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National Stroke Audit Rehabilitation Services

Data supplement 2012

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Contents

Foreword

The purpose of this document is to facilitate the availability of all analysed data from the *National Stroke Audit – Rehabilitation Services 2012*. This is the third rehabilitation audit cycle conducted since 2008. Rehabilitation audits occur biennially.

This document contains all analysed data from the *National Stroke Audit – Rehabilitation Services 2012* that was **not** included in the *National Stroke Audit – Rehabilitation Services Report 2012*, available at www.strokefoundation.com.au. This Supplement data should be read in conjunction with the national report.

Like the *National Stroke Audit – Rehabilitation Services Report 2012*, this document was compiled by the National Stroke Foundation and data analysis was undertaken by the Translational Public Health Unit, Monash University.

Chapter 1: Introduction

1.1 Background

The National Stroke Foundation has been developing clinical guidelines for stroke management since 2003 and has been measuring adherence to recommendations in national guidelines since 2007 through the National Stroke Audit Program. Each alternate year the focus of the audit program changes between acute series and rehabilitation. The current *Clinical Guidelines for Stroke Management 2010* provides an overview of the current research evidence and presents recommendations for stroke care.

The National Stroke Audit Program comprises two components:

1. An Organisational Survey of stroke rehabilitation services across Australia. The survey assesses the resources required to deliver evidence-based stroke care such as the availability of stroke units, comprehensive assessment by the MDT and team meetings. The self-reported data are provided by a nominated clinician on behalf of the team. The questions are found in Appendix 1.
2. A Clinical Audit involving a retrospective review of up to 40 consecutive patients admitted to participating rehabilitation units. The Clinical Audit is used to measure the delivery of evidence-based processes of care such as timely assessment by allied health, goal setting, care planning and discharge planning. The questions are found in Appendix 1

The *National Stroke Audit – Rehabilitation Services 2012* took place in Australian free-standing rehabilitation hospitals and the rehabilitation services of acute hospitals. This supplementary data can be use along with the individual hospital site reports to identify service gaps and plan quality improvement.

1.2 Methods

Please refer to the National Stroke Audit Rehabilitation Services Report 2012 for audit methods.

1.3 Format

Two defined sections are contained within the supplement report. The first outlines data from the organisational survey. The second section contains data from the clinical audit. Relevant links to sections and data within the national report are provided where appropriate.

It is important to note that this report details data that was not included in the national report. It is simply provided to give access to all data collected. It should only be used in conjunction with the *National Stroke Audit - Rehabilitation Services report 2012*.

Chapter 2: Organisational survey data

The organisational survey data reports available services in rehabilitation services throughout Australia. The data is representative of 111 participating hospitals across Australia.

2.1 Workforce

The National Audit Report Rehabilitation Services provides data on the breakdown of staff and their expertises by rurality, setting (table 7, page 15) and location. Table 1 below reports the data in regard to location.

Table 1: Composition and experience of rehabilitation team by state

	Australia (N=111)		NSW (N=43)		NT (N=2)		QLD (N=19)		SA (N=8)		TAS (N=3)		VIC (N=27)		WA (N=9)	
	Active involve-ment with stroke rehabilita-tion n^	>3 years experience n+ (%)	Active involve-ment with stroke rehabilita-tion n^	>3 years experience n+ (%)	Active involve-ment with stroke rehabilita-tion n^	>3 years experience n+ (%)	Active involve-ment with stroke rehabilita-tion n^	>3 years experience n+ (%)	Active involve-ment with stroke rehabilita-tion n^	>3 years experience n+ (%)	Active involve-ment with stroke rehabilita-tion n^	>3 years experience n+ (%)	Active involve-ment with stroke rehabilita-tion n^	>3 years experience n+ (%)	Active involve-ment with stroke rehabilita-tion n^	>3 years experien ce n+ (%)
Rehabilitation nurse	105 (95%)	101 (96%)	39 (91%)	38 (97%)	2 (100%)	1 (50%)	18 (95%)	18 (100%)	8 (100%)	6 (75%)	3 (100%)	3 (100%)	27 (100%)	27 (100%)	8 (89%)	8 (100%)
Clinical nurse consultant	42 (38%)	38 (90%)	14 (33%)	14 (100%)	2 (100%)	1 (50%)	9 (47%)	9 (100%)	6 (75%)	4 (67%)	2 (67%)	2 (100%)	9 (33%)	8 (89%)	0 (0%)	38 (90%)
Clinical nurse specialist	55 (50%)	46 (84%)	26 (60%)	22 (85%)	1 (50%)	1 (100%)	6 (32%)	4 (67%)	2 (25%)	1 (50%)	0 (0%)	-	15 (56%)	14 (93%)	5 (56%)	4 (80%)
Occupational therapist	110 (99%)	101 (92%)	42 (98%)	39 (93%)	2 (100%)	1 (50%)	19 (100%)	18 (95%)	8 (100%)	7 (88%)	3 (100%)	3 (100%)	27 (100%)	25 (93%)	9 (100%)	8 (89%)
Physiotherapist	111 (100%)	104 (94%)	43 (100%)	39 (91%)	2 (100%)	1 (50%)	19 (100%)	19 (100%)	8 (100%)	7 (88%)	3 (100%)	3 (100%)	27 (100%)	26 (97%)	9 (100%)	9 (100%)
Speech pathologist	111 (100%)	96 (86%)	43 (100%)	37 86%)	2 (100%)	1 (50%)	19 (100%)	16 (84%)	8 (100%)	7 (88%)	3 (100%)	3 (100%)	27 (100%)	25 (93%)	9 (100%)	7 (78%)
Dietitian	110 (99%)	76 (69%)	43 (100%)	33 (77%)	2 (100%)	1 (50%)	19 (100%)	14 (74%)	7 (88%)	4 (57%)	3 (100%)	1 (33%)	27 (100%)	19 (70%)	9 (100%)	4 (44%)
Social worker	105 (95%)	86 (82%)	41 (95%)	38 (93%)	2 (100%)	1 (50%)	17 (89%)	14 (82%)	7 (88%)	4 (57%)	3 (100%)	2 (67%)	26 (96%)	21 (81%)	9 (100%)	6 (67%)
Clinical psychologist	42 (38%)	33 (79%)	14 (33%)	12 (86%)	0 (0%)	-	6 (32%)	3 (50%)	3 (38%)	2 (67%)	1 (33%)	1 (100%)	15 (56%)	14 (93%)	3 (33%)	1 (33%)

Neuropsychol ogist	41 (37%)	38 (93%)	12 (28%)	11 (92%)	0 (0%)	-	7 (37%)	6 (86%)	2 (25%)	1 (50%)	2 (67%)	2 (100%)	17 (63%)	17 (100%)	1 (11%)	1 (100%)
Allied health assistant/ therapy assistant	108 (97%)	83 (77%)	41 (95%)	30 (73%)	2 (100%)	1 (50%)	19 (100%)	14 (74%)	7 (88%)	4 (57%)	3 (100%)	3 (100%)	27 (100%)	25 (93%)	9 (100%)	6 (67%)
Stroke liaison officer/stroke care coordinator	25 (23%)	20 (80%)	13 (30%)	11 (85%)	0 (0%)	-	1 (5%)	0 (0%)	3 (38%)	2 (67%)	0 (0%)	-	4 (15%)	3 (75%)	4 (44%)	4 (100%)
Recreational therapist	14 (13%)	8 (57%)	4 (9%)	1 (25%)	0 (0%)	-	6 (32%)	3 (50%)	0 (0%)	-	0 (0%)	-	3 (11%)	3 (100%)	1 (11%)	1 (100%)
Diversional therapist	19 (17%)	15 (79%)	11 (26%)	9 (82%)	0 (0%)	-	2 (11%)	1 (50%)	1 (13%)	1 (100%)	0 (0%)	-	5 (19%)	4 (80%)	0 (0%)	-

+ Numerator: workforce with >3years experience in stroke rehabilitation
^ Known n of available workforce used for determining percentage of existing available workforce with >3yrs experience in stroke rehabilitation

2.2 Team communication

The National Audit Report Rehabilitation Services provides data on the regular attendees to team meetings by rurality, setting (table 8, page 16) and location. Table 2 includes the frequency of team meetings based on location.

Table 2: Frequency of Team Meetings

	Australia (N=111)	NSW (N=43)	NT (N=2)	QLD (N=19)	SA (N=8)	TAS (N=3)	VIC (N=27)	WA (N=9)	Urban (N=96)	Rural (N=15)	Public (N=98)	Private (N=13)
Regular Team Meeting	110 (99%)	43 (100%)	2 (100%)	19 (100%)	8 (100%)	3 (100%)	27 (100%)	8 (89%)	95 (99%)	15 (100%)	97 (99%)	13 (100%)
Meeting at least once per week	107 (97%)	41 (95%)	2 (100%)	19 (100%)	8 (100%)	3 (100%)	26 (96%)	8 (89%)	93 (97%)	14 (93%)	94 (96%)	13 (100%)
Meetings more frequently than once per week	30 (27%)	13 (30%)	0 (0%)	4 (21%)	2 (25%)	1 (33%)	9 (33%)	1 (11%)	29 (30%)	1 (7%)	25 (26%)	5 (38%)

2.3 Facilities and equipment

The National Audit Report Rehabilitation provides data on the rurality, setting (table 10, page 18) and location of facilities and equipment available within rehabilitation services Table 3 below reports the data in regard to location.

Table 3: Facilities and equipment available by state

	Australia (N=111)	NSW (N=43)	NT (N=2)	QLD (N=19)	SA (N=8)	TAS (N=3)	VIC (N=27)	WA (N=9)
Therapy gymnasium	110 (99%)	42 (98%)	2 (100%)	19 (100%)	8 (100%)	3 (100%)	27 (100%)	9 (100%)
Therapy kitchen	105 (95%)	41 (95%)	2 (100%)	17 (89%)	6 (75%)	3 (100%)	27 (100%)	9 (100%)
Therapy bathroom	73 (66%)	28 (65%)	0 (0%)	13 (68%)	4 (50%)	3 (100%)	19 (70%)	6 (67%)
Dining room	95 (85%)	38 (88%)	1 (50%)	18 (95%)	8 (100%)	3 (100%)	21 (78%)	6 (67%)
Recreation room	64 (58%)	24 (56%)	2 (100%)	9 (47%)	5 (63%)	1 (33%)	18 (67%)	5 (56%)
Dedicated private room	97 (87%)	39 (91%)	2 (100%)	18 (95%)	5 (63%)	3 (100%)	22 (81%)	8 (89%)
Independent living unit/room	42 (38%)	16 (37%)	0 (0%)	9 (47%)	1 (13%)	2 (67%)	10 (37%)	4 (44%)
Robotic equipment	10 (9%)	7 (16%)	0 (0%)	1 (5%)	1 (13%)	0 (0%)	1 (4%)	0 (0%)

Supported body weight device over treadmill	51 (46%)	24 (56%)	0 (0%)	9 (47%)	2 (25%)	0 0%)	13 (48%)	3 (33%)
Supported body weight device over ground	66 (59%)	25 (58%)	1 (50%)	12 (63%)	4 (50%)	0 (0%)	20 (74%)	4 (44%)
Functional electrical stimulation	90 (81%)	38 (88%)	1 (50%)	19 (100%)	5 (63%)	2 (67%)	20 (74%)	5 (56%)
Upright cycle	90 (81%)	33 (77%)	2 (100%)	18 (95%)	4 (50%)	2 (67%)	25 (93%)	6 (67%)
Recumbent cycle	70 (63%)	27 (63%)	2 (100%)	10 (53%)	4 (50%)	2 (67%)	20 (74%)	5 (56%)
Upper limb ergometer	67 (60%)	28 (65%)	1 (50%)	12 (63%)	1 (13%)	2 (67%)	20 (74%)	3 (33%)
Free weights/ weights unit	105 (95%)	39 (91%)	2 (100%)	19 (100%)	8 (100%)	2 (67%)	27 (100%)	8 (89%)
Alternative and Augmentative communication devices	70 (63%)	25 (58%)	2 (100%)	14 (74%)	2 (25%)	2 (67%)	19 (70%)	6 (67%)
Nintendo Wii™	84 (76%)	35 (81%)	2 (100%)	16 (84%)	6 (75%)	1 (33%)	20 (74%)	4 (44%)

2.4 Management of impairments

Participants were asked to report recommended therapies for common impairments. This data (tables 4-7) was not reported in the National Audit Report.

Table 4: Selection of recommended therapies for motor and associated impairments after stroke

Motor and associated Impairment	Recommended Therapy/Intervention used to treat impairment	Australia (N=111)	Frequency of use	
Difficulty standing/sitting or standing from a seated position independently	Task-specific practice with feedback provided	110 (99%)	Always Usually Sometimes Rarely	102 (93%) 7 (6%) 1 (1%) 0 (0%)
Upper limb impairment	Repetitive Task-specific training	111 (100%)	Always Usually Sometimes Rarely	76 (68%) 31 (28%) 4 (4%) 0 (0%)
	EMG biofeedback	37 (33%)	Always Usually Sometimes Rarely	2 (5%) 5 (14%) 16 (43%) 14 (38%)
	Robot-assisted reaching	4 (4%)	Always Usually Sometimes Rarely	1 (25%) 1 (25%) 1 (25%) 1 (25%)
	Constraint-induced movement therapy	80 (72%)	Always Usually Sometimes Rarely	1 (1%) 7 (9%) 49 (61%) 23 (29%)
	Mental practice	101 (91%)	Always	17 (17%)

			Usually Sometimes Rarely	35 (35%) 41 (40%) 8 (8%)
	Mechanical assisted training	40 (36%)	Always Usually Sometimes Rarely	8 (20%) 13 (32%) 17 (43%) 2 (5%)
	Electrical stimulation	90 (81%)	Always Usually Sometimes Rarely	17 (19%) 26 (29%) 38 (42%) 9 (10%)
	Mirror therapy	101 (91%)	Always Usually Sometimes Rarely	11 (11%) 25 (25%) 54 (53%) 11 (11%)
	Bilateral training	107 (96%)	Always Usually Sometimes Rarely	30 (28%) 48 (45%) 28 (26%) 1 (1%)
Hypertonicity	Botulinum Toxin (Type A)	69 (62%)	Always Usually Sometimes Rarely	3 (4%) 9 (13%) 40 (58%) 17 (25%)
	Electromyograph (EMG) biofeedback	71 (64%)	Always Usually Sometimes Rarely	8 (11%) 19 (27%) 32 (45%) 12 (17%)
Difficulties with ADLS	Occupational therapy	110 (99%)	Always Usually Sometimes Rarely	106 (96%) 3 (3%) 1 (1%) 0 (0%)
	Multidisciplinary interventions targeting ADLs	111 (100%)	Always Usually Sometimes Rarely	95 (85%) 13 (12%) 1 (1%) 2 (2%)
Dysarthria	Biofeedback or a voice amplifier	60 (54%)	Always Usually Sometimes Rarely	9 (15%) 8 (13%) 1 (52%) 12 (20%)
	Intensive therapy	86 (77%)	Always Usually Sometimes Rarely	15 (17%) 20 (23%) 41 (48%) 10 (12%)
	Use of strategies	105 (95%)	Always Usually Sometimes Rarely	62 (59%) 30 (29%) 13 (12%) 0 (0%)
	Oral musculature exercises	105 (95%)	Always Usually Sometimes Rarely	50 (48%) 31 (29%) 22 (21%) 2 (2%)
	Augmentative and alternative and communication devices	103 (93%)	Always Usually Sometimes Rarely	23 (22%) 23 (22%) 49 (48%) 8 (8%)
Cardiovascular fitness	Fitness training	98 (88%)	Always Usually Sometimes Rarely	14 (14%) 44 (45%) 35 (36%) 5 (5%)

Table 5: Selection of recommended therapies for speech and language impairments after stroke

Speech and language impairments	Recommended Therapy/Intervention used to treat impairment	Australia (N=111)	Frequency of use	
Aphasia	Phonological & semantic interventions	110 (99%)	Always Usually Sometimes Rarely	70 (64%) 29 (26%) 11 (10%) 0 (0%)
	Constraint-induced therapy	63 (57%)	Always Usually Sometimes Rarely	8 (13%) 12 (19%) 35 (55%) 8 (13%)
	Use of gestures	111 (100%)	Always Usually Sometimes Rarely	52 (47%) 32 (29%) 26 (23%) 1 (1%)
	Supported conversation techniques	109 (98%)	Always Usually Sometimes Rarely	71 (65%) 18 (17%) 19 (17%) 1 (1%)
	Delivery of therapy programs via computer	91 (82%)	Always Usually Sometimes Rarely	8 (9%) 18 (20%) 50 (55%) 15 (16%)
	Group therapy	72 (65%)	Always Usually Sometimes Rarely	15 (21%) 15 (21%) 34 (47%) 8 (11%)
Dysphagia	Compensatory strategies such as positioning, therapy maneuvers or modifications of food and fluids	111 (100%)	Always Usually Sometimes Rarely	103 (93%) 5 (4%) 2 (2%) 1 (1%)
	Therapy targeting specific muscle groups (Shaker therapy)	105 (95%)	Always Usually Sometimes Rarely	35 (33%) 32 (31%) 38 (36%) 0 (0%)
	Thermo-tactile stimulation	83 (75%)	Always Usually Sometimes Rarely	9 (11%) 13 (16%) 44 (53%) 17 (20%)
	Electrical stimulation	28 (25%)	Always Usually Sometimes Rarely	1 (4%) 4 (14%) 14 (50%) 9 (32%)

Table 6: Selection of recommended therapies for cognitive, sensory and spatial impairments after stroke

Cognitive, speech and spatial impairments	Recommended Therapy / Intervention used to treat impairment	Australia (N=111)	Frequency of use	
Sensory impairment	Sensory-specific or sensory-related training	101 (91%)	Always Usually Sometimes Rarely	27 (27%) 40 (40%) 30 (29%) 4 (4%)
	Cutaneous electrical stimulation in conjunction with conventional therapy	67 (60%)	Always Usually Sometimes Rarely	9 (14%) 19 (28%) 29 (43%) 10 (15%)
Difficulty with executive function/attention/concentration/memory	Cognitive rehabilitation	111 (100%)	Always Usually Sometimes Rarely	72 (65%) 31 (28%) 7 (6%) 1 (1%)
	External cues used as strategy training	110 (99%)	Always Usually Sometimes Rarely	49 (45%) 44 (40%) 17 (15%) 0 (0%)
Unilateral spatial neglect	Simple cues	110 (99%)	Always Usually Sometimes Rarely	91 (83%) 15 (14%) 4 (3%) 0 (0%)
	Visual scanning training	107 (96%)	Always Usually Sometimes Rarely	70 (65%) 24 (22%) 12 (11%) 1 (1%)
	Prism adaptation	29 (26%)	Always Usually Sometimes Rarely	3 (10%) 4 (14%) 9 (31%) 13 (45%)
	Eye patching	66 (59%)	Always Usually Sometimes Rarely	5 (8%) 2 (3%) 41 (62%) 18 (27%)
	Mental imagery training or structured feedback.	81 (72%)	Always Usually Sometimes Rarely	16 (20%) 21 (26%) 31 (38%) 13 (16%)

Table 7: Selection of recommended therapies for complications or co-morbidities after stroke

Complication or co-ormorbidity	Recommended Therapy / Intervention used to treat impairment	Australia (N=111)	Frequency of use	
Shoulder Subluxation/pain	Firm management devices	97 (87%)	Always Usually Sometimes Rarely	51 (53%) 29 (30%) 10 (10%) 7 (7%)
	Electrical Stimulation	86 (77%)	Always Usually Sometimes Rarely	14 (16%) 32 (37%) 31 (36%) 9 (11%)
	Education for staff, carers or patients	111 (100%)	Always Usually Sometimes Rarely	87 (78%) 21 (19%) 3 (3%) 0 (0%)
	Shoulder strapping (for management of pain only)	92 (83%)	Always Usually Sometimes Rarely	7 (8%) 17 (18%) 47 (51%) 21 (23%)
Mood impairment	Psychological interventions (prevention)	86 (77%)	Always Usually Sometimes Rarely	22 (25%) 29 (34%) 31 (36%) 4 (5%)
	Antidepressants (treatment)	109 (98%)	Always Usually Sometimes Rarely	15 (14%) 41 (37%) 51 (47%) 2 (2%)
	Cognitive therapy (treatment)	75 (68%)	Always Usually Sometimes Rarely	9 (12%) 24 (32%) 33 (44%) 9 (12%)
Urinary incontinence	Individualised prompted or scheduling voiding regimen	105 (95%)	Always Usually Sometimes Rarely	35 (33%) 40 (38%) 29 (28%) 1 (1%)
	Containment aids	111 (100%)	Always Usually Sometimes Rarely	83 (75%) 8 (16%) 10 (9%) 0 (0%)
	Anticholinergic drugs	101 (91%)	Always Usually Sometimes Rarely	2 (2%) 12 (12%) 77 (76%) 10 (10%)
	Documented continence management plan	96 (87%)	Always Usually Sometimes Rarely	29 (30%) 42 (44%) 25 (26%) 0 (0%)
Urinary retention	Intermittent indwelling catheter	104 (94%)	Always Usually Sometimes Rarely	39 (37%) 9 (28%) 32 (31%) 4 (4%)
	Documented continence management plan	96 (86%)	Always Usually Sometimes Rarely	29 (30%) 42 (44%) 25 (26%) 0 (0%)
Contracture	Conventional therapy	109 (98%)	Always Usually Sometimes Rarely	77 (71%) 25 (23%) 7 (6%) 0 (0%)
	Routine use of splints or prolonged positioning	85 (77%)	Always Usually Sometimes Rarely	17 (20%) 35 (41%) 31 (37%) 2 (2%)

	Serial casting	64 (58%)	Always Usually Sometimes Rarely	3 (5%) 3 (5%) 29 (45%) 29 (45%)
Difficulties with community transport	Tailored strategies implemented	89 (80%)	Always Usually Sometimes Rarely	26 (29%) 31 (35%) 24 (27%) 8 (9%)
	Provision of information	108 (97%)	Always Usually Sometimes Rarely	50 (46%) 36 (33%) 22 (21%) 0 (0%)

2.5 Outcome measures

The National Audit Report Rehabilitation Services reports national data of standardised outcome measures used by rurality, setting (table 26, page 31) and location. Table 8 contains breakdown of this data by location.

Table 8: Use of standardised outcome measures

	Australia (N=111)	NSW (N=43)	NT (N=2)	QLD (N=19)	SA (N=8)	TAS (N=3)	VIC (N=27)	WA (N=9)	Urban (N=96)	Rural (N=15)	Public (N=98)	Private (N=13)
Functional Independence Measure	102 (92%)	39 (91%)	2 (100%)	19 (100%)	6 (75%)	3 (100%)	26 (96%)	7 (78%)	92 (96%)	10 (67%)	89 (91%)	13 (100%)
Motor Assessment Scale	60 (54%)	26 (60%)	0 (0%)	14 (74%)	2 (25%)	3 (100%)	13 (48%)	2 (22%)	51 (53%)	9 (60%)	53 (54%)	7 (54%)
Barthel Index	36 (32%)	11 (26%)	0 (0%)	1 (5%)	2 (25%)	0 (0%)	16 (59%)	6 (67%)	32 (33%)	4 (27%)	34 (35%)	2 (15%)
Modified Rankin Scale	14 (13%)	7 (16%)	0 (0%)	1 (5%)	1 (13%)	0 (0%)	1 (4%)	4 (4%)	11 (11%)	3 (20%)	12 (12%)	2 (15%)
Scandinavian Stroke Scale	2 (2%)	2 (5%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (2%)	0 (0%)	2 (2%)	0 (0%)

2.6 Access to community rehabilitation

The National Audit Report Rehabilitation Services reports national data on access to community rehabilitation and the time to access these services by rurality, setting and location (table 29-30, page 33). Table 9 presents this data by location

Table 9: Usual time to access community rehabilitation after discharge by state

		Time to access community rehabilitation service				
	Sites with access to service N	<1 week	1-2 weeks	2-3 weeks	3-4 weeks	>4 weeks
Australia						
Early supported discharge teams	30	19 (63%)	9 (30%)	2 (7%)	-	-
Outpatient rehabilitation	89	27 (30%)	28 (31%)	21 (24%)	6 (7%)	7 (8%)
Community based rehabilitation	82	32 (39%)	23 (28%)	14 (17%)	9 (11%)	4 (5%)
Day hospital	33	17 (52%)	7 (21%)	2 (6%)	2 (6%)	5 (15%)
NSW						
Early supported discharge teams	7	6 (86%)	1 (14%)	0	-	-
Outpatient rehabilitation	36	11 (31%)	9 (25%)	10 (28%)	3 (8%)	3 (8%)
Community based rehabilitation	28	12 (43%)	3 (11%)	6 (21%)	5 (18%)	2 (7%)
Day hospital	12	5 (42%)	2 (17%)	1 (7%)	2 (17%)	2 (17%)
NT						
Early supported discharge teams	1	1 (100%)	0	0	-	-
Outpatient rehabilitation	2	1 (50%)	1 (50%)	0	0	0
Community based rehabilitation	-	-	-	-	-	-
Day hospital	-	-	-	-	-	-
QLD						
Early supported discharge teams	8	1 (12%)	5 (63%)	2 (25%)	-	-
Outpatient rehabilitation	12	3 (25%)	4 (33%)	4 (33%)	0	1 (9%)
Community based rehabilitation	17	2 (12%)	10 (59%)	4 (23%)	0	1 (6%)
Day hospital	10	6 (60%)	3 (30%)	0	0	1 (10%)
SA						
Early supported discharge teams	2	2 (100%)	0	0	-	-
Outpatient rehabilitation	2	0	0	0	2 (100%)	0
Community based rehabilitation	6	3 (50%)	1 (17%)	1 (17%)	1 (17%)	0
Day hospital	4	3 (75%)	1 (25%)	0	0	0
TAS						
Early supported discharge teams	1	1 (100%)	0	0	-	-
Outpatient rehabilitation	2	1 (50%)	0	0	0	1 (50%)
Community based rehabilitation	1	1 (100%)	0	0	0	0
Day hospital	0	-	-	-	-	-
VIC						
Early supported discharge teams	7	4 (57%)	3 (43%)	0	-	-
Outpatient rehabilitation	26	7 (27%)	9 (34%)	7 (27%)	1 (4%)	2 (8%)
Community based rehabilitation	25	10 (40%)	8 (32%)	3 (12%)	3 (12%)	1 (4%)
Day hospital	2	1 (50%)	0	0	0	1 (50%)
WA						
Early supported discharge teams	4	4 (100%)	0	0	-	-
Outpatient rehabilitation	9	4 (44%)	5 (66%)	0	0	0
Community based rehabilitation	5	4 (80%)	1 (20%)	0	0	0
Day hospital	5	2 (40%)	1 (20%)	1 (20%)	0	1 (20%)

Respondents were asked to indicate the frequency with which nursing and allied health staff are available for community rehabilitation services where available. Data reported in table 10 was not reported in the National Audit Report.

Table 10: Availability of allied health in community rehabilitation services at least 1 day per week

	Outpatient rehabilitation (N*=88)	Community-based rehabilitation provided in the home (N*=81)	Early supported discharge (N=30)	Day Hospital (N*=32)
Physiotherapy	84 (94%)	78 (95%)	30 (100%)	31 (94%)
Occupational therapy	78 (88%)	78 (95%)	29 (97%)	31 (94%)
Speech pathology	83 (93%)	62 (76%)	24 (80%)	28 (85%)
Nursing	40 (45%)	46 (56%)	28 (93%)	26 (79%)
Dietetics	62 (70%)	39 (48%))	16 (53%)	19 (58%)
Psychology	34 (38%)	19 (23%)	7 (23%)	15 (45%)
Social work	62 (70%)	56 (68%)	22 (73%)	23 (70%)

*One site stated yes to service, but did not record availability of staff

2.7 Summary of organisational survey by state or territory

Table 15 is a summary of data from the 2012 organisational survey for each state and territory.

Table 11: Summary of organisational survey

	Australia (N=111)	NSW (N=43)	NT (N=2)	QLD (N=19)	SA (N=8)	TAS (N=3)	VIC (N=27)	WA (N=9)
Characteristics of participating hospitals								
Free standing rehabilitation hospital	35 (31%)	16 (37%)	0 (0%)	3 (16%)	3 (37%)	0 (0%)	12 (44%)	1 (11%)
Rehabilitation ward; same building of same health campus	53 (48%)	22 (51%)	1 (50%)	9 (47%)	2 (25%)	3 (100%)	11 (41%)	5 (56%)
Rehabilitation ward; separate building of same health campus	21 (19%)	5 (12%)	1 (50%)	7 (37%)	1 (13%)	0 (0%)	4 (15%)	3 (33%)
Rehabilitation service within acute hospital without designated beds	2 (2%)	0 (0%)	0 (0%)	0 (0%)	2 (25%)	0 (0%)	0 (0%)	0 (0%)
Facilities & equipment								
Therapy gymnasium	110 (99%)	42 (98%)	2 (100%)	19 (100%)	8 (100%)	3 (100%)	27 (100%)	9 (100%)
Therapy kitchen	105 (95%)	41 (95%)	2 (100%)	17 (89%)	6 (75%)	3 (100%)	27 (100%)	9 (100%)
Therapy bathroom	73 (66%)	28 (65%)	0 (0%)	13 (68%)	4 (50%)	3 (100%)	19 (70%)	6 (67%)
Dining room	95 (86%)	38 (88%)	1 (50%)	18 (95%)	8 (100%)	3 (100%)	21 (78%)	6 (67%)
Recreation room	64 (58%)	24 (56%)	2 (100%)	9 (47%)	5 (63%)	1 (33%)	18 (67%)	5 (56%)
Dedicated private room for family conferences and/or cognitive, speech and counselling therapy	97 (87%)	39 (91%)	2 (100%)	18 (95%)	5 (63%)	3 (100%)	22 (81%)	8 (89%)
Independent living unit	42 (38%)	16 (37%)	0 (0%)	9 (47%)	1 (13%)	2 (67%)	10 (37%)	4 (44%)

	Australia (N=111)	NSW (N=43)	NT (N=2)	QLD (N=19)	SA (N=8)	TAS (N=3)	VIC (N=27)	WA (N=9)
Robotic equipment	10 (9%)	7 (16%)	0 (0%)	1 (5%)	1 (13%)	0 (0%)	1 (4%)	0 (0%)
Supported body weight device over treadmill	51 (46%)	24 (56%)	0 (0%)	9 (47%)	2 (25%)	0 (0%)	13 (48%)	3 (33%)
Supported body weight device over ground	66 (59%)	25 (58%)	1 (50%)	12 (63%)	4 (50%)	0 (0%)	20 (74%)	4 (44%)
Functional electrical stimulation	90 (81%)	38 (88%)	1 (50%)	19 (100%)	5 (63%)	2 (67%)	20 (74%)	5 (56%)
Upright cycle	90 (81%)	33 (77%)	2 (100%)	18 (95%)	4 (50%)	2 (67%)	25 (93%)	6 (67%)
Recumbent cycle	70 (63%)	27 (63%)	2 (100%)	10 (53%)	4 (50%)	2 (67%)	20 (74%)	5 (56%)
Upper limb ergometer	67 (60%)	28 (65%)	1 (50%)	12 (63%)	1 (13%)	2 (67%)	20 (74%)	3 (33%)
Free weights/weights unit	105 (95%)	39 (91%)	2 (100%)	19 (100%)	8 (100%)	2 (67%)	27 (100%)	8 (89%)
Alternative and Augmentative communication devices (high and/or low tech devices	70 (63%)	25 (58%)	2 (100%)	14 (74%)	2 (25%)	2 (67%)	19 (70%)	6 (67%)
Nintendo Wii™	84 (76%)	35 (81%)	2 (100%)	16 (84%)	6 (75%)	1 (33%)	20 (74%)	4 (44%)
Medical leader for rehabilitation of stroke patients								
Rehabilitation physician	68 (61%)	31 (72%)	1 (50%)	9 (47%)	4 (50%)	1 (33%)	22 (81%)	0 (0%)
Geriatrician	20 (18%)	4 (9%)	0 (0%)	7 (37%)	1 (12%)	0 (0%)	1 (4%)	7 (78%)
General medical physician	7 (6%)	1 (2%)	1 (50%)	0 (0%)	0 (0%)	2 (67%)	2 (7%)	1 (11%)
Neurologist	4 (4%)	2 (5%)	0 (0%)	0 (0%)	1 (13%)	0 (0%)	1 (4%)	0 (0%)
General practitioner/visiting medical officer	12 (11%)	5 (12%)	0 (0%)	3 (16%)	2 (25%)	0 (0%)	1 (4%)	1 (11%)
Continuing education for stroke clinicians								
Hospitals with access to a program of continuing education of staff relating to stroke management	75 (68%)	33 (77%)	2 (100%)	10 (53%)	5 (63%)	1 (33%)	18 (67%)	6 (18%)
Access to community rehabilitation								
Early supported discharge teams	30 (27%)	7 (16%)	1 (50%)	8 (42%)	2 (25%)	1 (33%)	7 (26%)	4 (44%)
Outpatient rehabilitation	89 (80%)	36 (84%)	2 (100%)	12 (63%)	2 (25%)	2 (67%)	26 (96%)	9 (100%)
Community based rehabilitation provided in the home	82 (74%)	28 (65%)	0 (0%)	17 (89%)	6 (75%)	1 (33%)	25 (93%)	5 (56%)
Day hospital	33 (30%)	12 (28%)	0 (0%)	10 (53%)	4 (50%)	0 (0%)	2 (7%)	5 (56%)

	Australia (N=111)	NSW (N=43)	NT (N=2)	QLD (N=19)	SA (N=8)	TAS (N=3)	VIC (N=27)	WA (N=9)
Goal-setting process								
Usual practice is that person interviewed by separate disciplines only	7 (6%)	2 (5%)	0 (0%)	1 (5%)	2 (25%)	0 (0%)	2 (7%)	0 (0%)
Usual practice is that person interviewed by disciplines separately and goals reviewed at MDT meeting	82 (74%)	32 (74%)	2 (100%)	14 (74%)	5 (63%)	1 (33%)	23 (85%)	5 (56%)
Usual practice is that person and MDT develop goals together	15 (14%)	7 (16%)	0 (0%)	4 (21%)	0 (0%)	1 (33%)	1 (4%)	2 (22%)
No consistent process	5 (4%)	1 (2%)	0 (0%)	0 (0%)	0 (0%)	1 (33%)	1 (4%)	2 (22%)
Other	2 (2%)	1 (2%)	0 (0%)	0 (0%)	1 (13%)	0 (0%)	0 (0%)	0 (0%)
Use of outcomes measures								
Functional Independence Measure	102 (92%)	39 (91%)	2 (100%)	19 (100%)	6 (75%)	3 (100%)	26 (96%)	7 (78%)
Motor Assessment Scale	60 (54%)	26 (60%)	0 (0%)	14 (74%)	2 (25%)	3 (100%)	13 (48%)	2 (22%)
Barthel Index	36 (32%)	11 (26%)	0 (0%)	1 (5%)	2 (25%)	0 (0%)	16 (59%)	6 (67%)
Modified Rankin Scale	14 (13%)	7 (16%)	0 (0%)	1 (5%)	1 (13%)	0 (0%)	1 (4%)	4 (4%)
Scandinavian Stroke Scale	2 (2%)	2 (5%)	0 0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Chapter 3: Clinical audit data

A Clinical Audit involving a retrospective review of up to 40 consecutive patients admitted to participating rehabilitation units. The Clinical Audit is used to measure the delivery of evidence-based processes of care such as timely assessment by allied health, goal setting, care planning and discharge planning. One hundred and one hospitals participated in the clinical audit with 2821 patient case notes audited.

3.1 Transfers to and location of rehabilitation

The National Audit Report Rehabilitation Services provides data on where patients were transferred from to begin their rehabilitation by rurality, setting (table 13, page 21) and location. Table12 provides data based on location.

Table 12: Where patients were transferred from (prior to inpatient rehabilitation) state

	Australia (N=2821)	NSW (N=1069)	NT (N=12)	QLD (N=455)	SA (N=187)	TAS (N=75)	VIC (N=777)	WA (N=246)
Stroke Unit	1243 (44%)	418 (39%)	8 (67%)	165 (36%)	110 (59%)	53 (71%)	374 (48%)	115 (47%)
Acute Inpatient Ward	1231 (43%)	506 (47%)	2 (17%)	259 (57%)	66 (35%)	20 (27%)	297 (38%)	81 (33%)
Acute Unknown Ward	187 (7%)	79 (7%)	2 (17%)	13 (3%)	2 (1%)	1 (1%)	70 (9%)	20 (8%)
Rehabilitation Ward	56 (2%)	23 (2%)	0 (0%)	7 (2%)	1 (1%)	1 (1%)	18 (2%)	6 (2%)
General Practitioner Referral	15 (1%)	6 (1%)	0 (0%)	3 (1%)	5 (3%)	0 (0%)	0 (0%)	1 (1%)
Other/Unknown	89 (3%)	37 (3%)	0 (0%)	8 (2%)	3 (2%)	0 (0%)	18 (2%)	23 (9%)

3.2 Secondary prevention

The National Audit Report Rehabilitation Services reports national data on secondary prevention measures by location, rurality and setting (table 21, page 27). Table 13 provides more detail on Known N.

Table 13: Secondary prevention measures on discharge

	Location	Rurality		Setting	
	Australia n/N (%)	Urban n/N (%)	Rural n/N (%)	Public n/N (%)	Private n/N (%)
On antithrombotics on discharge*+	2,018/2091 (97)	1,868/1938 (96)	150/153 (98)	1,812/1880 (96)	206/211 (98)
On antihypertensives on discharge+	2,280/2683 (85)	2,106/2470 (85)	174/21. (82)	2,047/2414(85)	233/269 (87)
On lipid lowering therapy on discharge*+	1,751/2080 (84)	1633/1929 (85)	118/151 (78)	1,594/1874 (85)	157/206 (76)
Received advice about risk factor modification on discharge+	906/1698 (53)	850/1570 (54)	56/128 (44)	819/1508 (54)	87/190 (46)

*Ischaemic strokes only.

+Patients discharged alive, and with no contraindication for drug.

The *National Audit Report Rehabilitation Services* reports national data on discharge planning processes by location, rurality and setting (table 23, page 29). Table 14 provides more detail on Known N for each data point.

Table 14: Use of discharge planning processes

	Location								Rurality		Setting	
	Australia n/N (%)	NSW n/N (%)	NT n/N (%)	QLD n/N (%)	SA n/N (%)	TAS n/N (%)	VIC n/N (%)	WA n/N (%)	Urban n/N (%)	Rural n/N (%)	Public n/N (%)	Private n/N (%)
Discharge care plan provided *	1849/2503 (74)	664/939 (71)	12/12 (100)	299/419 (71)	138/168 (82)	45/61 (74)	576/687 (84)	115/217 (53)	1701/2304 (74)	148/199 (74)	1669/2244 (74)	180/259 (70)
Home assessment completed +	1193/1618 (74)	467/613 (76)	3/10 (30)	168/247 (68)	92/115 (80)	42/60 (70)	314/430 (73)	107/143 (75	1098/1492 (74)	95126 (75)	1061/1443 (74)	132/175 (75)
GP sent discharge summary #	2626/2821 (93)	994/1069 (93)	7/12 (58)	409/455 (90)	182/187 (97)	72/75 (96)	729/777 (94)	233/246 (95)	24212588 (94)	205/233 (88)	2369/2542 (93)	257/279 (92)
Contact provided for post-discharge programs **	1577/2789 (57)	6351056 (60)	7/12 (58)	206/448 (46)	136/187 (73)	24/75 (32)	421/768 (55)	148243 (61)	1455/2563 (57)	122/226 (54)	1449/2510 (58)	128279 (46)

*Known N is limited to eligible patients alive at discharge
+Known N is limited to eligible patients discharged home
#Known N includes all audited cases
**Known N is limited to eligible patients alive at discharge. Contact provided to patient or family

3.3 Life after stroke for patient and family

The National Audit Report Rehabilitation Services reports national data on carers preparation for life in the community (table 25, page 30). Table 15 provides more detail on Known N for each data point.

Table 15: Preparation of carer for life in the community*

	Australia n/N (%)	NSW n/N (%)	NT n/N (%)	QLD n/N (%)	SA n/N (%)	TAS n/N (%)	VIC n/N (%)	WA n/N (%)	Urban n/N (%)	Rural n/N (%)	Public n/N (%)	Private n/N (%)
Carers provided training	727/931 (78%)	284/355 (80%)	2/2 (100%)	86/114 (75%)	60/71 (85%)	27/39 (69%)	192/256 (75%)	76/94 (81%)	661/853 (78%)	66/78 (85%)	652/846 (77%)	75/85 (88%)
Carers received support needs assessment	753/971 (78%)	305/374 (82%)	2/2 (100%)	84/118 (71%)	57/73 (78%)	21/39 (54%)	202/270 (75%)	82/95 (86%)	692/888 (78%)	61/83 (74%)	691/886 (78%)	62/85 (73%)
Carers offered information about peer support	388/698 (56%)	153/247 (62%)	2/2 (100%)	50/85 (59%)	43/60 (72%)	7/24 (29%)	66/202 (33%)	67/78 (86%)	352/638 (55%)	36/60 (60%)	351/628 (56%)	37/70 (53%)
Carers offered formal targeted counselling	317/960 (33%)	137/370 (37%)	2/2 (100%)	44/116 (38%)	23/70 (33%)	7/39 (18%)	70/269 (26%)	34/94 (36%)	278/878 (32%)	39/82 (48%)	292/875 (33%)	25/85 (29%)

*Known N is limited to carers of stroke survivors who were discharged to private residence with a carer

3.4 Patient outcomes

All of the participating hospitals reported using at least one outcome measure. The Functional Independence Measure (FIM) was the most frequently used measure. It has been shown that a 22-point change in FIM represents a reliable threshold for consideration of a positive response to rehabilitation (refer to National Report). This also correlates with average FIM improvement of approximately 22 from admission to discharge reported in Australian Rehabilitation Outcomes Centre (AROC) data.

The National Audit Report Rehabilitation Services reports national data on 22 point increase in FIM (table 27, page 31). Table 16 provides detail on what patient the ward was treated on and the change in FIM score.

Table 16: Patients who achieved a 22 point increase in FIM and which ward treated on

Ward treated	Achieved 22point net positive change in FIM	Did not achieve 22 point net positive change in FIM
Dedicated stroke rehabilitation unit	95 (9%)	95 (9%)
Neurorehabilitation unit	145 (13%)	147 (13%)
Mixed rehabilitation ward	856 (78%)	867 (78%)

Data reported in table 17 was not reported in the National Audit Report.

Table 17: Discharge destination for those who achieved a 22 point increase in FIM

Discharge destination	Achieved 22point net positive change in FIM	Did not achieve 22 point net positive change in FIM
Private residence	862 (79%)	703 (63%)
High level supported accom	69 (6%)	170 (15%)
Low level supported accom	59 (5%)	41 (4%)
Statistical discharge	54 (5%)	83 (7%)
Other	49 (5%)	112 (10%)

3.5 Summary of clinical data by state or territory

Table 18 presents a summary of data from the 2012 clinical audit by state and territory

Table 18: Summary of clinical audit

	Australia N=2821	NSW (N=1069)	NT (N=12)	QLD (N=455)	SA (N=187)	TAS (N=75)	VIC (N=777)	WA (N=246)
Patient characteristics								
Male (n [%])	1533 (54%)	573 (54%)	8 (67%)	261 (57%)	98 (52%)	51 (68%)	412 (53%)	130 (53%)
Median Age (IQR)	76 (66–83)	76 (66–84)	55 (47–70)	74 (64–82)	76 (66–84)	73 (66–80)	76 (66–84)	76 (65–84)
Aboriginal and/or Torres Strait Islander background (n [%])	55 (2%)	24 (2%)	4 (33%)	9 (2%)	1 (1%)	1 (1%)	8 (1%)	8 (3%)
Non-English Speaking Background with requirement for interpreter (n [%])	284 (10%)	101 (9%)	2 (17%)	30 (7%)	20 (11%)	2 (3%)	116 (15%)	13 (5%)
Ischaemic stroke (n [%])	2136 (76%)	810 (76%)	11 (92%)	335 (74%)	154 (82%)	56 (75%)	576 (74%)	194 (79%)
Intracerebral haemorrhage (n [%])	519 (18%)	189 (18%)	1 (8%)	88 (19%)	30 (16%)	14 (19%)	157 (20%)	40 (16%)
Unknown stroke type (n [%])	166 (6%)	70 (7%)	0 (0%)	32 (7%)	3 (2%)	5 (7%)	44 (6%)	12 (5%)
Median FIM on admission (IQR)	75 (52–95)	73 (52–94)	76 (61–99)	78 (54–96)	85 (68–102)	78 (54–97)	72 (49–94)	67 (53–85)
Upper limb function assessed (n/N [%])	2428/2652 (92%)	905/1005 (90%)	11/11 (100%)	359/415 (87%)	179/184 (97%)	67/71 (94%)	690/738 (94%)	217/228 (95%)
Urinary incontinence assessed (n/N [%])	2238/2596 (86%)	834/983 (85%)	11/11 (100%)	376/406 (93%)	168/178 (94%)	65/70 (93%)	591/724 (82%)	193/224 (86%)
Mood assessed (n/N [%])	967/1931 (50%)	289/674 (43%)	4/9 (44%)	188/337 (56%)	101/151 (67%)	18/29 (62%)	294/574 (51%)	73/157 (47%)
Received Assessment by:								
Physiotherapy (n/N [%])	2802/2,811 (99%)	1057/106 3(99%)	12/12 (100%)	452/454 (99%)	187/187 (100%)	72/72 (100%)	777/777 (100%)	245/246 (99%)
Occupational therapy (n/N [%])	2,761/2,80 3 (99%)	1030/105 5 (98%)	12/12 (100%)	446/452 (99%)	187/187 (100%)	74/74 (100%)	771/ 777 (99%)	241/246 (98%)
Speech pathology (n/N [%])	2,370/2,53 2 (94%)	842/920 (92%)	9/11 (82%)	396/427 (93%)	153/157 (98%)	62/63 (98%)	701/731 (96%)	205/223 (92%)

	Australia N=2821	NSW (N=1069)	NT (N=12)	QLD (N=455)	SA (N=187)	TAS (N=75)	VIC (N=777)	WA (N=246)
Social work (n/N [%])	2,224/2,590 (86%)	817/970 (84%)	12/12 (100%)	385/436 (88%)	108/131 (82%)	54/63 (86%)	638/742 (86%)	210/236 (89%)
Dietetics if known dysphagia or who were referred to a dietitian for nutrition/hydration problems (n/N [%])	1006/1048 (96%)	347/370 (94%)	6/7(86%)	164/175 (94%)	43/43 (100%)	22/24 (92%)	305/310 (98%)	119/119 (100%)
Psychology if mood impairment identified on admission (n/N [%])	185/451 (36%)	51/153 (33%)	0/1 (0%)	31/78 (40%)	20/37 (54%)	2/6 (33%)	53/130 (41%)	28/46 (61%)
Patient-centred Care								
Patient met team to discuss management* (n/N [%])	2,033/2,659 (76%)	757/1004 (75%)	11/12 (92%)	313/431 (73%)	147/183 (80%)	54/75 (72%)	579/718 (81%)	172/236 (73%)
Goal setting with the patient*(n/N [%])	2,127/2,692 (79%)	782/1012 (77%)	11/12 (92%)	367/441 (83%)	128/180 (71%)	34/75 (45%)	649/737 (88%)	156/235 (66%)
Secondary prevention								
Received advice for lifestyle risk factors (n/N [%])	906/1,698 (53%)	335/596 (56%)	6/10 (60%)	140/268 (52%)	106/133 (80%)	8/25 (32%)	184/492 (37%)	127/174 (73%)
Discharged on lipid-lowering medication if ischaemic stroke (n/N [%])	1,751/2,080 (84%)	654/789 (83%)	10/11 (91%)	269/325 (83%)	132/151 (87%)	47/55 (86%)	480/561 (86%)	159/188 (85%)
Discharged on blood-pressure lowering medication (n/N [%])	2,280/2,683 (85%)	836/1006 (83%)	10/12 (83%)	373/432 (86%)	166/182 (91%)	60/69 (87%)	639/752 (85%)	196/230 (85%)
Discharged on antithrombotics if ischaemic stroke (n/N [%])	2,018/2,091 (97%)	768/792 (97%)	10/11 (91%)	314/328 (96%)	148/152 (97%)	53/54 (98%)	539/563 (96%)	186/191 (97%)
Discharge planning for stroke survivors and carers								
Education provided to stroke survivor and family/carer (n/N [%])	1,829/2,789 (66%)	702/1056 (67%)	11/12 (92%)	291/448 (65%)	160/187 (86%)	54/75 (72%)	420/768 (55%)	191/243 (79%)
Discharge care plan developed with input from team and patient* (n/N [%])	1,849/2,503 (74%)	664/939 (71%)	12/12 (100%)	299/419 (71%)	138/168 (82%)	45/61 (74%)	576/687 (84%)	115/217 (53%)
Received information on sexuality post-stroke (n/N [%])	483/2,789 (17%)	163/1056 (15%)	4/12 (33%)	86/448 (19%)	79/187 (42%)	4/75 (5%)	62/768 (8%)	85/243 (35%)
Stroke survivor offered information about peer support* (n/N [%])	638/1,635 (39%)	222/580 (38%)	0/8 (0%)	91/268 (34%)	79/115 (69%)	11/31 (36%)	119/462 (26%)	116/171 (68%)
Stroke survivor informed of self-management programs* (n/N [%])	603/2,423 (25%)	267/890 (30%)	3/12 (25%)	84/394 (21%)	76/158 (48%)	3/69 (4%)	98/676 (15%)	72/224 (32%)

	Australia N=2821	NSW (N=1069)	NT (N=12)	QLD (N=455)	SA (N=187)	TAS (N=75)	VIC (N=777)	WA (N=246)
Post-discharge contact provided to stroke survivor or family (n/N [%])	1,577/2,789 (57%)	635/1056 (60%)	7/12 (58%)	206/448 (46%)	136/187 (73%)	24/75 (32%)	421/768 (55%)	148/243 (61%)
Carer received training^ (n/N [%])	727/931 (78%)	284/355 (80%)	2/2 (100%)	86/114 (75%)	60/71 (85%)	27/39 (69%)	192/256 (75%)	76/94 (81%)
Home assessment (n/N [%])	1,193/1,618 (74%)	467/613 (76%)	3/10 (30%)	168/247 (68%)	92/115 (80%)	42/60 (70%)	314/430 (73%)	107/143 (75%)
Stroke survivor offered assistance to return to driving if previously drove and wanted to return to driving (n/N [%])	572/586 (98%)	168/170 (99%)	2/2 (100%)	96/98 (98%)	52/53 (98%)	23/24 (96%)	167/174 (96%)	64/65 (99%)
Discharge planning for stroke survivors and carers								
Stroke survivor offered assistance to return to work if previously worked and wanted to return to work (n/N [%])	140/163 (86%)	41/47 (87%)	0/1 (0%)	30/33 (91%)	8/10 (80%)	1/ 2 (50%)	45/54 (83%)	15/16 (94%)
Post-discharge needs discussed with carer^ (n/N [%])	753/971 (78%)	305/374 (82%)	2/2 (100%)	84/118 (71%)	57/73 (78%)	21/39 (54%)	202/270 (75%)	82/95 (86%)
Carers offered information about peer support^ (n/N [%])	388/698 (56%)	153/247 (62%)	2/2 (100%)	50/85 (59%)	43/60 (72%)	7/24 (29%)	66/202 (33%)	67/78 (86%)
Stroke survivor's general practitioner sent a discharge summary (n/N [%])	2609/2789 (94%)	990/1056 (94%)	7/12 (58%)	407/448 (91%)	182/187 (97%)	72/75 (96%)	720/768 (94%)	231/243 (95%)
Targeted counselling offered to stroke survivor* (n/N [%])	821/2,654 (31%)	348/996 (35%)	6/12 (50%)	153/432 (35%)	67/176 (38%)	15/73 (21%)	175/727 (24%)	57/238 (24%)
Targeted counselling offered to family/carer^ (n/N [%])	317/960 (33%)	137/370 (37%)	2/2 (100%)	44/116 (38%)	23/70 (33%)	7/39 (18%)	70/269 (26%)	34/94 (36%)

	Australia N=2821	NSW (N=1069)	NT (N=12)	QLD (N=455)	SA (N=187)	TAS (N=75)	VIC (N=777)	WA (N=246)
Outcomes								
18-60 FIM on discharge (n [%])	295 (13%)	129 (15%)	0 (0%)	45 (12%)	13 (7%)	5 (8%)	97 (15%)	6 (9%)
61-78 FIM on discharge (n [%])	202 (9%)	86 (10%)	0 (0%)	29 (8%)	13 (7%)	1 (2%)	64 (10%)	9 (13%)
79-99 FIM on discharge (n [%])	395 (18%)	153 (18%)	1 (17%)	81 (21%)	22 (12%)	8 (13%)	113 (17%)	17 (25%)
100-126 FIM on discharge (n [%])	1335 (60%)	501 (58%)	5 (83%)	226 (59%)	132 (73%)	49 (78%)	385 (58%)	37 (54%)
Discharged to private residence (n [%])	1934 (69%)	720 (67%)	10 (83%)	307 (68%)	144 (77%)	64 (85%)	532 (69%)	157 (64%)
Discharged to supported accommodation (n [%])	439 (16%)	200 (19%)	0 (0%)	66 (15%)	22 (12%)	3 (4%)	107 (14%)	41 (17%)
Died in hospital (n [%])	32 (1%)	13 (1%)	0 (0%)	7 (2%)	0 (0%)	0 (0%)	9 (1%)	3 (1%)

* Patients without severe cognitive and/or communication difficulties

^ Included carers of stroke survivors discharged to a private residence

Appendix 1: Audit Questions

Organisational Survey

SECTION 1 ORGANISATION OF CARE

1.1 Auditor Details
Auditor Name
Auditor email
Auditor contact number

1.2 Auditor Discipline

Doctor/Nurse/Manager/Physiotherapist/Occupational therapist/Social worker/Speech pathologist/Dietitian/Psychologist/Other

1.3 Name of Hospital

1.4 State of Australia

1.5 Which of the following best describes the rehabilitation service at your site:

a. Free-standing rehabilitation hospital
b. Rehabilitation ward within acute hospital in same building of same health campus
c. Rehabilitation ward within acute hospital in separate buildings of same health campus
d. Rehabilitation service within acute hospital (no designated beds)

1.6 How many beds are dedicated for inpatient rehabilitation at your site?

1.7 Does your site have a dedicated stroke rehabilitation unit? Yes/No
1.7.1. If yes, how many beds are in your dedicated stroke rehabilitation unit?

1.8 Does your site have designated beds for stroke rehabilitation? Yes/No
1.8.1. If yes, how many designated stroke beds are there?

1.9 How many stroke rehabilitation patients (patients coded with a rehabilitation episode-type):

1.9.1 Are currently in all your inpatient rehabilitation beds today?
1.9.2 Were admitted to your site last year?
1.9.3 Are currently in your dedicated stroke rehabilitation unit today?
1.9.4 Were admitted to your dedicated stroke rehabilitation unit last year (approximately)?

1.10 Please select any of the following equipment and facilities that are available for stroke rehabilitation patients at your hospital:

Facilities:

a. Therapy gymnasium
b. Therapy kitchen
c. Therapy bathroom
d. Dining room
e. Recreation room
f. Dedicated private room for family conferences and/or cognitive/speech/counselling therapy
g. Independent living unit/room

Equipment:

h. Robotic equipment
i. Supported body weight device over treadmill
j. Supported body weight device over ground
k. Functional electrical stimulation
l. Upright cycle

m. Recumbent cycle
n. Upper limb ergometer
o. Free weights/weights unit
p. Alternative and Augmentative Communication Devices (high and/or low tech devices)

q. Nintendo Wii™

SECTION 2 COMMUNICATION, ASSESSMENT AND THERAPY

2.1 Who is responsible for making the decision as to which patients are suitable for rehabilitation at your hospital? (Tick all that apply)

a. Acute physician
b. Post acute physician (rehabilitation physician, geriatrician)
c. Nurse
d. Multidisciplinary team
e. Other team member

2.2 Does your site formally document regular multidisciplinary team meetings (case-conferences)? Yes/No

If yes,

2.2.1 How often are these meetings held _ days per month.

2.2.2 Which of the following disciplines regularly attend the meetings?
Rehabilitation physician/Geriatrician/General medical physician/Neurologist/General practitioner/visiting medical officers/Nurse/Occupational therapist/Physiotherapist/Speech pathologist/Dietitian/Psychologist/Social Worker/Pharmacist/Other

2.3 Does your site have a formal process for goal-setting with patients? Yes/No

2.4 How does your hospital usually establish patient-directed goals? (Select one only)

a. Patient interviewed by each discipline only
b. Goals discussed and reviewed at team meeting after patient meets with each discipline separately
c. Patient and full multidisciplinary team set goals together
d. Ad hoc – no consistent process used
e. Goals not patient-directed at this hospital
f. Other

2.5 Does your site provide group therapy? Yes/No

2.5..1 If yes, please specify the types of group therapy provided at your site? Free text box

2.6 Is group circuit class training used as a method to increase amount of practice? Yes/No

If yes, please specify how often this therapy is used:

a. Always
b. Usually
c. Sometimes
d. Rarely

2.7 Is speech therapy for dysphagia or communication difficulties provided as much as can be tolerated (aiming for at least 2 hours per week)? Yes/No

If yes, please specify how often this therapy is used:

a. Always
b. Usually

c. Sometimes
d. Rarely

2.8 Is provision made during the day for patients to practice skills learnt in therapy sessions? This could involve staff, family or self practice. Yes/No.

If yes, please specify how often this therapy is used:
e. Always
f. Usually
g. Sometimes
h. Rarely

2.9 Does your team use any of the following interventions for the listed impairments?
If yes, please indicate how often this therapy technique is used for patients with this impairment. Always/Usually/sometimes/rarely.

a. Sensory impairment

Sensory-specific training/related training Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Rarely/Sometimes

Cutaneous electrical stimulation in conjunction with conventional therapy Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

b. Hypertonicity (Spasticity)

Botulinum Toxin (Type A) Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

Electrical Stimulation and/or Electromyograph (EMG) biofeedback Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

c. Shoulder subluxation and/or pain

Firm management devices used Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

Electrical Stimulation used Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

Education and training for staff, carers or patient Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

Shoulder strapping (for management of shoulder pain only) Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

d. Difficulty standing/sitting or standing from a seated position without assistance

Task-specific practice with feedback provided Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

e. Upper limb impairment

Repetitive Task-specific training Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

EMG biofeedback Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

Robot-assisted reaching Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

Constraint-induced movement therapy for specific people Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

Mental practice Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

Mechanical-assisted training Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

Electrical stimulation Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

Mirror therapy Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

Bilateral training Yes/No
If yes, please specify how often this therapy is used;
Always/Usually/Sometimes/Rarely

f. Difficulty with Activities of Daily Living

Occupational therapy Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

Multidisciplinary interventions targeting ADL Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

g. Difficulty with executive functions /attention/concentration /memory

Cognitive interventions Yes/No

If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

External cues used as strategy training Yes/No
If yes please specify how often each therapy is used;
Always/Usually/Sometimes/Rarely

h. Unilateral spatial neglect

Simple cues Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Visual scanning training in addition to sensory stimulation Yes/No

If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Prism adaptation Yes/No

If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Eye patching Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Mental imagery training or structured feedback Yes/No

If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

i. Aphasia

Treatment of aspects of language (including phonological and semantic deficits, sentence-level processing, reading and writing) following models derived from cognitive neuropsychology Yes/No

If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Constraint-induced therapy Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Use of gestures Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Supported conversation techniques Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Delivery of therapy programs via computer Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Group therapy Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

j. Dysarthria

Biofeedback or a voice amplifier to change intensity and increase loudness Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Intensive therapy aiming to increase loudness (e.g. Lee Silverman Voice Treatment) Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Use of strategies such as decreased rate, overarticulation and gesture Yes/No

If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Oral musculature exercises Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Augmentative and Alternative and Communication devices used Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

k. Dysphagia

Compensatory strategies such as positioning, therapeutic manoeuvres or modification of food and fluids Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Therapy targeting specific muscle groups (e.g. Shaker therapy) Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Thermo-tactile stimulation Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Electrical stimulation Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

l. Mood impairment
Prevention of depression after stroke
Psychological interventions (e.g. problem solving and motivational interviewing) Yes/No

If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Treatment of depression after stroke
Antidepressants Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Psychological interventions (e.g. Cognitive behaviour therapy) Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

m. Urinary incontinence

An individualised prompted or scheduled voiding regimen Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Anticholinergic drugs Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Containment aids if continence is unachievable Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Documented continence management plan Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

n. Urinary retention

Intermittent Indwelling catheter (IDC) Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

Documented continence management plan Yes/No
If yes please specify how often each therapy is used; Always/Usually/Sometimes/Rarely

o. Cardiovascular fitness

Fitness training? Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

p. Contracture (prevention and management)

Conventional therapy (ie. early tailored interventions)? Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Routine use of splints or prolonged positioning of muscles in a lengthened position Yes/No

If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Serial casting (for severe, persistent contracture) Yes/No

If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

q. Difficulties with community transport and mobility post discharge

Tailored strategies implemented (e.g. escorted outdoor journeys) Yes/No
If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

Provision of information about local transport options/alternatives Yes/No

If yes, please specify how often this therapy is used; Always/Usually/Sometimes/Rarely

2.10 What patient outcome measures are collected routinely?
a. Functional Independence Measure (FIM)
b. Barthel Index (BI)
c. Motor Assessment Scale (MAS)
d. Scandinavian Stroke Scale (SSS)
e. Modified Rankin Scale (mRS)

2.11 Does your hospital provide patient education prior to discharge? Yes No
If yes how is it provided? Tick all that apply
- Written or audio visual resources
- Individual verbal session
- Group session

SECTION 3 WORKFORCE

3.1 Please identify which of the following health professionals are actively involved in the rehabilitation management of stroke patients at your hospital? Yes/No

3.1.1 Rehabilitation physician
3.1.2 Geriatrician
3.1.3 General medical physician
3.1.4 Neurologist
3.1.5 General practitioner/visiting medical officers
3.1.6 Rehabilitation nurse
3.1.7 Clinical nurse consultant
3.1.8 Clinical nurse specialist
3.1.9 Physiotherapist
3.1.10 Speech pathologist
3.1.11 Dietitian
3.1.12 Social worker
3.1.13 Occupational therapist
3.1.14 Clinical psychology
3.1.15 Neuropsychologist
3.1.16 Recreational therapist
3.1.17 Diversional therapist
3.1.18 Allied health assistant/therapy assistant
3.1.19 Medical resident
3.1.20 Stroke liaison officer/stroke care coordinator
If other please specify __

3.2 Which of the following is the medical leader responsible for the management of your stroke rehabilitation patients? Please indicate whether this is a **formal** recognition (a defined process exists), or whether this person **usually** assumes the responsibility.
Select one box only

3.2.1 Rehabilitation physician
3.2.2 Geriatrician
3.2.3 General medical physician
3.2.4 Neurologist
3.2.5 General practitioner/visiting medical officers

3.3 Do you have staff members with greater than 3 years experience in stroke rehabilitation from each of the following disciplines: Yes/No/Not on staff

3.3.1 Rehabilitation physician
3.3.2 Geriatrician
3.3.3 General medical physician
3.3.4 Neurologist
3.3.5 General practitioner/visiting medical officers
3.3.6 Rehabilitation Nurse
3.3.7 Clinical nurse consultant
3.3.8 Clinical nurse specialist
3.3.9 Occupational therapist
3.3.10 Physiotherapist
3.3.11 Speech pathologist
3.3.12 Dietitian
3.3.13 Social worker

3.3.14 Clinical psychologist
3.3.15 Neuropsychologist
3.3.16 Recreational therapist
3.3.17 Diversional Therapist
3.1.18 Allied health assistant/therapy assistant
3.1.19 Stroke liaison officer/stroke care coordinator
If other, please specify __

3.4 Is there a program for the continuing education of staff relating to the management of stroke?
Yes/No

3.5 How many **stroke-specific** clinical research studies are currently conducted at your hospital?
Acute/Rehab/Prevention/Other/Total

SECTION 4 POST- DISCHARGE SERVICES

Does your site have access to community rehabilitation via:

4.1 Outpatients Yes/No

4.1.1 If yes, what is the average waiting time to access this service?

4.1.2 How many days per week is this service available?

4.1.3 Please select the frequency of availability of the following disciplines for this service: 7 days per week/6 days per week/5 days per week/4 days per week/3 days per week/2 days per week/ 1 day per week/ rarely/never

Physiotherapy/Occupational therapy/Speech pathology/Nursing/Dietetics/Psychology/Social work/Other

4.2 Day hospital Yes/No

4.2.1 If yes, what is the average waiting time to access this service?

4.2.2 How many days per week is this service available?

4.2.3 Please select the frequency of availability of the following disciplines for this service: 7 days per week/6 days per week/5 days per week/4 days per week/3 days per week/2 days per week/ 1 day per week/ rarely/never

Physiotherapy/Occupational therapy/Speech pathology/Nursing/Dietetics/Psychology/Social work/Other

4.3. Community-based rehabilitation provided in the home Yes/No

4.3.1 If yes, what is the average waiting time to access this service?

4.3.2 How many days per week is this service available?

4.2.4 4.3.3 Please select the frequency of availability of the following disciplines for this service: 7 days per week/6 days per week/5 days per week/4 days per week/3 days per week/2 days per week/ 1 day per week/ rarely/never

Physiotherapy/Occupational therapy/Speech pathology/Nursing/Dietetics/Psychology/Social work/Other

4.4. Early Supported Discharge Yes/No

4.4.1. If yes, is this a true replacement for inpatient rehabilitation? Yes/No

4.4.2 If yes, what is the average waiting time to access this service?

4.4.3 How many days per week is this service available?

4.2.5 4.4.4 Please select the frequency of availability of the following disciplines for this service: 7 days per week/6 days per week/5 days per week/4 days per week/3 days per week/2 days per week/ 1 day per week/ rarely/never

Physiotherapy/Occupational therapy/Speech pathology/Nursing/Dietetics/Psychology/Social work/Other

4.5 Does your site offer a key contact person (in the hospital) for patients/carers to access for post discharge queries and post discharge support? Yes/No

4.6 Does your site have protocols guiding discharge planning for your stroke rehabilitation patients? Yes/No

4.7 Does your site routinely provide a care plan to patients on discharge? Yes/No

CLINICAL AUDIT

Auditor Information

Auditor details: Free Text
Auditor name
Auditor email
Auditor contact number

Discipline: Select one only
Doctor/Nurse/Physiotherapist/Occupational therapist/Social Worker/Speech pathologist/Dietitian/Psychologist/Manager/Other

Patient Demographics

The person is of Aboriginal or Torres Strait Islander origin: Select one only
Aboriginal but not Torres Strait Islander origin/Torres Strait Islander but not Aboriginal origin/Both Aboriginal and Torres Strait Islander origin/Neither Aboriginal nor Torres Strait Islander origin/Not stated/inadequately described

What is the person's date of birth? DDMMYYYY

What is the person's gender? Male/Female/Indeterminate/Not stated/inadequately defined

Is the person from a Non-English Speaking Background (NESB) with a requirement for an interpreter? Yes/No

Section 1 Episode Details

1.1 Date of stroke DDMMYYYY/Unknown

1.2 What was the stroke type?
Ischaemic/Haemorrhagic/Unknown

1.3 What date was the patient admitted to the rehabilitation facility? DDMMYYYY

1.4 Where did the patient come from? Select one only

- Acute hospital - Stroke Unit
- Acute hospital - Acute inpatient ward
- Acute hospital -Unknown ward
- Rehabilitation ward
- General practitioner referral
- Other
- Unknown

1.5 Admission Functional Status

1.5.1 On **admission** to the rehabilitation facility what is the patient's modified Rankin score? Scores of 0 through to 5 (or not known for very rare cases) Score/Unknown

Algorithm for calculating Modified Rankin Score. (Yes/No/Unknown for the following)

1.5.1.1. Can the patient walk on their own (i.e. without the assistance of another person, but may include walking aid)?
1.5.1.2. If the patient can't walk on their own can they walk if someone if helping them?
1.5.1.3. If the patient can walk on their own (includes walking aids) do they need help with simple usual personal activities (toilet, bathing, dressing, cooking, household tasks, simple finances?
1.5.1.4. If the patient can perform simple personal activities do they need help with more complex usual activities (driving, golf, finances, household bills, work tasks?
1.5.1.5. If the patient has no disability do they have any symptoms?

1.5.2 On **admission** to the rehabilitation facility what is the patient's total FIM score? Figure/unknown

1.6 Where was this patient treated?

- Dedicated stroke rehabilitation unit
- Neurorehabilitation unit
- Mixed rehabilitation ward

1.7 Was the patient assessed by each of the following team members, and if yes, what date was the patient **first** assessed: (DD/MM/YYYY)

1.7.1 Physiotherapy Yes/No / Not required/Therapist not on staff/Assessed by team member before admission/Unknown

1.7.2 Occupational therapy Yes/No / Not required/Therapist not on staff/Assessed by team member before admission/Unknown

1.7.3 Speech pathology	Yes/No / Not required/Therapist not on staff/Assessed by team member before admission/Unknown
1.7.4 Social work	Yes/No / Not required/Therapist not on staff/Assessed by team member before admission/Unknown
1.7.5 Dietetics	Yes/No / Not required/Therapist not on staff/Assessed by team member before admission/Unknown
1.7.6 Psychology	Yes/No / Not required/Therapist not on staff/Assessed by team member before admission/Unknown

1.8 What is the date of discharge? DD/MM/YYYY

1.9 What was the discharge destination? Select one only

- Private residence
- High-level supported residential care
- Low-level supported residential care
- Statistical discharge
- Died in hospital
- Other

1.9.1 If discharged to private residence:

1.9.1.1 Please describe the level of support if discharged to private residence? Select one only

- Lives alone (no formal supports)
- Lives alone (formal supports)
- Lives with others (no formal supports)
- Lives with others (formal supports)

1.9.1.2 Indicate if this is the same level of support as previous status before stroke (if known). Change from previous/No change from previous/Unknown

1.10 Discharge Functional Status

1.10.1 On **discharge** from the rehabilitation facility what is the patient's modified Rankin score? Scores of 0 through to 6 (or not known for very rare cases) Score/Unknown

Algorithm for calculating Modified Rankin Score.

1.10.1.1 Is this patient alive?
1.10.1.2 Can the patient walk on their own (i.e. without the assistance of another person, but may include walking aid)?
1.10.1.3 If the patient can't walk on their own can they walk if someone if helping them?
1.10.1.4 If the patient can walk on their own (includes walking aids) do they need help with simple usual personal activities (toilet, bathing, dressing, cooking, household tasks, simple finances?
1.10.1.5 If the patient can perform simple personal activities do they need help with more complex usual activities (driving, golf, finances, household bills, work tasks?
1.10.1.6 If the patient has no disability do they have any symptoms?

1.10.2 On **discharge** from the rehabilitation facility what is the patient's total FIM score? Figure/unknown

1.10.2 On **discharge** from the rehabilitation facility what is the patient's total FIM score? Score/Unknown

1.11 Was the patient referred for further rehabilitation following discharge? Yes/No/Not documented

1.11.1 Please select the type of further rehabilitation this patient was referred to

- Community rehabilitation
- Outpatient rehabilitation
- Other inpatient rehabilitation
- GEM unit
- Transitional service(please specify)

Section 2 Management of the consequences of stroke

2.1 Did the patient have difficulty walking independently on admission? Yes/No No but paraplegic, amputee etc /Not assessed/Not documented

2.1.1 Did management include any of the following:
a. Tailored, repetitive practice of walking (or components of walking)
b. Cueing of cadence
c. Mechanically assisted gait (via treadmill or other mechanical or robotic device)

d. Joint position biofeedback
e. Other therapy Yes/No

2.2 Did the patient have difficulty with Activities of Daily Living? Yes/No/Not assessed/Not documented

2.2.1 Did management include:
a. Task specific practice
b. Trained use of appropriate aids
c. Other

2.3 Did the patient have aphasia? Yes/No/Not assessed/Not documented

2.3.1 Did the patient receive any of the following treatments?
a. Alternative means of communication (e.g. gestures, drawing, writing, use of augmentative and alternative communication devices)
b. Phonological & semantic interventions,
c. Constraint-induced language therapy
d. Supported conversation techniques
e. Delivery of therapy programs via computer,
f. Group therapy (e.g. conversation groups)
g. Other therapy

2.4 Did the patient have neglect / inattention? Yes/No/Not assessed/Not documented

2.4.1 Did management include;
a. Visual scanning training with sensory stimulation
b. Prism adaptation
c. Eye patching
d. Simple cues to draw attention to the affected side
e. Mental imagery training or structured feedback
f. Other therapy

2.5 Did the patient have nutrition complications? Yes/No/Not assessed/Not documented

2.5.1 If Yes, did management include any of the following
a. Ongoing monitoring by a dietitian
b. Nutritional supplementation for those whose nutritional status was poor or deteriorating
c. Alternative feeding (then specify NG feeding or PEG)

2.6 Was the patients upper limb assessed Yes/No/Not documented

2.6.1 If yes indicate which assessment measures were used (tick all that apply)
a. Upper limb component of the Motor Assessment Scale: UL-MAS
b. 9 hole peg test: 9HPT
c. Other please specify

2.6.2 Did the patient have difficulty using their upper limb? Yes/No/Not documented

2.6.2.1 Did management include any of the following:
a. Constraint-induced movement therapy (in selected people)
b. Repetitive task-specific training
c. Mechanically assisted training (need help notes to specify
d. Other therapy

2.7 Was the patient's mood assessed? Yes/No/Not documented

2.7.1 Indicate which assessment measures was used (tick all that apply) ;
a. Geriatric Depression Scale: GDS
b. Hospital and Depression Scale: HADS
c. Other please specify ____

2.7.2 Did the patient have a mood impairment (depression, emotional lability or anxiety)? Yes/No/Not documented

2.7.2.1 If the patient had a mood impairment, did management include;
a. Antidepressants
b. Psychological (e.g. Cognitive-behavioural) interventions
c. Other therapy

2.8 Was the patient assessed for incontinence: Yes/No/Not documented

2.8.1 If yes indicate which assessment measures was used (tick all that apply)
a. Non-standardized Bladder function chart
b. Post-void residual scan
c. FIM subset
d. Other please specify _____

2.8.2 Did the patient have urinary incontinence? Yes/No

2.8.2.1 If yes, does a continence management plan exist? Yes/No/Not documented

Section 3 Complications

3.1 **On admission to rehabilitation** did the patient have any of the following complications?

a. Aspiration pneumonia Yes/No
b. Deep Vein Thrombosis (DVT) Yes/No
c. Falls Yes/No
d. Fever Yes/No
e. Pressure sores Yes/No
f. Shoulder subluxation Yes/No
g. Shoulder pain Yes/No
h. Urinary tract infection Yes/No
i. Contracture Yes/No
j. malnutrition Yes/No

3.2 **During the rehabilitation stay** did the patient develop any of the following new complications?

Aspiration pneumonia Yes/No
a. Deep Vein Thrombosis (DVT) Yes/No
b. Falls Yes/No
c. Fever Yes/No
d. Pressure sores Yes/No
e. Shoulder subluxation Yes/No
f. Shoulder pain Yes/No

g. Urinary tract infection Yes/No
h. Contracture Yes/No
i. Malnutrition Yes/No

Section 4 Communication and support for patient and family/carer

4.1 Did the team meet with the patient to discuss management? Yes/No/No, but met with family

4.2 Were goals set with input from the team and patient? Yes/No/No, but met with family

4.3 During the rehabilitation stay did the patient and family/carer receive tailored information regarding stroke rehabilitation and recovery (using relevant language or formats)?" Yes/No

4.3.1 If yes how was this provided?(tick all that apply)

- Written or audio visual resources
- Individual verbal session
- Group session

4.4 Was formal counselling offered to the stroke survivor? Yes/No/No, but

4.5 Was formal counselling offered to the family/carer? Yes/No/No, but

Section 5 Secondary Prevention

5.1 Was the patient discharged on the following medications?

5.1.1 Antithrombotics Yes/No

5.1.1.1 If yes, mark all that apply below.
Aspirin/Clopidogrel/Dipyridamole MR/Warfarin/Other anticoagulant(please specify)/Other

5.1.1.2 If no, select reason:
Contraindicated/Patient refused/Under review/No reason given

5.1.2 Antihypertensives Yes/No

5.1.2.1 If yes, mark all that apply below
ACE inhibitor/Angiotensin-II receptor antagonists/Alpha blocker/Beta blocker/Calcium channel blocker/Thiazide diuretic/Other

5.1.2.2 If no, select reason:
Contraindicated/Patient refused/Under review/No reason given

5.1.3 Lipid-lowering treatment Yes/No

5.1.3.1 If yes, mark all that apply
Statin/Other

5.1.3.2 If no, select reason:
Contraindicated/Patient refused/Under review/No reason given

5.2 Is there evidence of patient education about behaviour change for modifiable risk factors prior to discharge? Yes/No/No, but/Not documented

Section 6 Discharge planning and transfer of care

6.1 Was a discharge care plan outlining post discharge care in the community developed with

input from the team and the patient? Yes/No/No, but

6.2 Was a home assessment carried out? Yes/No/Not required

6.3 Was the general practitioner (GP) and/or community providers provided with a copy of the discharge summary Yes/No

6.4 Did the patient receive the contact details of someone in the hospital for any post-discharge questions? Yes/No/No, but provided to family

6.5 Does the patient have a carer? Yes/No

6.5.1 Did the carer receive relevant training before the patient was discharged? Yes/No/No, but
6.5.2 Did the carer identify and discuss the post-discharge needs (e.g. physical, emotional, social) with the team? Yes/No/No, but
6.5.3 Was the carer provided with information about peer support resources prior to patient's discharge? Yes/No/Not documented

Section 7 Community re-integration and long-term recovery

7.1 Was the patient made aware of the availability of generic self- management programs before discharge from hospital? Yes/No/No, but

7.2 Was the patient asked if they wanted to return to driving? Yes/No/No, but/Not documented

- 7.2.1 If yes, did the patient want to return to driving? Yes/No
  - 7.2.11 Informed of restrictions to driving post stroke? Yes/No/Not documented
  - 7.2.12 Provided with information about the process to return to driving? Yes/No/Not documented
  - 7.2.13 Referred for driving assessment Yes/No/Not documented

7.3 Was the patient asked if they wanted to return to work? Yes/No/No, but/Not documented

- 7.3.1 Did the patient want to return to work? Yes/No

7.3.1.1 If Yes, was the patient informed of services to assist with return to work? Yes/No/Not documented

7.4 With regard to sexuality, was the patient offered either of the following?

- 7.4.1 The opportunity to discuss issues relating to sexuality Yes/No

- 7.4.2 Written information addressing issues relating to sexuality post stroke Yes/No

7.5 Was the patient provided with information about peer support (e.g. availability and benefits of local stroke support groups or other sources of peer support such as NSF StrokeConnect online support)? Yes/No/No, but/Not documented

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