number of stroke unit beds should be increased so that at least 90% of patients with a stroke are cared for in a stroke unit.



### RECOMMENDATION 2

Increase the thrombolysis rates in all hospitals providing acute stroke care.



### RECOMMENDATION 3

All hospitals providing acute stroke care should have an active stroke governance committee.



### RECOMMENDATION 4

Increase the number of Early Supported Discharge teams.



### RECOMMENDATION 5

Expand the use of the individual health identifier in order to increase follow-up for patients on discharge or transfer to another hospital.



### RECOMMENDATION 6

Develop a Best Practice Tariff for acute stroke care.



## What happened over COVID? 2018/19 vs 2020/21

Services held  
up well during  
the Pandemic.

Admitted <3hours decreased (50.4% to 47.6%.)

Reviewed <10minutes from admission increased (40.1% to 48.9% )

Imaged <1 hour from admission increased (39.0% to 47.5%)

Proportion admitted to stroke unit reduced slightly (72.1% to 70.2%)

Admitted from nursing homes dropped (3.7% to 3.2%.)

Thrombolysed after arriving <4 hours from onset dropped (29.1% to 24.8%)

Thrombectomy Increased by 31.5% (610-802)



# Updates on previous recommendations

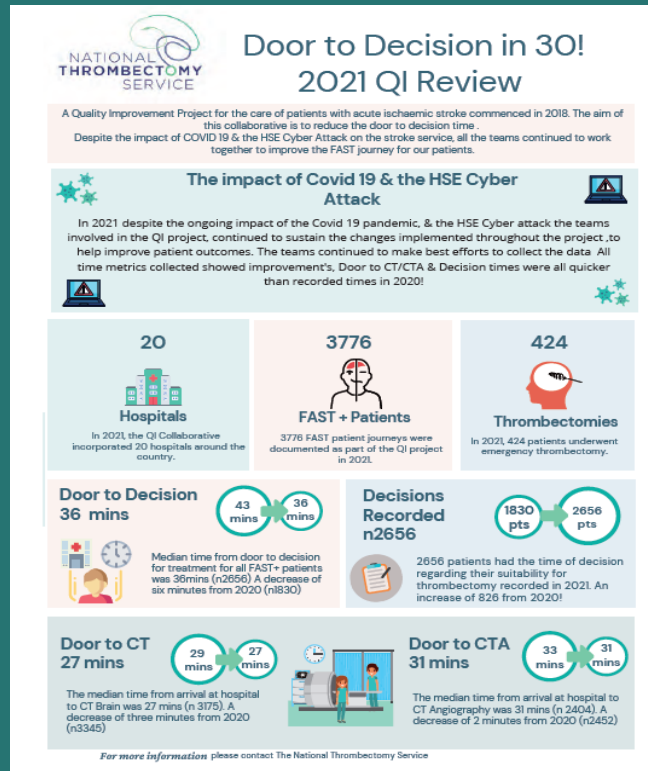
- ❖ Spotlight audit on Atrial Fibrillation
- ❖ Increase in HSCP participation
- ❖ Stroke awareness campaign
- ❖ Large vessel occlusion bypass Dublin/Cork
- ❖ Swallow screening QI project
- ❖ Increased access to psychology as part of MDT



# Update on QI Initiatives



INAS DASHBOARD IMPLEMENTED  
 QUARTERLY REPORTS TO CLINICAL TEAMS AND  
 HOSPITAL MANAGEMENT



NATIONAL QI INITIATIVE  
 THROUGH THE NATIONAL  
 THROMBECTOMY SERVICE ON  
 ALL F.A.S.T. PATIENTS

# Audit Developments



ACCESS TO A VALIDATED DATASET 2013-2021 FOR RESEARCH

HRB APA DEVELOPING A STROKE DATASET

- ACUTE DATASET
- REHABILITATION DATASET
- RESOURCING NEEDS
- PATIENT REPORTED OUTCOME MEASURES

SPOTLIGHT ON THROMBOLYSIS

# THANK YOU



**Minutes can  
save lives**

Learn the signs,  
Say it's a Stroke  
**Save #Precioustime**