



# Irish National Audit of Stroke

## **Organisational Audit Report 2021 APPENDICES**

## Irish National Audit of Stroke Organisational Audit Report 2021 – Appendices

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## APPENDIX 1. IRISH NATIONAL AUDIT OF STROKE GOVERNANCE COMMITTEE

NAME	Title
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Prof. Joe Harbison	Clinical Lead – Irish National Audit of Stroke Consultant Geriatrician and Stroke Physician, St James's Hospital
Joan McCormack	Cardiovascular Programme Audit Manager, National Office of Clinical Audit
Martin Quinn	Public and Patient Interest Representative, Irish National Audit of Stroke Governance Committee Stroke Survivor and Advocate, Irish Heart Foundation
Dr Marcia Ward	Public and Patient Interest Representative, Irish National Audit of Stroke Governance Committee Senior Clinical Neuropsychologist, Headway
Ms Sinead Brennan	Director of Quality, Clinical Governance and Patient Safety, Ireland East Hospital Group Commenced – November 2021
Dr Margaret O'Connor	Consultant in Geriatric Medicine, University Hospital Limerick
Prof. Rónán Collins	Clinical Lead, National Clinical Programme for Stroke Consultant in Geriatric and Stroke Medicine, Tallaght University Hospital
Prof. John Thornton	Consultant Neuroradiologist, Beaumont Hospital Director, National Thrombectomy Service
Dr Eugene Wallace	Consultant in Rehabilitation Medicine, National Rehabilitation Hospital
Una Moffatt	Advanced Nurse Practitioner in Stroke Care, Sligo University Hospital
Glen Arrigan	Clinical Nurse Specialist in Stroke, Cork University Hospital
Claire Prendergast	Clinical Specialist Physiotherapist in Stroke, Our Lady of Lourdes Hospital Drogheda
Dr Breda Smyth	Director of Public Health, HSE West
Paul Gallagher	Chief Director of Nursing & Midwifery, Ireland East Hospital Group
Deirdre Murphy	Head of Hospital In-Patient Enquiry, Healthcare Pricing Office

## APPENDIX 2. INAS ORGANISATIONAL AUDIT SURVEY SEPTEMBER 2021

### INAS ORGANISATIONAL AUDIT SURVEY SEPTEMBER 2021

*\* indicated mandatory questions*

#### 1. Hospital Details

**\* 1. What is the name of your hospital?**

Please write full name of hospital.

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**\* 2. Name of person completing the survey.**

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**\* 3. Does the hospital have a Stroke Governance Committee?**

☐ Yes ☐ No

#### 2. Stroke Governance

**\* 4. What is the membership of the Stroke Governance Committee?**

Select all that apply.

☐ Stroke Consultant ☐ Patient Representative ☐ Senior Accountable Hospital Manager ☐ Senior Nursing Representative ☐ Senior HSCP Representative ☐ Quality Manager ☐ Other (please specify)

**\* 5. How frequently does the committee meet?**

Select one option.

☐ Monthly ☐ Quarterly ☐ Twice annually ☐ Annually

**\* 6. Do INAS reports form part of the agenda?**

☐ Yes ☐ No

**\* 7. Does local INAS data inform the discussion?**

☐ Yes ☐ No

#### 3. Hospital Information

**\* 8. How many beds are in the hospital?**

Please give your answer in a number.

---

**9. How is 'stroke' defined in your hospital**

☐ WHO Definition - rapidly developing clinical signs of focal (or global) disturbance of cerebral function, lasting more than 24 hours or leading to death, with no apparent cause other than that of vascular origin

☐ AHA/ASA Definition - infarction based on pathological, imaging or other objective evidence of infarction. In the absence of this evidence, the persistence of symptoms of at least 24 hours or until death remained a method to define stroke

**10. Does your hospital have a stroke unit?**

Please see additional information for stroke unit definition.

Please select one option.

☐ Yes ☐ No

#### 4. Stroke Unit Activity

**\* 11. In total, how many stroke unit beds are in the hospital?**

Please answer in a number.

Please see additional information sheet for further information on stroke unit bed types.

---

**\* 12. How many patients with stroke are there in the hospital on the day of form completion?**

Please answer in a number.

**\* 13. How many of the patients with stroke are in a stroke unit bed?**

Please answer in a number.

---

**\* 14. Does the hospital run an emergency department?**

Please select one answer.

☐ Yes ☐ No

**\* 15. Does the hospital run an intensive care unit?**

Please select one answer.

☐ Yes ☐ No

## **5. Acute Presentation**

**\* 16. Is there a stroke team on-call?**

Select one option.

☐ Yes, 24/7 ☐ Yes, Monday-Friday 9am-5pm ☐ No

**\* 17. Do you ever use video tele-health to review patients with your ambulance crews?**

Please select one answer.

☐ Yes ☐ No

**\* 18. Does the stroke team/hospital receive a pre-alert from the ambulance service for suspected stroke?**

Select one option for each stroke patient type

	Yes	No	Sometimes
Thrombolysis candidates only			
All FAST positive cases			
All suspected stroke cases			

**\* 19. If the stroke team/hospital receive a pre-alert, who is the call usually made to?** Please select only one.

☐ Direct to Emergency Department  
☐ Stroke Nurse Specialist  
Comment if required

☐ Stroke NCHD on call  
☐ Stroke Consultant on call  
☐ CT control room

☐ Call to Stroke Unit  
☐ No pre-alert  
☐ Other (please specify)

---

**\* 20. Who is the stroke patient normally first seen by?**

Please select only one.

☐ ED Nurse ☐ Stroke Consultant ☐ Medical Consultant  
☐ ED NCHD ☐ Stroke NCHD ☐ Telemedicine link  
☐ ED Consultant ☐ Stroke Nurse Specialist  
Other (please specify)

---

**\* 21. Where are suspected stroke patients that arrive by ambulance taken for assessment?**

Please select one option

☐ Emergency Department ☐ Stroke Unit ☐ Acute Medical Admission Ward ☐ HDU/CCU/ICU ☐ CT Scan

**\* 22. Is there access to CT imaging for patients in ED?**

Please select one answer.

☐ Yes

☐ No

**23. Is it consistently possible to get an urgent CT scan of the brain within 30 minutes of the request?**

Select one option.

☐ Always

☐ Usually

☐ Sometimes

☐ Rarely

☐ Never

**\* 24. Can you routinely get CT scanning performed on all patients within 3 hours of admission?**

Please select one answer.

☐ Yes

☐ No

**25. Is there an on-call radiologist and radiographer available to perform brain imaging?**

Please select one option for Radiologist and one for Radiographer.

	On site	Off site
On-call Radiologist		
On-call Radiographer		

**\* 26. Is there access to MRI for patients in A&E?**

Please select one answer.

☐ Yes

☐ No

**\* 27. What initial acute brain imaging do you request for the following?**

Select all that apply.

	CT	CTA	CTP
Clinical suspicion of stroke amenable to thrombolysis			
Clinical suspicion of stroke amenable to thrombolysis & possible thrombectomy			
Clinical suspicion of stroke but over 4.5 hours since onset of symptoms			
Clinical suspicion of posterior circulation stroke but not a thrombolysis candidate			
Clinical suspicion of alternative neurological diagnosis			

**28. Who is responsible for initial review of brain imaging to inform decisions about thrombolysis / thrombectomy?**

Select one option for In hours and one option for Out of hours.

	Stroke Consultant on site	Stroke Consultant remotely via phone	Stroke NCHD	Neuroradiologist	General Radiologist	Reporting hub	ED Consultant/Registrar	Medical Consultant/Registrar
In Hours								
Out of Hours								

Other (please specify)

**\* 29. If not during initial assessment, is brain imaging subsequently reviewed by a radiologist with a specific competency in neurovascular imaging in the following patient groups.**

Select only one option for each patient group.

	Yes, always	Yes, sometimes	Yes, rarely	Never
Thrombolysis patients				
Large vessel occlusion				
All stroke patients				

**\* 30. Do you admit patients with subarachnoid haemorrhage to the stroke unit?**

Please select one answer

☐ Yes

☐ No

☐ Sometimes

**\* 31. Do you admit patients with subdural haematoma to your stroke unit?**

Please select one answer.

☐ Yes ☐ No ☐ Sometimes

**\* 32. To which ward is a patient most likely to be admitted after ED?**

Select one option for Non thrombolysed patients and one option for Thrombolysed patients

	Stroke Unit	CCU/HDU/ICU	Medical Ward Surgical Ward
Thrombolysed patients			
Non thrombolysed patients			

Other (please specify)

Thrombolysed = / Non thrombolysed =

---

**6. Thrombolysis, Thrombectomy and Advanced Imaging**

**\* 33. Do you provide a thrombolysis service?**

Select one option.

☐ Yes, 24/7

☐ Yes, 9-5 Mon-Fri

☐ No

Other (please specify)

---

**7. Thrombolysis**

**\* 34. Who normally assesses the patient for thrombolysis?**

Please select one option.

☐ ED NCHD

☐ Stroke NCHD

☐ Medical Consultant

☐ ED Consultant

☐ Stroke Consultant

☐ Stroke Nurse Specialist

Other (please specify)

---

**\* 35. Who normally decides to proceed with thrombolysis?**

Please select one option.

☐ ED NCHD ☐ ED Consultant ☐ Stroke NCHD ☐ Stroke Consultant ☐ Medical Consultant ☐ Stroke Nurse Specialist

Other (please specify)

---

**\* 36. Where are the majority of patients thrombolysed?**

Select one option for bolus and one option for infusion

	Emergency Department	CT Scanner	Stroke Unit	CCU/HDU/ICU	Acute Medical Assessment Unit/Medical Ward	Neurology Ward
Bolus						
Infusion						

Other (please specify)

Bolus= / Infusion=

---

**\* 37. Are you a thrombectomy centre?**

Please select one answer.

☐ Yes

☐ No

**8. Thrombectomy**

**\* 38. What are the hours of operation for your thrombectomy service?**

Select only one option

☐ Monday - Friday  
9-5pm

☐ Monday - Friday  
extended hours

☐ Extended hours  
including weekends

☐ 24/7

**\* 39. How many consultant level doctors from your site carry out thrombectomy?**

Select one option only.

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

☐ 6

**\* 40. For each of the consultants who perform thrombectomy, please state the number in each specialty.**

This should add up to the same number of consultants as in question 38.

	One	Two	Three	Four	Five
Interventional neuroradiology					
Vascular interventional radiology					
Non-vascular interventional radiology					
Cardiologist					
Neurosurgeon					
Stroke Physician					

Other (please specify)

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**\* 41. Do you refer appropriate patients to a thrombectomy centre?**

Select one option only.

☐ 24/7

☐ Yes, In-hours

☐ Yes, Out of hours

☐ No

**\* 42. Which centre do you usually (9-5 weekday) refer patients to for thrombectomy?**

Please select one answer.

☐ Beaumont Hospital

☐ Cork University Hospital

**\* 43. What is your process for IV thrombolysis prior to transfer for thrombectomy?**

Select one option only.

☐ Give Bolus and full infusion before transfer

☐ Give Bolus and infusion but stop infusion at point patient ready to be transferred

☐ Give Bolus and infusion which is continued in ambulance with support of doctor on transfer

☐ Give Bolus and infusion which is continued in ambulance with support of stroke nurse on transfer

☐ Give Bolus and infusion which is continued in ambulance with support of A&E/other nurse on transfer

☐ Give Bolus and infusion which is continued in ambulance with support from paramedic crew

☐ Process depends on ambulance service conveying patient (i.e. different protocols for different services)

Other (please specify)

---

**\* 44. Who makes the decision that there is a large vessel occlusion on CTA imaging prior to transferring for thrombectomy?**

Please select only one answer for In-Hours and one answer for Out of Hours.

	In Hours	Out of Hours
Stroke NCHD making referral to thrombectomy centre		
Stroke Consultant		
General Radiologist		



Neuroradiologist at referring hospital		
Neuroradiologist at Thrombectomy Centre (if different)		
Stroke team at thrombectomy centre		
Remote teleradiology service off site		
No service		

Other (please specify)

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**\* 45. When a patient requires conveyance to thrombectomy centre at what point do you call the ambulance service?**

Select only one option.

- ☐ Paramedic crew are kept on standby and not released from initial call
- ☐ At the point IV thrombolysis is complete
- ☐ When accepted by thrombectomy centre

**\* 46. Have you made use of Protocol 37 when transferring patients for thrombectomy?**

Please select one.

- ☐ Yes ☐ No

**\* 47. Have you experienced delays >30 minutes in awaiting a Protocol 37 ambulance on more than 1 occasion.**

Please select one answer.

- ☐ Yes ☐ No

**\* 48. Has the stroke team used helicopter transfers for thrombectomy patients?**

Please select one answer.

- ☐ Yes ☐ No

Other (please specify)

---

**\* 49. What are your arrangements (governance processes) for discussion of patients post thrombectomy?**

Select only one option.

- ☐ Most patients referred are reviewed with the thrombectomy centre as part of regional MDT
- ☐ Most patients referred are reviewed locally as part of local MDT
- ☐ Informal feedback
- ☐ No regular discussion

**\* 50. Do you have an MRI scanner available in your hospital?**

Please select one.

- ☐ Yes ☐ No

**\* 51. Is MRI scanning available out of hours?**

Please answer in a number.

- ☐ Yes ☐ No ☐ Sometimes

**52. If yes, how many out of hours MRIs have you performed on stroke patients in the last 12 months.**

---

**\* 53. Does the stroke service have access to NIMIS?**

Please select one option for In the hospital and one answer for Remotely.

	Yes	No
In the hospital		

Remotely		
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**\* 54. Do you have Transcranial Doppler Scanning available in your hospital?**

Please select one.

☐ Yes ☐ No

**\* 55. Do you have PET scanning available in your hospital?**

Please select one.

☐ Yes ☐ No

**56. Do you perform Digital Subtraction Angiography in your hospital?**

Please select one.

☐ Yes ☐ No

## 10. Stroke Units

**\* 57. Is there a stroke unit in your hospital?**

Please select one.

☐ Yes ☐ No

**\* 58. Is there a policy for direct admission to the Stroke Unit from ED?**

Please select one.

☐ Yes ☐ No

**\* 59. Does the stroke service have control of bed management for the stroke unit?**

Please select one.

☐ Yes ☐ No

**60. Do you have written Standard Operating Procedures or Protocols for each of the following:**

Please select all that apply

<input type="checkbox"/> Stroke Diagnosis	<input type="checkbox"/> Prevention	<input type="checkbox"/> Emergency Department Management
<input type="checkbox"/> Stroke Nursing	<input type="checkbox"/> Follow-up including community rehabilitation	<input type="checkbox"/> Emergency Medical Services and pre hospital notification
<input type="checkbox"/> Communication with patients and relatives	<input type="checkbox"/> Critical Incident Management	
<input type="checkbox"/> Rehabilitation		

**61. Does the infrastructure of your Stroke Unit allow for continuous monitoring of the following:**

Please select all that apply.

☐ ECG ☐ Breathing ☐ Blood Pressure ☐ Pulse Oximetry ☐ Blood Glucose Monitoring ☐ Temperature

**\* 62. What type of beds make up the stroke unit?**

Type 1 = Acute stroke beds.

Type 2 = Rehabilitation stroke beds.

Type 3 = Combined Acute and Rehabilitation stroke beds.

See additional information for further definition.

Please select all that apply.

	Number of beds	Number of beds with continuous physiological monitoring
Type 1 –Acute stroke beds		
Type 2 – Rehabilitation stroke beds		
Type 3 - Combined Acute and Rehabilitation stroke beds		

**\* 63. How many stroke consultant led ward rounds are conducted per week?**

Please answer in a number.

---

**\* 64. Does the stroke unit operate an admission criteria or limitation?**

Please select one.

☐ Yes

☐ No

**\* 65. If the stroke unit operates an admission criteria what is it?**

See additional information for further detail. Select all that apply.

	Type 1	Type 2	Type 3
Age related			
Stroke severity			
Pre-existing dementia			
Stroke type			

Other (please specify for each type)

---

**66. How often are there multidisciplinary team meetings for the interchange of information about individual patients?**

Select all that apply.

	Type 1	Type 2	Type 3		
Daily					
More than once a week					
Weekly					

**67. Which indices of stroke severity do you routinely record on admission and discharge?**

Please select all that apply.

	Admission	Discharge	3-6 months
Modified Rankin Score			
NIHSS			
Barthel			

**68. Do you give the patient a formal, written plan for follow up and continued rehabilitation on discharge?**

Please select one.

☐ Yes

☐ No

**12. Specialist Investigations**

**\* 69. What is the usual waiting time for patients to receive carotid imaging?**

Please select one.

☐ The same day (7 days a week)

☐ The same day (6 days a week)

☐ The same day (5 days a week)

☐ The next day

☐ The next weekday

☐ Within a week

☐ Longer than a week

Other (please specify)

---

**\* 70. Do you ever image intra-cranial vessels for your ischaemic stroke patients?**

Please select one.

☐ Yes

☐ No

**\* 71. Which of the following best describes your practice for imaging intra-cranial vessels?**

Please select one.

☐ It is a routine investigation for everyone

☐ Only for patients that would be amenable to specific treatment if abnormality detected

**\* 72. Which of the following methods do you use to image intra cranial vessels?**

Select one option for In hours and one option for Out of hours.

	In Hours	Out of Hours
CTA		
MRA		
No Service		

**\* 73. Do you image extra cranial vessels for your ischaemic stroke patients?**

Please select one.

☐ Yes ☐ No

**\* 74. Which imaging modality do you use as a first line to image extra-cranial vessels?**

Select one option for In hours and one option for Out of hours.

	In Hours	Out of Hours
Doppler Ultrasound		
CTA		
MRA		
No Service		

**\* 75. Which of the following best describes your practice for imaging extra-cranial vessels?**

Please select one.

☐ It is a routine investigation  
☐ Only for patients that would be amenable to specific treatment if abnormality detected

**\* 76. What is your usual pathway for detecting paroxysmal atrial fibrillation?**

Please, select which type is used first, second, third etc.

	Sequence of investigations
HASU telemetry monitoring	
Inpatient 24 hour tape	
Outpatient 24 hour tape	
Extended cardiac recording: 48 hours	
Extended cardiac recording: 5- 7 days	
Reveal/implantable loop recorder	
Transdermal patch (e.g. Ziopatch)	

**\* 77. In which stroke patients do you normally perform echocardiography?**

Select all that apply.

☐ In the majority of patients post stroke  
☐ Patients suggestive of cardioembolic source on brain imaging  
☐ In patients in Atrial Fibrillation  
☐ Young patients with suspicion of PFO  
☐ Patients with any abnormal ECG's  
☐ Patients with suspected valvular lesions  
☐ Patients with new heart failure  
☐ Patients with known heart failure  
☐ We rarely do echocardiography  
Other (please specify)

**\* 78. In which patients do you request a bubble contrast echo?**

Please select one answer.

☐ All patients post stroke  
☐ All patients with suspected cardioembolic source on brain imaging  
☐ In patients with suspected cardioembolic source but normal ECG and cardiac monitoring.  
☐ Patients with suspected cardioembolic source but initial transthoracic echocardiogram (TTE) normal  
☐ Patients with a normal echo but suspicion of PFO

☐ Only in patients where we would consider PFO closure.

☐ We have no local access to bubble contrast echo

☐ Young patients with potential PFO

Other (please specify)

---

**79. In which patients do you request a TOE (trans-oesophageal echo)?**

Please select one.

☐ All patients post stroke

☐ If patient has had a positive bubble contrast echo

☐ All patients with suspected cardioembolic source on brain imaging

☐ We have no local access to TOE.

Other (please specify)

---

**\* 80. Is PFO closure available locally for your stroke patients?**

Please select one.

☐ Yes

☐ No

**\* 81. Are all patients discussed at a specialist stroke/cardiology MDT before PFO closure is offered?**

Please select one.

☐ Yes

☐ No

**\* 82. In which stroke patients do you request thrombophilia screening?**

Select one option.

☐ Majority of patients

☐ Only patients with previous history of previous DVT/ PE /miscarriage

☐ None

☐ Only patients under a specific age

**16. TIA and Neurovascular Services**

**\* 83. Does your hospital run a TIA clinic?**

Please select one.

☐ Yes

☐ No

**\* 84. Are there agreed TIA protocols between Hospital and Primary Care services?**

Please select one.

☐ Yes

☐ No

**\* 85. Do you routinely admit patients with TIA to hospital for investigation?**

Please select one.

☐ Yes

☐ No

**\* 86. Which first line brain imaging modality do you most frequently use in your neurovascular clinic for suspected TIAs?**

Select one option

☐ CT

☐ MRI

☐ Rarely image TIAs

**\* 87. Which first line carotid imaging modality do you most frequently use in your neurovascular clinic for suspected TIAs?**

Please select one.

☐ Carotid Doppler

☐ MRA

☐ CTA

☐ Rarely image TIAs

**\* 88. How frequently do you use this first line brain imaging modality in your neurovascular clinic for suspected TIAs?**

Please select one.

☐ Frequently (>70%) ☐ Sometimes (30-70%) ☐ Rarely (<30%)

**\* 89. Is carotid endarterectomy surgery performed within the hospital?**

Please select one.

☐ Yes ☐ No

#### **17. Carotid Stenosis Treatment**

**\* 90. Which hospital do you send your patients to?**

Please give full name of the hospital.

---

**\* 91. Is there a formal arrangement in place with an endovascular centre / vascular service for transfer of your patients?**

Please select one.

☐ Yes ☐ No

**\* 92. Have patients undergone carotid stenting in the last 12 months?**

Please select one.

☐ Yes ☐ No

**\* 93. In which hospital is the procedure performed?**

Please write full name of hospital.

---

#### **18. Human Resources**

**\* 94. Is there an Advanced Nurse Practitioner in stroke?**

Please select one.

☐ Yes ☐ No

#### **19. Advanced Nurse Practitioners**

**\* 95. How many Stroke ANPs are in your service?**

Please select one.

☐ 1 ☐ 2

**\* 96. What services are offered by the ANP Stroke?**

Please select all that apply.

	Inpatient	Outpatient	Community
Direct patient care/Emergency response			
Patient education			
Staff education			
Clinics			
Service development			
Therapy planning			
Long term patient support			

Other (please specify)

---

**\* 97. Is there a Clinical Nurse Specialist in Stroke?**

Please select one.

☐ Yes ☐ No

## 21. Clinical Nurse Specialists

### \* 98. How many Stroke CNSs are in your service?

Please select one.

☐ 1 ☐ 2 ☐ 3 ☐ 4

### \* 99. What services are offered by the CNS(s) Stroke?

Please select all that apply.

	Inpatient	Outpatient	Community
Direct patient care/Emergency response			
Patient education			
Staff education			
Clinics			
Service development			
Therapy planning			
Long term patient support			

Other (please specify)

---

### \* 100. How many WTE RGNs are allocated to the stroke unit per 24hrs?

Please select one response.

---

### \* 101. How many WTE HCAs are allocated to the stroke unit per 24hrs?

Please select one.

---

### \* 102. How many RGNs trained in swallow screening?

Please select one option.

---

### \* 103. How many RGNs trained in stroke assessment and management?

Please select one.

---

### \* 104. Does your unit have its own Portering staff to support nursing.

Please select one.

☐ Yes ☐ No

### \* 105. Medical Staffing: Is there a specialist 'Stroke Service' working independently of other clinical roles or responsibilities.

Please select one.

☐ Yes ☐ No

### \* 106. Is there a consultant physician with specialist knowledge of stroke who is formally recognised as having principle responsibility for stroke services?

Please select one.

☐ Yes ☐ No

### \* 107. How many doctors make up the medical team for the stroke service?

Please select all that apply.

	Number	WTE spent on stroke
Stroke consultant providing daytime cover		
Other Consultant contributing to the service (e.g. on call)		
Specialist registrar		

Registrar		
Senior House Officer		
Intern		

Please comment if required

---

**\* 108. Which Medical specialisms contribute Consultant Cover to the Stroke Unit?**

Select all that apply.

	In Hours	Out of Hours
Geriatrics		
Neurology		
General Medicine		
Clinical Pharmacology		

Other (please specify)

---

**\* 109. In total, what is the establishment of whole time equivalents (WTEs) of the following professionals for each of the 3 types of stroke unit.**

If it is not possible to differentiate the staffing for each type of unit, complete total number for each profession and select 0 for the remaining options.

All therapists with allocated time to stroke patients are to be included not just therapists specifically funded for stroke.

	Type 1	Type 2	Type 3	Total
Clinical psychologist				
Dietician				
Medical social worker				
Occupational therapist				
Physiotherapist				
Speech and language therapist				

Other (please specify)

**\*\*Please note that this question was amended and responses were used from Q132 to report on HSCP WTE staffing.**

---

**\* 110. What is the availability of the HSCP?**

Select all that apply.

	Does the professional attend weekly MDT meetings?	Is weekend cover available?	Is there a professional a Clinical Specialist?
Clinical psychologist			
Dietician			
Medical social worker			
Occupational therapist			
Physiotherapist			
Speech and language therapist			

Other (please specify)



**\* 111. Do patients have access to a clinical psychologist for the provision of the following aspects of care?**

Select one option for each assessment/treatment.

	Yes	No
Mood assessment		
Higher cognitive function assessment		
Mood treatment		
Higher cognitive function treatment		

**\* 112. Are there other members of the MDT not mentioned above?**

Please select one.

☐ Yes ☐ No

**113. If yes, what is their responsibility?**

---

**114. What is the compliment of therapy assistants for each of the following:**

Please select all that apply.

	WTE
Physiotherapy Assistant	
Occupational Therapy Assistant	
Speech and Language Therapy Assistant	

Other (please specify)

---

**23. Education and training**

**\* 115. Is there an in-house programme for the continuing education in management of stroke?**

Please select one.

☐ Yes ☐ No

**\* 116. Is there a policy that all staff should complete the 'STARS' programme?**

Please select one.

☐ Yes ☐ No

**\* 117. Is there a swallow screening programme available?**

Please select one.

☐ Yes ☐ No

**\* 118. Is there funding available locally for staff education or conference attendance?**

Please select one.

☐ Yes ☐ No

**\* 119. Is there an educational programme for inpatients and carers?**

Please select one.

☐ Yes ☐ No

**\* 120. Is there patient/ carer material easily available on the Stroke Unit/ Wards?**

Please select one.

☐ Yes ☐ No

**24. Discharge Planning**

**\* 121. Are stroke specific patient satisfaction surveys carried out by your service?**

Please select one.

☐ Yes ☐ No

Other (please specify)

---

**\* 122. If yes, are patient satisfaction survey results discussed at the Stroke Governance Committee?**

Please select one.

☐ Yes      ☐ No      ☐ No Stroke Governance Committee      ☐ N/A

**25. Patient information**

**\* 123. Is there information literature available for patients on the following: Select all that apply.**

☐ Patient/carer information literature on stroke  
☐ Patient versions of national or local guidelines or standard  
☐ Community services  
☐ Carers benefit/allowance  
☐ Local voluntary agencies  
☐ How to complain

**\* 124. Does the stroke service have formal links with patients' and carers' organisations for communication on the service?**

Please select one.

☐ Yes      ☐ No

**\* 125. Is there a stroke support group available locally for patients?**

Please select one.

☐ Yes      ☐ No

**\* 126. Is there a policy to give patients a named contact on transfer from hospital to community?**

Please select one.

☐ Yes      ☐ No

**\* 127. Have you made use of the Irish Heart Foundation online support services for stroke patients?**

Please select one.

☐ Yes      ☐ No

**\* 128. Have You Access to an Early Supported Discharge team for Stroke?**

Please select one.

☐ Yes      ☐ No

**26. Community Rehabilitation**

**129. Have you access to other generic supported discharge teams that can be used by stroke patients?**

Please select one.

☐ Yes      ☐ No

**\* 130. Is the Early Supported discharge team attached to your Hospital Service?**

Please select one.

☐ Yes      ☐ No

**131. If yes, how often do you meet with the ESD team?**

Please select one.

☐ Weekly or more      ☐ Monthly      ☐ Quarterly      ☐ Yearly      ☐ Rarely or Never

**132. Amended HSCP WTE questions.**

	<p>Does your hospital provide a stroke specific* HSCP allocation for each of the professions identified?</p> <p>Please say yes or no in the boxes below for each profession.</p>	<p>If yes, what is the total WTE allocated to the stroke service in the hospital?</p> <p>Please write the total number of WTE's for each profession.</p>	<p>Out of the total WTE allocated to the stroke service, how many WTEs are allocated to the stroke unit</p> <p>Please record the WTE allocated to the stroke unit only.</p>
Example – Play therapist	Yes	1 WTE (looks after all patients of the stroke service)	0.8 WTE (out of 1 WTE, 0.8 WTE spent on patients in the stroke unit– approx.)
Physiotherapy			
Occupational therapy			
Speech and language therapy			
Dietetics			
Medical social work			

**27. Thank you for your time in completing the survey.**

## APPENDIX 3. EARLY SUPPORTED DISCHARGE SURVEY 2021

### EARLY SUPPORTED DISCHARGE SURVEY 2021

**What hospital is your ESD service linked to?**

Answer: Free Text

**When did your ESD Service commence?**

Answer: Month and Year

**What healthcare professionals make up the ESD team at the time of the survey?**

Healthcare Professional	Whole time equivalent on ESD
Clinical nurse specialist	
Dietician	
Medical social worker	
Occupational therapist	
Pharmacist	
Psychologist	
Physiotherapist	
Speech and language therapist	

Other: please name the professional and the WTE on ESD.

**Does a member of the team attend the stroke MDT meetings in the hospital?**

Answer: Yes/No/Other

Other: please comment

**What type of ESD model does your service provide?**

ESD in the home

ESD via teleconferencing

ESD in a community setting closer to the patient's home

Other – please comment

## APPENDIX 4. PARTICIPATING HOSPITAL INFORMATION LETTER



Date

RE: IRISH NATIONAL AUDIT OF STROKE (INAS) – ORGANISATIONAL AUDIT

Dear CEO/Hospital manager

As you are aware, the *INAS National Report 2019* was published in 2020. One of the recommendations was to complete an organisational audit of stroke services in hospitals that provide acute stroke services. This audit was due to be completed in 2020 but has been deferred to Q4 2021 due to the unprecedented challenges experienced in hospitals during 2020/21.

The audit will involve a review of the availability and accessibility of stroke unit beds, the availability of the appropriate number of trained stroke staff, and accessibility to diagnostic tests and investigations. The data to be collected is comparable to the data collected in the *Irish Heart Foundation/HSE National Stroke Audit 2015* and will facilitate benchmarking against this report and against the Irish Heart Foundation Stroke Guideline 2010, the UK RCPI Stroke Guideline 2016 and the European Stroke Organisation Stroke Unit standards.

The audit will be completed using Survey Monkey as the platform for collecting the data and the data will be analysed by the data analytic team in NOCA. The results will inform an INAS Organisational Audit Report which will be published on the NOCA website.

The Clinical Lead for Stroke in your hospital is responsible for the completion of the survey in conjunction with the Advanced Nurse Practitioner/Clinical Nurse Specialist for Stroke and we will liaise with them before and during the process. The survey is detailed, with more than 100 questions, and it is hoped that the person completing the survey will be provided with some protected time to complete the survey within the required timeframe.

We plan to disseminate the survey in September 2021 with a turnaround time of three weeks for completion. The INAS Audit Manager will be available to assist whomever is completing the survey as required.

If you have any questions please do not hesitate to contact us,

Kind regards

Joan McCormack, INAS Audit Manager

Prof. Joe Harbison, Clinical Lead of INAS

## APPENDIX 5. INITIAL IMAGING MODALITY, BY HOSPITAL

Hospitals	Imaging	Clinical suspicion of stroke			Posterior circulation stroke but not a thrombolysis candidate	Alternative neurological diagnosis
		Amenable to thrombolysis	Amenable to thrombolysis and possible thrombectomy	But over 4.5 hours since onset of symptoms		
Bantry General Hospital	CT	✓	✓	✓	✓	✓
	CTA		✓	✓		
	CTP					
Beaumont Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	✓
	CTP	✓	✓	✓	✓	✓
Cavan General Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
Connolly Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
Cork University Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP	✓	✓	✓	✓	
Letterkenny University Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
Mater Misericordiae University Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	✓
	CTP	✓	✓	✓	✓	✓
Mayo University Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
Mercy University Hospital	CT	✓	✓		✓	✓
	CTA		✓	✓	✓	
	CTP					
Naas General Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
Our Lady of Lourdes Hospital Drogheda	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
Portiuncula University Hospital	CT	✓	✓	✓	✓	✓
	CTA		✓	✓	✓	
	CTP					
Regional Hospital Mullingar	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	✓
	CTP					
Sligo University Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
St James's Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP	✓	✓	✓	✓	
St Luke's General Hospital, Carlow/Kilkenny	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
St Vincent's University Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
	CT	✓	✓	✓	✓	✓

Tallaght University Hospital	CTA	✓	✓	✓	✓	
	CTP					
South Tipperary General Hospital	CT	✓	✓	✓	✓	✓
	CTA		✓	✓	✓	
	CTP		✓	✓		
University Hospital Galway	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
University Hospital Kerry	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
University Hospital Limerick	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP		✓	✓	✓	
University Hospital Waterford	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	✓
	CTP					
Wexford General Hospital	CT	✓	✓	✓	✓	✓
	CTA	✓	✓	✓	✓	
	CTP					
Total	CT	24	24	23	24	24
	CTA	20	24	24	23	4
	CTP	4	6	6	5	2

Note: CT = computed tomography; CTA = computed tomography angiography; CTP = computed tomography perfusion

**APPENDIX 6. STROKE SEVERITY RECORDED ON ADMISSION AND DISCHARGE, BY HOSPITAL (N=24)**

		Admission	Discharge	3–6 months
Bantry General Hospital	mRS	✓	✓	
	NIHSS	✓		
	Barthel	✓	✓	
Beaumont Hospital	mRS	✓	✓	
	NIHSS	✓		
Cavan General Hospital	mRS		✓	
	NIHSS	✓		
Connolly Hospital	mRS	✓	✓	
	NIHSS	✓		
Cork University Hospital	mRS	✓	✓	✓
	NIHSS	✓	✓	
	Barthel	✓	✓	
Letterkenny University Hospital	mRS	✓		
	NIHSS	✓		
	Barthel	✓		
Mater Misericordiae University Hospital	mRS	✓	✓	✓
	NIHSS	✓		
Mayo University Hospital	mRS	✓		
	NIHSS	✓		
Mercy University Hospital	mRS	✓	✓	
	NIHSS	✓		
Naas General Hospital	mRS	✓	✓	✓
	NIHSS	✓		
	Barthel	✓		
Our Lady of Lourdes Hospital Drogheda	mRS	✓	✓	
	NIHSS	✓		
Portiuncula University Hospital	mRS	✓	✓	
	NIHSS	✓		
Regional Hospital Mullingar	mRS	✓		
	NIHSS	✓	✓	
	Barthel	✓	✓	
Sligo University Hospital	mRS	✓	✓	
	NIHSS	✓		
	Barthel	✓	✓	
St James's Hospital	mRS		✓	
St Luke's General Hospital, Carlow/Kilkenny	mRS	✓	✓	✓
	NIHSS	✓		
	Barthel	✓	✓	
St Vincent's University Hospital	mRS	✓	✓	✓
	NIHSS	✓	✓	✓
	Barthel	✓	✓	✓
Tallaght University Hospital	mRS	✓	✓	
	NIHSS	✓		
	Barthel	✓		
South Tipperary General Hospital	mRS	✓	✓	
	NIHSS	✓		
University Hospital Galway	mRS	✓	✓	
	NIHSS	✓		
University Hospital Kerry	mRS	✓	✓	✓
	NIHSS	✓		
University Hospital Limerick	mRS	✓	✓	
	NIHSS	✓		
	Barthel		✓	
University Hospital Waterford	mRS	✓	✓	
	NIHSS	✓		
Wexford General Hospital	mRS	✓		
	NIHSS	✓		
	Barthel	✓		

*Note: mRS = modified Rankin Scale; NIHSS = National Institutes of Health Stroke Scale; Barthel = Barthel Index of Daily Living*



## APPENDIX 7. ADMISSION WARD FOR PATIENTS WHO WERE THROMBOLYSED AND PATIENTS WHO WERE NOT THROMBOLYSED FOLLOWING TREATMENT IN THE EMERGENCY DEPARTMENT, BY HOSPITAL (N=24)

		Stroke unit	CCU/HDU/ICU	Medical ward
Bantry General Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
Beaumont Hospital	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
Cavan General Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed			✓
Connolly Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
Cork University Hospital	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
Letterkenny University Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
Mater Misericordiae University Hospital	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
Mayo University Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
Mercy University Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
Naas General Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
Our Lady of Lourdes Hospital Drogheda	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed			✓
Portiuncula University Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
Regional Hospital Mullingar	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed			✓

Sligo University Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
St James's Hospital	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
St Luke's General Hospital, Carlow/Kilkenny	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
St Vincent's University Hospital	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
Tallaght University Hospital	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
South Tipperary General Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
University Hospital Galway	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
University Hospital Kerry	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
University Hospital Limerick	Patients who were thrombolysed	✓		
	Patients who were not thrombolysed	✓		
University Hospital Waterford	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed	✓		
Wexford General Hospital	Patients who were thrombolysed		✓	
	Patients who were not thrombolysed			✓

*Note: CCU = coronary care unit; HDU = high dependency unit; ICU = intensive care unit*

## APPENDIX 8. FREQUENCY TABLES

FIGURE 4.1: MEMBERSHIP OF THE STROKE GOVERNANCE COMMITTEE (n=20)

	<b>N</b>	<b>%</b>
Stroke consultant	20	100.0%
Senior accountable hospital manager	10	50.0%
Senior nursing representative	17	85.0%
Senior HSCP representative	16	80.0%
Quality manager	6	30.0%
Other	10	50.0%

FIGURE 5.1: THE HEALTHCARE PROFESSIONAL A PATIENT WITH A STROKE IS FIRST SEEN BY (N=24)

	<b>N</b>	<b>%</b>
ED consultant	1	4.2%
ED NCHD	4	16.7%
ED nurse	10	41.7%
Stroke consultant	2	8.3%
Stroke NCHD	6	25.0%
stroke nurse Specialist	1	4.2%
<b>Total</b>	<b>24</b>	<b>100.0%</b>

FIGURE 5.2: AVAILABILITY OF ACCESS TO A COMPUTED TOMOGRAPHY SCAN OF THE BRAIN WITHIN 30 MINUTES OF THE REQUEST (N=24)

	<b>N</b>	<b>%</b>
Always	12	50.0%
Sometimes	2	8.3%
Usually	10	41.7%
<b>Total</b>	<b>24</b>	<b>100.0%</b>

FIGURE 5.3: HEALTHCARE PROFESSIONAL RESPONSIBLE FOR THE INITIAL REVIEW OF BRAIN IMAGING TO INFORM DECISIONS ABOUT THROMBOLYSIS/THROMBECTOMY (N=24)

	<b>Normal working hours</b>		<b>Out-of-hours</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
General radiologist	9	37.5%	13	54.2%
Medical consultant/registrar	1	4.2%	2	8.3%
Neuroradiologist	1	4.2%	1	4.2%
Stroke consultant on-site	10	41.7%	2	8.3%
Stroke consultant remotely via phone	2	8.3%	6	25.0%
Stroke NCHD	1	4.2%		0.0%
<b>Total</b>	<b>24</b>	<b>100.0%</b>	<b>24</b>	<b>100.0%</b>

FIGURE 5.4: REVIEW OF BRAIN IMAGING BY A RADIOLOGIST WITH A SPECIFIC COMPETENCY IN NEUROVASCULAR IMAGING, BY PATIENT GROUP (N=24)

		Patients who received thrombolysis	Patients with a large vessel occlusion	All patients with a stroke
Yes, always	N	9	15	7
	%	37.5%	62.5%	29.2%
Yes, sometimes	N	9	6	12
	%	37.5%	25.0%	50.0%
Yes, rarely	N	1	0	1
	%	4.2%	0.0%	4.2%
Never	N	5	3	4
	%	20.8%	12.5%	16.7%
Total	N	24	24	24
	%	100.0%	100.0%	100.0%

FIGURE 5.5: HEALTHCARE PROFESSIONAL WHO USUALLY ASSESSES THE PATIENT AND DECIDES TO PROCEED TO THROMBOLYSIS (n=23)

	Assesses for thrombolysis		Authorises thrombolysis	
	N	%	N	%
ED consultant	1	4.3%	1	4.3%
ED NCHD	1	4.3%	0	0.0%
Medical consultant	2	8.7%	6	26.1%
Stroke consultant	6	26.1%	16	69.6%
Stroke NCHD	12	52.2%	0	0.0%
Stroke nurse specialist	1	4.3%	0	0.0%
<b>Total</b>	<b>23</b>	<b>100.0%</b>	<b>23</b>	<b>100.0%</b>

FIGURE 5.6: LOCATION OF THROMBOLYSIS FOR BOLUS AND INFUSION PROCEDURES (n=23)

	Bolus		Infusion	
	N	%	N	%
ED	15	65.2%	21	91.3%
CT scanner	8	34.8%	1	4.3%
CCU/HDU/ICU	0	0.0%	1	4.3%
<b>Total</b>	<b>23</b>	<b>100.0%</b>	<b>23</b>	<b>100.0%</b>

FIGURE 5.7: HEALTHCARE PROFESSIONAL WHO MAKES THE DECISION THAT THERE IS A LARGE VESSEL OCCLUSION ON COMPUTED TOMOGRAPHY ANGIOGRAPHY IMAGING PRIOR TO TRANSFERRING THE PATIENT FOR THROMBECTOMY (n=22)

	Normal working hours		Out-of-hours	
	N	%	N	%
Stroke NCHD makes referral to thrombectomy centre	1	4.5%	0	0.0%
Stroke consultant	7	31.8%	4	18.2%
General radiologist	8	36.4%	10	45.5%
Neuroradiologist at referring hospital	1	4.5%	1	4.5%
Neuroradiologist at thrombectomy centre (if different)	5	22.7%	5	22.7%
Remote teleradiology service off-site	0	0.0%	1	4.5%
No service	0	0.0%	1	4.5%
<b>Total</b>	<b>22</b>	<b>100.0%</b>	<b>22</b>	<b>100.0%</b>

FIGURE 5.8: HEALTHCARE PROFESSIONAL WHO MANAGES THROMBOLYSIS INFUSION DURING TRANSFER TO THE ENDOVASCULAR THROMBECTOMY STROKE CENTRE (n=22)

	N	%
ED/other nurse on transfer	4	18.2%
Doctor on transfer	11	50.0%
Stroke nurse on transfer	3	13.6%
Other	4	18.2%
<b>Total</b>	<b>22</b>	<b>100.0%</b>

FIGURE 5.9: ADMISSION WARD FOR PATIENTS WHO WERE THROMBOLYSED AND PATIENTS WHO WERE NOT THROMBOLYSED FOLLOWING TREATMENT IN THE EMERGENCY DEPARTMENT (N=24)

	Stroke unit		CCU/HDU/ICU		Medical ward		Total	
	N	%	N	%	N	%	N	N
Patients who were thrombolysed	9	37.5%	15	62.5%	0	0.0%	24	100.0%
Patients who were not thrombolysed	20	83.3%	0	0.0%	4	16.7%	24	100.0%

FIGURE 6.1: STANDARD OPERATING PROCEDURES IN STROKE UNITS (N=24)

	N	%
Communication with patients and relatives	7	29.2%
Rehabilitation	7	29.2%
Follow-up, including community rehabilitation	9	37.5%
Prevention	9	37.5%
Stroke diagnosis	12	50.0%
Emergency medical services and pre-hospital notification	14	58.3 %
Critical incident management	18	75.0%
Stroke nursing	18	75.0%
ED management	21	87.5%

FIGURE 6.3: PATIENT INFORMATION ON DISCHARGE (N=24)

	N	%
Patient/carer information literature on stroke	23	95.8%
Local voluntary agencies	17	70.8%
Information literature on how to complain	17	70.8%
Community services	14	58.3%
Carer's benefit/allowance	12	50.0%
Patient versions of national or local guidelines or standards	6	25.0%

FIGURE 6.4: COMMUNITY SUPPORT ON DISCHARGE (N=24)

	Yes		No		Total	
	N	%	N	%	N	%
Policy to give patients a named contact on transfer from hospital to community	8	33.3%	16	66.7%	24	100.0%
Stroke service has formal links with patients' and carers' organisations for communication on the service	13	54.2%	11	45.8%	24	100.0%
Stroke support group available locally for patients	20	83.3%	4	16.7%	24	100.0%
Made use of the IHF's online support services for patients with a stroke	24	100.0%	0	0.0%	24	100.0%

FIGURE 7.1: WAITING TIME FOR PATIENTS TO RECEIVE CAROTID IMAGING (N=24)

	N	%
Next day	5	20.8%
Next weekday	3	12.5%
Same day (5 days per week)	4	16.7%
Same day (7 days per week)	6	25.0%
Within 1 week	6	25.0%
<b>Total</b>	<b>24</b>	<b>100.0%</b>

FIGURE 7.2: PATIENT GROUPS WHO RECEIVE ECHOCARDIOGRAPHY (N=24)

	N	%
In the majority of patients post-stroke	19	79.2%
Patients suggestive of cardioembolic source on brain imaging	8	33.3%
In patients with atrial fibrillation	7	29.2%
Young patients with suspected PFO	8	33.3%
Patients with any abnormal ECG	4	16.7%
Patients with suspected valvular lesions	9	37.5%
Patients with new heart failure	8	33.3%
Patients with known heart failure	3	12.5%

FIGURE 7.3: PATIENT GROUPS WHO RECEIVE BUBBLE CONTRAST ECHOCARDIOGRAPHY (N=24)

	N	%
In patients with suspected cardioembolic source but normal ECG and cardiac monitoring	2	8.3%
Only in patients where PFO closure is considered	1	4.2%
Other	4	16.7%
Patients with a normal echo but with suspected PFO	4	16.7%
No local access to bubble contrast echo	2	8.3%
Young patients with suspected PFO	11	45.8%
<b>Total</b>	<b>24</b>	<b>100.0%</b>

FIGURE 7.4: PATIENT GROUPS WHO RECEIVE BUBBLE TRANSOESOPHAGEAL ECHOCARDIOGRAPHY (N=24)

	N	%
All patients with suspected cardioembolic source on brain imaging	3	12.5%
If patient has had a positive bubble contrast echo	9	37.5%
Other	9	37.5%
No local access to TOE	3	12.5%
<b>Total</b>	<b>24</b>	<b>100.0%</b>

FIGURE 8.1: TOTAL NURSE STAFFING COMPARED TO THE RECOMMENDED EUROPEAN STROKE ORGANISATION NURSE STAFFING PER 24 HOURS, BY HOSPITAL (N=24)

	Current nurse staffing per 24 hours	ESO recommended nurse staffing total per 24 hours
Bantry General Hospital	4.2	4.8
Beaumont Hospital	11	18
Cavan General Hospital	4	4.47
Connolly Hospital	4	6.29
Cork University Hospital	14	21.26
Letterkenny University Hospital	6	5.83
Mater Misericordiae University Hospital	10	12.4
Mayo University Hospital	3.6	5.3
Mercy University Hospital	3	3.56
Naas General Hospital	3.8	7.14
Our Lady of Lourdes Hospital Drogheda	6	7.7
Portiuncula University Hospital	2	2.3
Regional Hospital Mullingar	1.5	3.64
Sligo University Hospital	4	7.11
St James's Hospital	4.3	6.06
St Luke's General Hospital, Carlow/Kilkenny	5	6.06
St Vincent's University Hospital	2.5	9.65
Tallaght University Hospital	5	7.52
South Tipperary General Hospital	2	4.92
University Hospital Galway	3	5.58
University Hospital Kerry	3	3.63
University Hospital Limerick	13	12.03
University Hospital Waterford	3.5	5.34
Wexford General Hospital	1.25	3.23



FIGURE 8.2: REGISTERED GENERAL NURSE AND HEALTHCARE ASSISTANT STAFFING RATIO PER 24 HOURS, BY HOSPITAL (N=24)

	RGNs per 24 hours		HCAs per 24 hours		Total	
	N	%	N	%	N	%
Bantry General Hospital	3.2	76.2	1	23.8	4.2	100.0%
Beaumont Hospital	9	81.8%	2.0	18.2%	11	100.0%
Cavan General Hospital	2	50.0%	2.0	50.0%	4	100.0%
Connolly Hospital	3	75.0%	1.0	25.0%	4	100.0%
Cork University Hospital	9	64.3%	5.0	35.7%	14	100.0%
Letterkenny University Hospital	5	83.3%	1.0	16.7%	6	100.0%
Mater Misericordiae University Hospital	6	60.0%	4.0	40.0%	10	100.0%
Mayo University Hospital	1.6	44.4%	2.0	55.6%	3.6	100.0%
Mercy University Hospital	2	66.7%	1.0	33.3%	3	100.0%
Naas General Hospital	3	78.9%	0.8	21.1%	3.8	100.0%
Our Lady of Lourdes Hospital Drogheda	4	66.7%	2.0	33.3%	6	100.0%
Portiuncula University Hospital	1	50.0%	1.0	50.0%	2	100.0%
Regional Hospital Mullingar	1	66.7%	0.5	33.3%	1.5	100.0%
Sligo University Hospital	3	75.0%	1.0	25.0%	4	100.0%
St James's Hospital	4	93.0%	0.3	7.0%	4.3	100.0%
St Luke's General Hospital, Carlow/Kilkenny	3	60.0%	2.0	40.0%	5	100.0%
St Vincent's University Hospital	2	80.0%	0.5	20.0%	2.5	100.0%
Tallaght University Hospital	5	100.0%	0.0	0.0%	5	100.0%
South Tipperary General Hospital	1	50.0%	1.0	50.0%	2	100.0%
University Hospital Galway	2	66.7%	1.0	33.3%	3	100.0%
University Hospital Kerry	2	66.7%	1.0	33.3%	3	100.0%
University Hospital Limerick	10	76.9%	3.0	23.1%	13	100.0%
University Hospital Waterford	3	85.7%	0.5	14.3%	3.5	100.0%
Wexford General Hospital	1	80.0%	0.25	20.0%	1.25	100.0%

FIGURE 8.3: TOTAL PHYSIOTHERAPIST STAFFING COMPARED TO THE RECOMMENDED PHYSIOTHERAPIST STAFFING, BY HOSPITAL (n=23)

	Hospital provides a stroke specific HSCP allocation for PT	N of patients with stroke on the day of survey completion	Number of PT in stroke service	Total recommended WTE staffing
Bantry General Hospital	No	~	0	0.3
Beaumont Hospital	Yes	28	3	4.7
Cavan General Hospital	Yes	7	0.2	1.2
Connolly Hospital	Yes	32	1.5	5.4
Cork University Hospital	Yes	29	3	4.9
Letterkenny University Hospital	Yes	12	1	2.0
Mater Misericordiae University Hospital	Yes	17	3	2.9
Mayo University Hospital	Yes	8	0.7	1.3
Mercy University Hospital	No	~	0	0.7
Naas General Hospital	Yes	7	1.6	1.2
Our Lady of Lourdes Hospital Drogheda	Yes	16	1.8	2.7
Portiuncula University Hospital	Yes	~	0.5	0.5
Regional Hospital Mullingar	Yes	14	0.5	2.4
Sligo University Hospital	yes	10	1	1.7
St James's Hospital	Yes	20	2.5	3.4
St Luke's General Hospital, Carlow/Kilkenny	Yes	~	1	0.7
St Vincent's University Hospital	Yes	30	2	5.0
Tallaght University Hospital	yes	20	1.2	3.4
South Tipperary General Hospital	No	~	0	0.8
University Hospital Galway	Yes	19	1.5	3.2
University Hospital Kerry	Yes	12	1.5	2.0
University Hospital Limerick	Yes	23	2	3.9
University Hospital Waterford	No	9	0	1.5
Wexford General Hospital	Yes	11	1	1.8
<b>Total</b>		<b>342</b>	<b>30.5</b>	<b>57.5</b>

~ Denotes five cases or fewer

\* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE 8.4: TOTAL OCCUPATIONAL THERAPIST STAFFING COMPARED TO THE RECOMMENDED OCCUPATIONAL THERAPIST STAFFING, BY HOSPITAL (n=23)

	Hospital provides a stroke specific HSCP allocation for OT	N of patients with stroke on the day of survey completion	Number of OT in stroke service	Total recommended WTE staffing
Bantry General Hospital	Yes	~	0.5	0.3
Beaumont Hospital	Yes	28	2	4.5
Cavan General Hospital	No	7	0	1.1
Connolly Hospital	No	32	0	5.2
Cork University Hospital	Yes	29	4	4.7
Letterkenny University Hospital	Yes	12	1	1.9
Mater Misericordiae University Hospital	Yes	17	3	2.8
Mayo University Hospital	No	8	0	1.3
Mercy University Hospital	Yes	~	0.5	0.6
Naas General Hospital	Yes	7	0.6	1.1
Our Lady of Lourdes Hospital Drogheda	Yes	16	0.9	2.6
Portiuncula University Hospital	No	~	0	0.5
Regional Hospital Mullingar	Yes	14	0.5	2.3
Sligo University Hospital	Yes	10	0.5	1.6
St James's Hospital	Yes	20	2	3.2
St Luke's General Hospital, Carlow/Kilkenny	Yes	~	1	0.6
St Vincent's University Hospital	Yes	30	2	4.9
Tallaght University Hospital	Yes	20	1.5	3.2
South Tipperary General Hospital	Yes	~	1	0.8
University Hospital Galway	Yes	19	0.5	3.1
University Hospital Kerry	Yes	12	1.5	1.9
University Hospital Limerick	Yes	23	2	3.7
University Hospital Waterford	No	9	0	1.5
Wexford General Hospital	No	11	0	1.8
<b>Total</b>		<b>342</b>	<b>25.0</b>	<b>55.4</b>

~ Denotes five cases or fewer

\* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE 8.5: TOTAL CURRENT SPEECH AND LANGUAGE THERAPIST STAFFING COMPARED TO THE RECOMMENDED SPEECH AND LANGUAGE THERAPIST STAFFING, BY HOSPITAL (n=23)

	Hospital provides a stroke specific HSCP allocation for SLT	N of patients with stroke on the day of survey completion	Number of SLT in stroke service	Total recommended WTE staffing
Bantry General Hospital	No	~	0	0.2
Beaumont Hospital	yes	28	1	2.2
Cavan General Hospital	Yes	7	0.2	0.6
Connolly Hospital	Yes	32	1	2.6
Cork University Hospital	Yes	29	2.5	2.3
Letterkenny University Hospital	Yes	12	0.4	1.0
Mater Misericordiae University Hospital	Yes	17	1.9	1.4
Mayo University Hospital	Yes	8	0.1	0.6
Mercy University Hospital	No	~	0	0.3
Naas General Hospital	Yes	7	0.4	0.6
Our Lady of Lourdes Hospital Drogheda	Yes	16	2	1.3
Portiuncula University Hospital	No	~	0	0.2
Regional Hospital Mullingar	Yes	14	0.5	1.1
Sligo University Hospital	No	10	0	0.8
St James's Hospital	No	20	0	1.6
St Luke's General Hospital, Carlow/Kilkenny	Yes	~	1	0.3
St Vincent's University Hospital	Yes	30	1	2.4
Tallaght University Hospital	Yes	20	1.5	1.6
South Tipperary General Hospital	Yes	~	0.5	0.4
University Hospital Galway	Yes	19	0.5	1.5
University Hospital Kerry	Yes	12	1	1.0
University Hospital Limerick	Yes	23	2.5	1.8
University Hospital Waterford	No	9	0	0.7
Wexford General Hospital	No	11	0	0.9
<b>Total</b>		<b>342</b>	<b>18.0</b>	<b>27.4</b>

~ Denotes five cases or fewer

\* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE 8.6: TOTAL CURRENT DIETITIAN STAFFING COMPARED TO THE RECOMMENDED DIETITIAN STAFFING, BY HOSPITAL (n=23)

	Hospital provides a stroke specific HSCP allocation for dietetics	N of patients with stroke on the day of survey completion	Number of dietetics in stroke service	Total recommended WTE staffing
Bantry General Hospital	Yes	~	0.25	0.1
Beaumont Hospital	Yes	28	0.7	0.8
Cavan General Hospital	Yes	7	0.2	0.2
Connolly Hospital	No	32	0	1.0
Cork University Hospital	Yes	29	0.4	0.9
Letterkenny University Hospital	No	12	0	0.4
Mater Misericordiae University Hospital	Yes	17	1	0.5
Mayo University Hospital	Yes	8	0.1	0.24
Mercy University Hospital	No	~	0	0.1
Naas General Hospital	No	7	0	0.2
Our Lady of Lourdes Hospital Drogheda	Yes	16	0.9	0.5
Portiuncula University Hospital	Yes	~	0.5	0.1
Regional Hospital Mullingar	No	14	0	0.4
Sligo University Hospital	No	10	0	0.3
St James's Hospital	No	20	0	0.6
St Luke's General Hospital, Carlow/Kilkenny	No	~	0	0.1
St Vincent's University Hospital	yes	30	0.3	0.9
Tallaght University Hospital	yes	20	1	0.6
South Tipperary General Hospital	No	~	0	0.2
University Hospital Galway	No	19	0	0.6
University Hospital Kerry	Yes	12	0.5	0.4
University Hospital Limerick	No	23	0	0.7
University Hospital Waterford	No	9	0	0.3
Wexford General Hospital	No	11	0	0.3
<b>Total</b>		<b>342</b>	<b>5.9</b>	<b>10.3</b>

~ Denotes five cases or fewer

\* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE 8.7: TOTAL CURRENT PSYCHOLOGIST STAFFING COMPARED TO THE RECOMMENDED PSYCHOLOGIST STAFFING, BY HOSPITAL (n=23)

	Hospital provides a stroke specific HSCP allocation for psychologists	N of patients with stroke on the day of survey completion	Number of psychologists in stroke service	Total recommended WTE staffing
Bantry General Hospital	No	~	0	0.1
Beaumont Hospital	No	28	0	1.1
Cavan General Hospital	No	7	0	0.3
Connolly Hospital	No	32	0	1.3
Cork University Hospital	No	29	0	1.2
Letterkenny University Hospital	No	12	0	0.5
Mater Misericordiae University Hospital	Yes	17	1	0.7
Mayo University Hospital	No	8	0	0.32
Mercy University Hospital	No	~	0	0.2
Naas General Hospital	Yes	7	0.2	0.3
Our Lady of Lourdes Hospital Drogheda	Yes	16	0.1	0.6
Portiuncula University Hospital	No	~	0	0.1
Regional Hospital Mullingar	No	14	0	0.6
Sligo University Hospital	No	10	0	0.4
St James's Hospital	No	20	0	0.8
St Luke's General Hospital, Carlow/Kilkenny	No	~	0	0.2
St Vincent's University Hospital	No	30	0	1.2
Tallaght University Hospital	Yes	20	0.8	0.8
South Tipperary General Hospital	No	~	0	0.2
University Hospital Galway	No	19	0	0.8
University Hospital Kerry	No	12	0	0.5
University Hospital Limerick	Yes	23	0.6	0.9
University Hospital Waterford	No	9	0	0.4
Wexford General Hospital	No	11	0	0.4
<b>Total</b>		<b>342</b>	<b>2.7</b>	<b>13.7</b>

~ Denotes five cases or fewer

\* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE 8.8: MOOD AND COGNITION ASSESSMENT AND TREATMENT (N=24)

	Yes		No		Total	
	N	%	N	%	N	%
Mood assessment	6	25.0%	18	75.0%	24	100.0%
Higher cognitive function assessment	3	12.5%	21	87.5%	24	100.0%
Mood treatment	6	25.0%	18	75.0%	24	100.0%
Higher cognitive function treatment	3	12.5%	21	87.5%	24	100.0%

FIGURE 8.9: MEDICAL SPECIALTIES CONTRIBUTING TO PROVIDING STROKE SERVICE COVER (N=24)

	Normal working hours		Out-of-hours	
	N	%	N	%
Geriatric medicine	24	100.0%	15	62.5%
Neurology	5	20.8%	5	20.8%
General medicine	7	29.2%	12	50.0%
Clinical pharmacology	2	8.3%	1	4.2%

FIGURE 9.1: PERCENTAGE OF MEMBERS OF THE EARLY SUPPORTED DISCHARGE TEAM WHO ATTEND THE STROKE MULTIDISCIPLINARY TEAM MEETINGS IN THE HOSPITAL (n=10)

	N	%
Yes	8	80.0%
No	2	20.0%
<b>Total</b>	<b>10</b>	<b>100.0%</b>

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