



# Recent Stroke Developments in Northern Ireland

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**NIMAST**

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# Disclosures

- ◆ Member of the Regional Thrombolysis Group
- ◆ Personal Views
- ◆ From Northern Ireland
- ◆ No Financial Disclosures



# Improving Stroke Services in Northern Ireland 2007: Recommendations

- ◆ **Public Awareness**
- ◆ **Thrombolysis**
- ◆ **TIA**
- ◆ **Stroke Unit Care**
- ◆ **Early Supported Discharge**
- ◆ **Transfer of Care document**
- ◆ **Community access**
- ◆ **Primary Care Review**
- ◆ **Psychology**
- ◆ **Individual specific information**
- ◆ **Equity of access**
- ◆ **Competency**
- ◆ **Stroke Register**



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## Priorities for Action 2010/11

- ◆ *'By March 2011, the HSC Board and Trusts should ensure **24/7 access to thrombolysis** and that high risk transient ischemic attacks are assessed and treated within 24 hours. Trusts should also work towards a **door to needle time of 60 minutes for thrombolysis** by March 2011.'*



**Night and Day-Real time accessibility to stroke  
thrombolysis in Northern Ireland**

*Enda Kerr, Michael McCormick, Ivan Wiggam, Nicola McCrickard, Anne-Marie Hunter, Maria Kinnaird, Patricia Gordon, Fergal Tracey, Alastair Thompson, Jim Kelly*

- ◆ 2009
  - ◆ Case note audit
  - ◆ 61 patients treated with thrombolysis ( $\pm$ IA/clot retrieval)
  - ◆ Approximately 2% of all strokes received thrombolysis
    - Assuming 3000 strokes/year in NI



# 2011 (Thrombolysis)

- ◆ 2011
  - ◆ E-mail and phone contact with colleagues
    - January-September 2011
  - ◆ Thrombolysis ( $\pm$ IA/clot retrieval)
  - ◆ 133 patients treated (9 patients IA/clot retrieval)

**Table 7: Thrombolysis - numbers thrombolysed and crude rate per 100,000 by NHS board of residence of patient**

NHS Board of Residence*	Number of patients receiving thrombolysis in 2010	Mid-Year Population Estimate 2009	Crude Rate per 100,000
<b>Scotland</b>	<b>524</b>	<b>5 194 000</b>	<b>10.1</b>
Ayrshire & Arran	30	367 160	8.2
Borders	1	112 680	0.9
Dumfries & Galloway	18	148 510	12.1
Fife	22	363 385	6.1
Forth Valley	11	291 383	3.8
Grampian	70	544 980	12.8
Greater Glasgow & Clyde	160	1 199 026	13.3
Highland	41	310 530	13.2
Lanarkshire	67	562 215	11.9
Lothian	73	826 231	8.8
Orkney	2	19 960	10.0
Shetland	0	22 210	0.0
Tayside	26	399 550	6.5
Western Isles	3	26 180	11.5



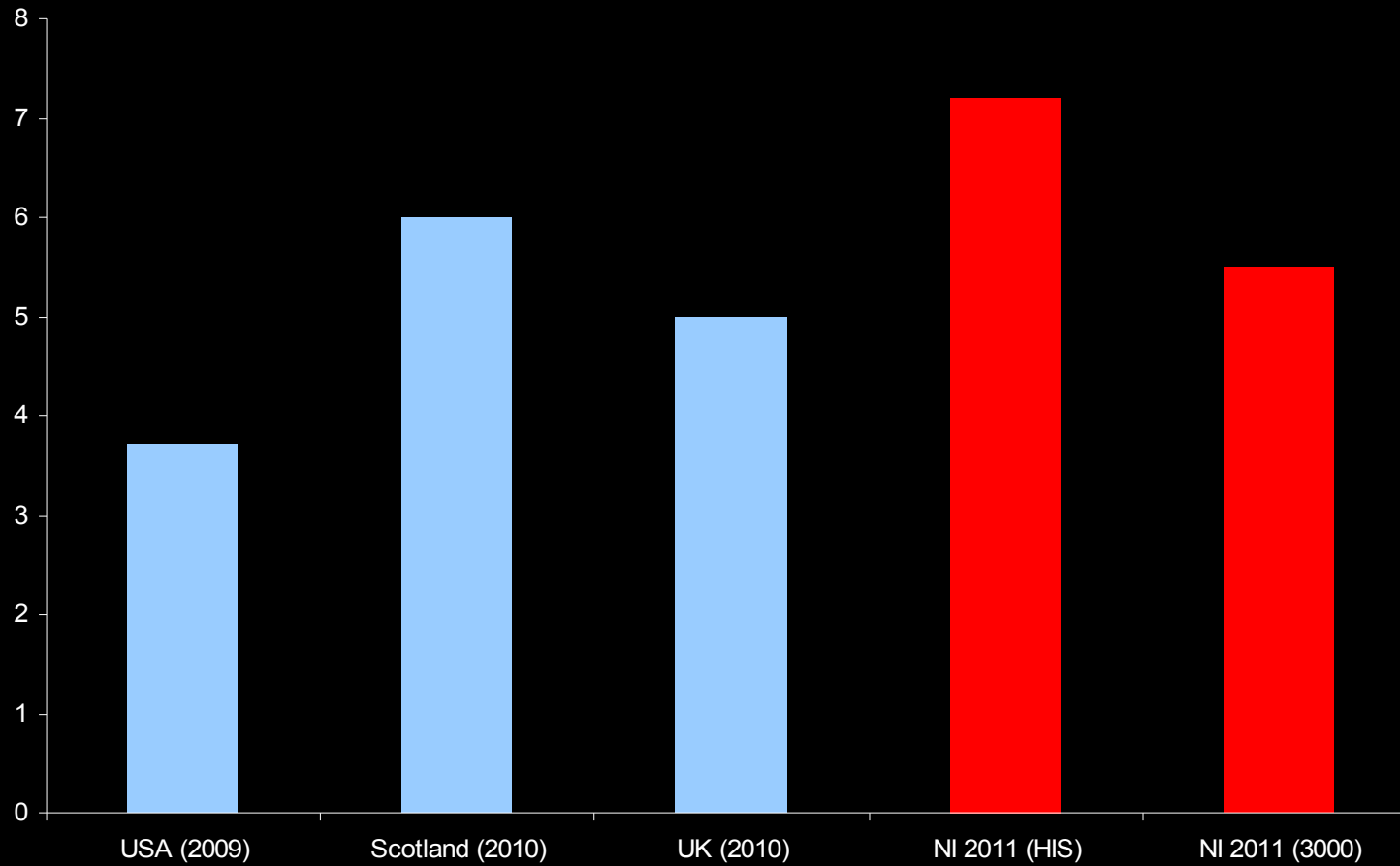
# Thrombolysis (NI)

	2009	2011 (-Sep 30 <sup>th</sup> ) <b>(Projected)</b>	2009 Rate/10 <sup>5</sup>	2011 Rate/10 <sup>5</sup> (projected)
Northern Ireland	60	124 <b>(165)</b>	3.4	9.3
Trust A	10	29 <b>(39)</b>	2.9	11.4
Trust B	20	37 <b>(49)</b>	5.7	14.1
Trust C	8	16 <b>(21)</b>	1.8	4.6
Trust D	17	26 <b>(35)</b>	5.1	10.5
Trust E	5	16 <b>(21)</b>	1.7	7.1



# How are we doing?

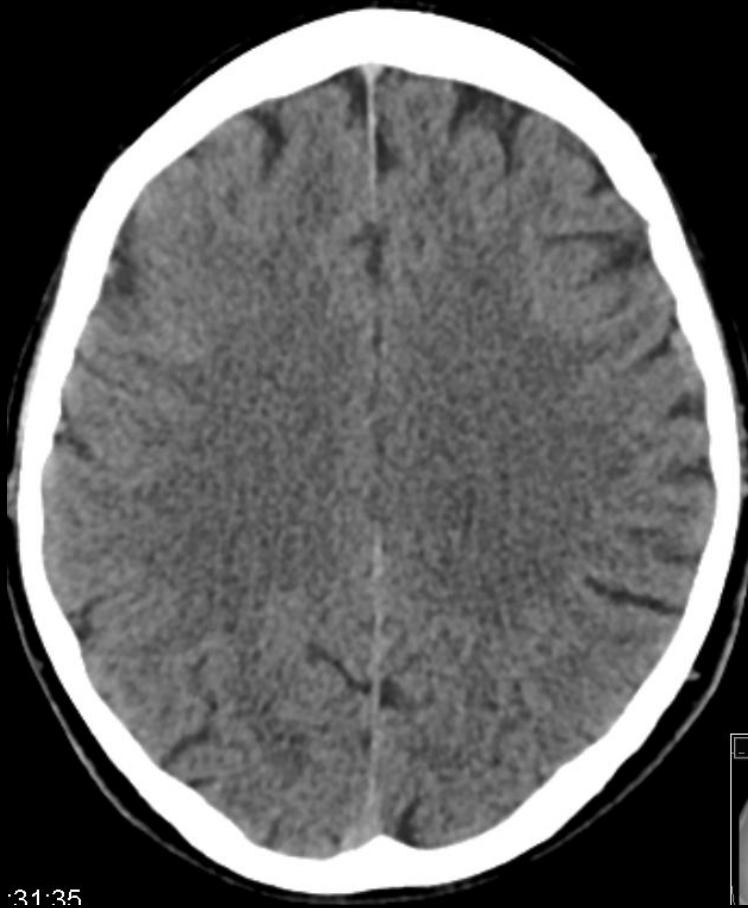
**Stroke % Receiving Thrombolysis**



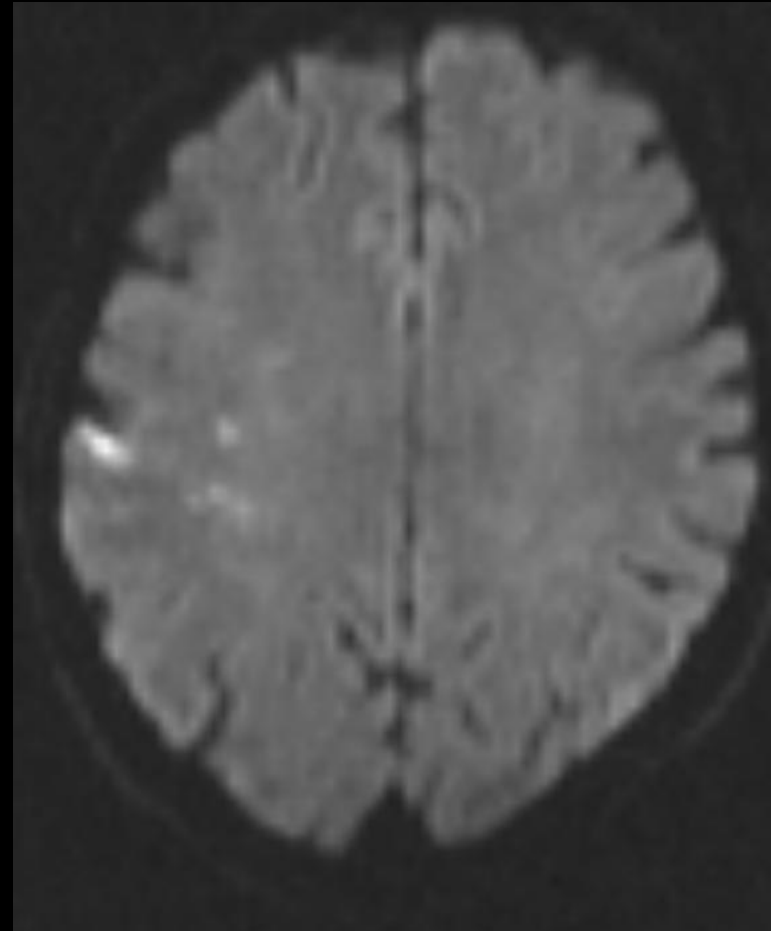
**Stroke 2011;42:1952-1955; Scottish Stroke Care Audit 2010; Sentinel Stroke Audit 2010**



# What is the Diagnosis?



31:35





# Thrombolysis

- ◆ Progress
- ◆ What is the Stroke Denominator?
- ◆ Rota (1:10----1:2)
- ◆ Door to Needle time
  - ◆ Ultra-early thrombolysis
  - ◆ Outcomes



## Regional Stroke Collaborative (HSC Safety Forum)

(Patients admitted to Stroke Ward)	August 2011 (10 pts)	September 2011 (23 pts)
Assessment within 30 minutes of registration at A & E	67% (2/3 pts)	100% (10/10pts)
CT scan within 45 minutes	50% (1/2 pts)	100% (10/10pts)
bolus within 60 minutes of arrival	50% (1/2 pts)	100% (2/2 pts)
transferred to Hyper Acute Stroke Unit within 90 minutes of registration	50% (1/2 pts)	100% (2/2 pts)
Monthly Thrombolysis Rate	20.0%	8.7%

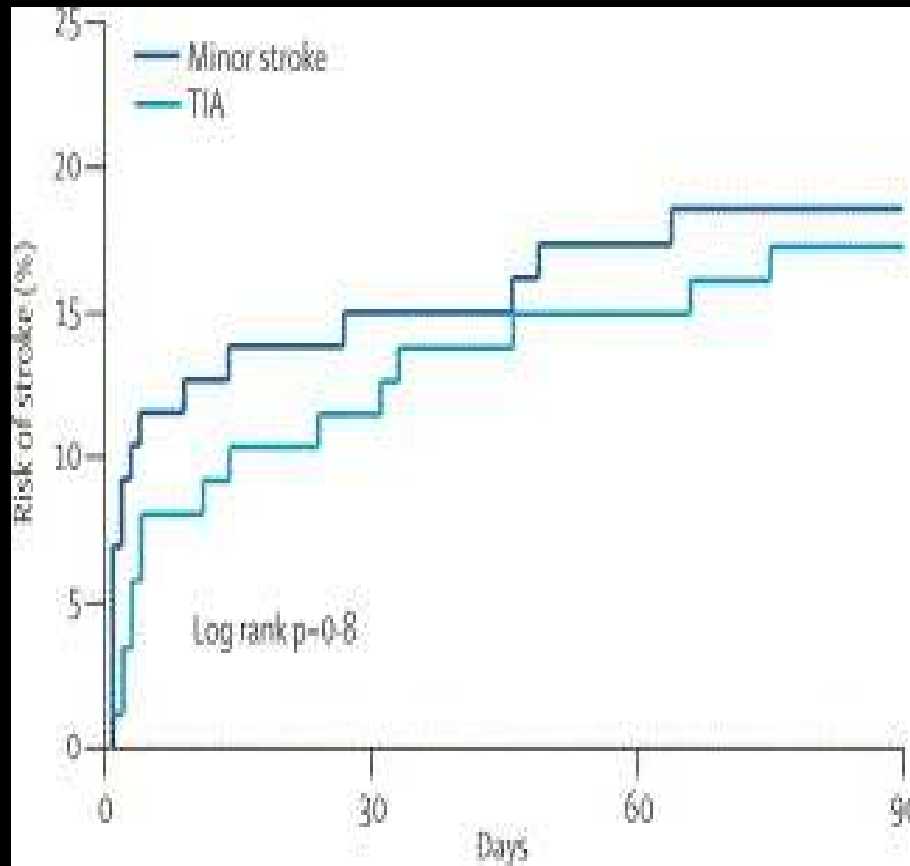


## Priorities for Action 2010/11

- ◆ ***'By March 2011, the HSC Board and Trusts should ensure 24/7 access to thrombolysis and that high risk transient ischemic attacks are assessed and treated within 24 hours. Trusts should also work towards a door to needle time of 60 minutes for thrombolysis by March 2011.'***



# Cumulative Risk of Stroke following TIA or Minor Stroke (NIHSS<3) in OXVASC Study 2002-3



- ◆ **A = Age**  
≥60yrs = 1
- ◆ **B = BP**  
Systolic ≥140 and/or Diastolic > 90  
=1
- ◆ **C = Clinical Symptoms**  
Unilateral weakness = 2  
Speech disturbance without weakness = 1  
Other = 0
- ◆ **D = Duration of symptoms.**  
> 60 mins = 2  
10-59 mins = 1  
<10mins = 0
- ◆ **D = Diabetes = 1**



## High Risk TIA (Consensus)

- ◆ ABCD2 score >5
- ◆ ABCD2 score >3
  - ◆ Within 1 week
  - ◆ >1 week
- ◆ Time to presentation/referral
  - ◆ Assessing Hospital Process
  - ◆ Patient pathway
  - ◆ Recurrent events
  - ◆ Atrial Fibrillation
- ◆ Education campaign



# Stroke Units

## 5.2 Overall results for key process indicators in 2010

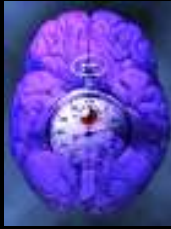
Table gives % compliance with each indicator for applicable patients		National	England	Wales	N Ireland
Q1.11	Patients treated for 90% of stay in a Stroke Unit	60	62	37	50
Q3.3	Screened for swallowing disorders within first 24 hours of admission	83	85	76	67
Q1.14iv	Brain scan within 24 hours of stroke	70	71	60	57
Q3.4	Commenced aspirin by 48 hours after stroke	93	93	92	91
Q3.6	Physiotherapy assessment within first 72 hours of admission	91	92	87	87
Q4.2	Assessment by an Occupational Therapist within 4 working days of admission	83	85	59	77
Q5.1	Weighed at least once during admission	85	86	81	73
Q5.3	Mood assessed by discharge	80	81	66	70
Q4.5i	Rehabilitation goals agreed by the multi-disciplinary team	94	95	95	92
Average for 9 indicators for 2010		82	83	73	74

*Comment: There has been a very significant improvement in stroke care in Wales since 2008. England however achieves the highest scores for all the key process indicators. Access to stroke unit care and occupational therapy are particular challenges in Wales whilst Northern Ireland struggles particularly to deliver brain imaging within 24 hours of stroke.*

## 5.7 Comparison of results in Northern Ireland from 2006-2010

Table gives % compliance with each indicator for applicable patients		N Ireland 2006	N Ireland 2008	N Ireland 2010
	Patients	402	355	<b>457</b>
Q1.11	Patients treated for 90% of stay in a Stroke Unit	60	59	<b>50</b>
Q3.3	Screened for swallowing disorders within first 24 hours of admission	62	70	<b>67</b>
Q1.14iv	Brain scan within 24 hours of stroke	40	55	<b>57</b>
Q3.4	Commenced aspirin by 48 hours after stroke	68	82	<b>91</b>
Q3.6	Physiotherapy assessment within first 72 hours of admission	74	85	<b>87</b>
Q4.2	Assessment by an Occupational Therapist within 4 working days of admission	61	73	<b>77</b>
Q5.1	Weighed at least once during admission	50	68	<b>73</b>
Q5.3	Mood assessed by discharge	77	80	<b>70</b>
Q4.5i	Rehabilitation goals agreed by the multi-disciplinary team	88	83	<b>92</b>
Average for 9 indicators for 2008		64	73	<b>74</b>

*Comment: Although there has been improvement in the total score, dips in swallow screening and mood assessment from 2008 are difficult to explain. The rate in increase in aggregate score for Northern Ireland is approximately half that of England and Wales (an increase of 12 from 2006 to 2010 compared with 23 Wales and 24 England). Unless this changes it is likely that the gap between England and Northern Ireland will increase and Wales will overtake Northern Ireland in terms of delivering high quality acute stroke care.*



# SINAP

Trust name	Hospital	Total number of records in analysis after data cleaning	Number of stroke patients	Key Indicator 8 Number of potentially eligible patients thrombolysed	Key Indicator 9 Bundle 1: Seen by nurse and one therapist within 24h and all relevant therapists within 72h (proxy for NICE QS 5)	Key Indicator 10 Bundle 2: Nutrition screening and formal swallow assessment within 72 hours where appropriate	Key Indicator 11 Bundle 3: Patient's first ward of admission was stroke unit and they arrived there within four hours of hospital arrival	Key Indicator 12 Bundle 4: Patient given antiplatelet within 72h where appropriate and had adequate fluid and nutrition in all 24h periods	Average of 12 key indicators	Quartile
ALL SITES (ONE YEAR)	ALL SITES - JULY 2010 - JUNE 2011 (ONE YEAR)	28716	19436 (68%)	1050 (49%)	7905 (48%)	14161 (82%)	8917 (48%)	9257 (56%)	60	
ALL SITES (ONE QUARTER)	ALL SITES - APRIL - JUNE 2011 (ONE QUARTER)	9583	6089 (64%)	362 (52%)	2734 (53%)	4502 (85%)	3187 (55%)	3275 (63%)	64	
Royal Liverpool & Broadgreen University Hospitals NHS Trust	Royal Liverpool University Hospital	167	132 (79%)	6 (60%)	94 (77%)	32 (91%)	82 (66%)	60 (59%)	73.9	1st
Salford Royal NHS Foundation Trust	Hope Hospital	175	103 (59%)	12 (63%)	21 (70%)	90 (92%)	88 (92%)	62 (70%)	81	1st
Southport and Ormskirk Hospital NHS Trust	Southport and Formby District General	135	87 (64%)	6 (40%)	48 (60%)	23 (28%)	40 (49%)	55 (77%)	54.2	3rd
St Helens and Knowsley Hospitals NHS Trust	Whiston Hospital	273	99 (36%)	9 (75%)	23 (34%)	65 (81%)	46 (48%)	16 (22%)	54.4	3rd
Stockport NHS Foundation Trust	Stepping Hill Hospital	32	31 (97%)	1 (25%)	9 (35%)	26 (93%)	16 (52%)	12 (43%)	56.4	3rd
Tameside Hospital NHS Foundation Trust	Tameside General Hospital	145	64 (44%)	0 (0%)	17 (29%)	50 (83%)	2 (3%)	45 (80%)	45.6	4th
Trafford Healthcare NHS Trust	Trafford General Hospital	24	24 (100%)	0 (0%)	8 (36%)	12 (55%)	15 (65%)	1 (6%)	37.1	4th
University Hospital of South Manchester NHS Foundation Trust	Wythenshawe Hospital	199	90 (45%)	0 (0%)	31 (41%)	78 (95%)	13 (16%)	49 (66%)	54.4	3rd
University Hospitals of Morecambe Bay NHS Trust	Furness General	Insufficient records								
University Hospitals of Morecambe Bay NHS Trust	Royal Lancaster Infirmary	23	23 (100%)	0 (0%)	3 (13%)	21 (91%)	2 (9%)	12 (55%)	33.1	4th
Wirral University Teaching Hospital NHS Foundation Trust	Arrowe Park Hospital	381	163 (43%)	12 (80%)	114 (79%)	141 (92%)	94 (60%)	106 (80%)	66.6	2nd
Wrightington, Wigan and Leigh NHS Foundation Trust	Royal Albert Edward Infirmary	54	53 (98%)	0 (0%)	33 (63%)	52 (100%)	3 (6%)	36 (71%)	56	3rd

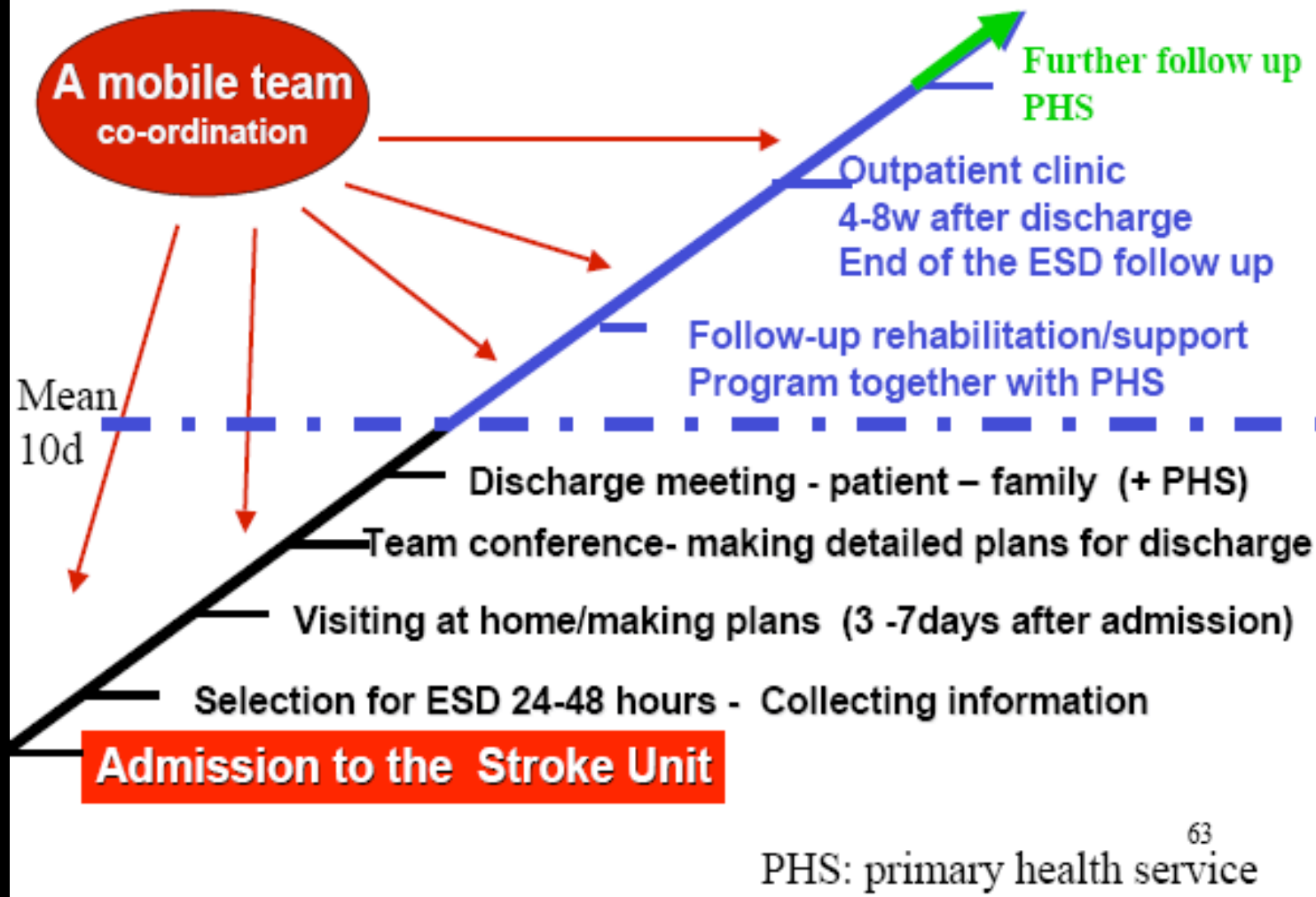


# Early Supported Discharge



# The ESD flowchart

Active life !!





## Consensus Statement: Team composition

- ◆ Team composition
  - ◆ Stroke specialist, multidisciplinary
- ◆ For 100 patients per year caseload:
  - ◆ OT (1.0),
  - ◆ Physio (1.0),
  - ◆ SALT (0.4)
  - ◆ Physician (0.1),
  - ◆ Nurse (0-1.2),
  - ◆ Social Worker (0-0.5)
- ◆ Inclusion Criteria
  - ◆ Living at home before the stroke
  - ◆ Patients with mild to moderate stroke
    - NIHSS 3-16
- ◆ Urban/Rural challenges



# Stroke prevention in Primary Care: Managing Atrial Fibrillation



- ◆ Number of new patients with AF **identified** and their subsequent treatment
- ◆ Number of existing AF patients reviewed and where necessary subject to **optimal therapy**
- ◆ Establishment of a clear and agreed **patient pathway** for AF patients
- ◆ **New QOF target for AF**



# Summary

- ◆ **Thrombolysis**
  - ◆ Significant Progress
  - ◆ Door to Needle time (Ultra-early)
  - ◆ Regional Priorities/Protocols (CV Framework)
  - ◆ Denominator (Register)
- ◆ **TIA**
  - ◆ Define High Risk (HSC Safety Forum)
- ◆ **Stroke Unit**
  - ◆ Competencies (SSEF)
  - ◆ Regulation (CV Framework)
- ◆ **ESD**
  - ◆ “Does what it says on the tin”
- ◆ **Atrial Fibrillation**
  - ◆ QOF
  - ◆ Documentation (GAIN-AF)



# Thrombolysis: Thankyou

- ◆ Maureen Matthews
- ◆ Kevin Dynan
- ◆ Roisin Doyle
- ◆ Jamil Vahidassr
- ◆ Ivan Wiggam
- ◆ Ken Fullerton
- ◆ Anne-Marie Hunter
- ◆ Alison Allerton
- ◆ John Corrigan
- ◆ Enda Kerr
- ◆ Bronagh Byrne
- ◆ Diane Crooks



# NIMAST Conference 2011

## The Stroke Journey

21<sup>st</sup> October 2011

Lagan Valley Island Centre