A behaviour change program to increase outings delivered during therapy to stroke survivors by community rehabilitation teams : The Out-and-About trial

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Short title: The Out-and-About trial

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ABSTRACT

Background*:* Australian guidelines recommend that outdoor mobility be addressed to increase participation after stroke.

Aim: To investigate the efficacy of the Out-and-About program at increasing outings delivered during therapy by community teams, and outings taken by stroke survivors in real life.

M**ethod***:* Cluster-randomised trial involving 22 community teams providing stroke rehabilitation. Experimental teams received the Out-and-About program (a behaviour change program comprising a training workshop with barrier identification and booster session, printed educational materials, audit and feedback). Control teams received printed clinical guidelines only. The primary outcome was the percentage of stroke survivors receiving four or more outings during therapy. Secondary outcomes included the number of outings received by stroke survivors during therapy and undertaken in real life.

Results: At 12 months after implementation of the behaviour change program, 9% *audited* experimental group stroke survivors received four or more outings during therapy compared with 5% in the control group (adjusted risk difference 4%, 95% CI -9 to 17, p=0.54). They received 1.1 (SD 0.9) outings during therapy compared with 0.6 (SD 1.0) in the control group (adjusted mean difference 0.5, 95% CI -0.4 to 1.4; p=0.26). After 6 months of rehabilitation, *observed* experimental group stroke survivors took 9.0 (SD 3.0) outings per week in real life compared with 7.4 (SD 4.0) in the control group (adjusted mean difference 0.5, 95% CI -1.8 to 2.8; p = 0.63).

Conclusion*:* The Out-and-About program did not change team or stroke survivor behaviour.

Trial registration: Australia and New Zealand Clinical Trials Registry (ACTRN12611000554965).

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INTRODUCTION

Approximately one third of Australian stroke survivors need help to walk or travel outdoors (1). After hospital discharge, mobility training can increase walking performance (2), but improved walking indoors does not automatically translate into improved walking outdoors. For example, crowded environments such as shopping malls are challenging for people with reduced mobility. Stroke survivors often do not venture out alone because they lack confidence and fear falling (3), thereby decreasing their quality of life.

Delivering outdoor-related sessions during therapy (including outings involving overground walking or bus travel and provision of transport information) can help stroke survivors to get out more often and improve quality of life (4). In 2004, Logan and colleagues reported that 4.7 outdoor-related sessions delivered over three months to community-dwelling stroke survivors resulted in 8.5 outdoor 'journeys'/wk in real life compared to 3.2 outdoor 'journeys'/wk in a control group that received transport information only (4). Importantly, the intervention was only provided to stroke survivors who reported wanting to get out more often. Based on these findings, the intervention was recommended as best practice in the 2010 Australian national stroke guidelines (5):

> *People faced with difficulties in community transport and mobility should…undertake tailored strategies such as multiple....escorted outdoor journeys (which may include practice crossing roads, visits to local shops, bus or train travel), help to resume driving, aids and equipment, and written information about local transport options/alternatives, p 88'* (5)

We therefore developed a behaviour change program targeting community rehabilitation teams – the Out-and-About program – to implement this intervention. The program includes strategies known to be effective for changing practice (6): educational meetings (7), printed educational materials including clinical guidelines (8), and file audit followed by feedback (9). The behaviour change program was piloted with five community rehabilitation teams (10) and found to be feasible to deliver. Furthermore, after 12 months, 39% of their stroke survivor caseload received four or more outdoor-related sessions during therapy compared with 21% pre-intervention.

The aim of this randomised trial was to investigate the efficacy of the Out-and-About program on both team and stroke survivor behaviour. The research questions were:

1. Do community teams that receive the Out-and-About program deliver more outings during therapy to stroke survivors than control teams that receive written clinical guidelines only?
2. Do stroke survivors that are seen by these community teams undertake more outings in real life, and travel further, than those seen by control teams?

Outings during therapy (ie, beyond the perimeter of the hospital/property into public streets) were the focus of intervention in order to increase the likelihood of transfer into real life.

METHOD

Design

A two-group, cluster-randomised trial was conducted with concealed allocation, blinded assessment and intention-to-treat analysis (11) (Figure 1). Because therapists were the target of intervention, teams were randomised to experimental or control intervention by an independent randomisation service. Minimisation was used (12) to ensure balance of four variables across teams: location of team (centre- or home-based), funding of team (public or private), volume of caseload (high ≥ 50 or low < 50 stroke referrals per year), and level of outings (high ≥ 2; low < 2 outings during therapy per stroke survivor). To optimise blinding of therapists, only team leaders were privy to study aims. Measurers (of audited or observed stroke survivors) were blinded to team allocation. Approval to audit medical records was obtained from university and local ethics committees.

Inclusion criteria for teams

All teams that delivered post-hospital rehabilitation in Sydney, Newcastle and two regional areas of NSW (Illawarra and Central Coast) were approached (n=79). Teams were eligible to participate if they (i) employed at least one occupational therapist and one physiotherapist, (ii) received ≥10 stroke referrals annually, and (iii) delivered < 4 outings during therapy to individual stroke survivors who wanted to get out more often. Teams were categorised by type of service (outpatient, day therapy or home-based rehabilitation) location, funding, caseload volume, and level of outings.

Intervention

The experimental teams received a behaviour change program (11) including a training workshop with barrier identification and booster session, printed educational materials, audit

and feedback (see Supplementary File).

Training workshop: A 2-hour workshop was conducted at each site by AM and attended by team physiotherapists, occupational therapists and therapy assistants. A target of six or more outings during therapy was set. Outings were to be conducted in local streets and could include public transport training, overground walking, help with return to driving, and/or supervised practice using a motorised scooter. The configuration of outings and content were to be individually tailored by treating therapists. Two case studies, demonstrating how up to six outings might be provided during therapy, were presented.

Barrier identification: 20 minutes was allocated for discussion of audit results, and identification of barriers and enablers to implementing the intervention. Key barriers were similar to those identified in the pilot study (13), but also included limited skills and knowledge about risk management and safety, vehicle access and health fund regulations. Strategies for overcoming barriers (such as reminders at weekly team meetings and use of therapy assistants) were discussed.

Printed educational materials: These included (a) screening questions to ask stroke survivors about weekly outings, usual modes of travel, and driving status; (b) evidence-informed protocols developed by the investigators for progressing walking distance and difficulty, bus, train and scooter travel, and road safety; (c) driving and transport information; (d) a form for recording outings during therapy; and (e) the 2010 stroke guidelines (5).

Audit and feedback: Consecutive medical records of the most recently discharged stroke survivors were audited for each team. Twenty consecutive medical records were requested so that at least 15 records could be audited. Data were graphed, presented verbally and in writing to experimental teams by AM. De-identified data were compared across teams (ie, benchmarking). The data included number of outings and outdoor-related sessions per stroke survivor, total number of therapy sessions provided, duration of therapy, time to first therapy session and stroke severity.

Booster session: At nine of the 11 experimental sites, a 1-hour 'booster' session was conducted 12 months post-workshop by AM. Two experimental teams did not receive booster sessions (one team had disbanded, another had finished recruitment). Audit feedback

was re-presented to staff, followed by discussion about how/if teams were overcoming barriers to implementation.

Control teams received a copy of the 2010 stroke guidelines (5) by mail.

Outcome measures

Outings delivered during therapy: The primary outcome was team behaviour defined as the percentage of *audited* stroke survivors receiving four or more outings during therapy, measured by auditing medical records at 12 months.

Twenty consecutive medical records were requested so that at least 15 records could be audited. Stroke survivors had to have sustained their stroke within the previous 12 months. Two trained researchers audited the medical records. Initially, data were extracted independently from 10 files by these two researchers and their data compared until consistency was achieved.

Secondary outcomes included the number of outdoor-related sessions delivered during therapy. Outdoor-related sessions were categorised as an *outing* (a therapist-escorted outing beyond the perimeter of the hospital/property into a public street), *outdoor practice* (practice on steps or uneven ground within the hospital/property), or *outdoor information* (provision of information about outings, preparation for outings or advice about return to driving).

Descriptive information was collected about the *audited* stroke survivors at the commencement of therapy, including demographics (age, sex, marital status, living situation), stroke type, stroke severity (Scandinavian Stroke Scale retrospectively) (SSS; 14) and dependency (Modified Rankin Scale retrospectively) (15). Post-inpatient therapy received by the audited stroke survivors was also recorded, including wait time (days from inpatient discharge to therapy commencement), duration of therapy, and number of sessions delivered.

Outings undertaken in real life: Secondary outcome data collected directly from stroke survivors (the *observed* sample*)* included the number and purpose of outings per week, mode of travel used, and distance travelled per week, measured at baseline and six months later. Stroke survivors referred to teams for post-inpatient therapy were sequentially included if

they were ≥18 years; had sustained a stroke in the previous 12 months; could provide informed consent and complete self-report outcome measures with/without an interpreter or next of kin; lived at home, in a hostel or nursing home; could walk 10-m outdoors with/without a walking aid or supervision, and were not getting out of the house as often or as far as desired.

The number, purpose and mode of travel of weekly outings were measured using a self-report diary, at baseline and six months later. At six months, distance travelled per week was measured using a global positioning system (11), and the extent of travel was measured using the Life-Space Assessment (16).

Descriptive information was collected about the *observed* stroke survivors at commencement of therapy, including demographics (age, sex, marital status, living situation), stroke type and dependency (Modified Rankin Scale) (15), type of dwelling and walking capacity.

Sample size

The study was powered with respect to the primary outcome. In our pilot study (10), 25% of stroke survivors received four or more outings during therapy before the Out-and-About program. Assuming that guideline dissemination would increase this rate to 30%, the Out-and-About program would be considered effective if 50% received four or more outings, that is, a difference of 20%. With an intra-cluster correlation coefficient of zero (10), 186 medical records would be needed to detect a 20% difference, with 80% power, (two-sided). A target of 300 medical records was set in order to detect a 20% difference with 80% power at a 5% significance level, if the intra-cluster correlation coefficient was 0·04, and 90% power if it was 0·01. We planned to recruit at least 20 teams (or clusters), and audit an average of 15 stroke survivor records per team.

Data analysis

Outcomes were analysed using intention-to-treat analyses. Due to the small number of clusters, cluster level t-tests were used (17). For the observed stroke survivors' outcomes measured after six months, the cluster level t-tests were also adjusted for their baseline value. Cluster level t-tests were repeated for all outcomes which further adjusted for age, sex, living status, team location and funding. A sensitivity analysis was also conducted at the individual

stroke survivor level using mixed effects models, with binary (proportions) and count outcomes analysed using logistic and negative binomial regression models respectively. The negative binomial model was used instead of a Poisson model due to data being overdispersed (18). All models included the experimental group as a covariate in the model, with clustering adjusted for using mixed models, with a random effect for cluster. Models were fitted with and without other covariates – the covariates the same as listed above for the cluster level analysis. These analyses gave results which were not qualitatively different (therefore results not presented).

RESULTS

Characteristics of teams

Of 79 healthcare teams contacted, 32 met the eligibility criteria; 24 were recruited and eight declined or were non-responsive (three public outpatient services, three private day program services, one public day program service, one private outpatient service). Two of the teams were excluded after auditing but prior to randomisation, because they were already providing four or more outings per stroke survivor (Figure 1). Between July 2011 and November 2012, 11 experimental teams received the Out-and-About program and written guidelines, and 11 teams received the guidelines only. Most of the 22 teams were centre-based and publicly-funded. A median of three therapists was employed per team (range 2 to 13). Between July 2010 and November 2012, *baseline* audits were completed of 263 medical records across the 22 teams (median 13 records/team, range 5 to 20), capturing therapy between July 2009 and November 2012. Cluster randomisation achieved a balance between experimental and control teams in terms of location, funding, therapists employed, and level of outings during therapy (Table 1).

Characteristics of stroke survivors audited at 12 months

Between July 2012 and December 2013, 279 medical records were audited at 12 months (median of 12 per team, range 0 to 23), capturing therapy between July 2011 and December 2013. Cluster randomisation (of teams) achieved balance between experimental and control stroke survivors audited at 12 months for characteristics and post-inpatient therapy received (Table 2).

Effect of intervention on team behaviour: outings delivered during therapy

Only 9% of experimental stroke survivors audited at 12 months received four or more outings during therapy compared with 5% of control stroke survivors (adjusted risk difference 4%, 95% CI -9 to 17, p=0.54) (Table 3). 60% of experimental stroke survivors audited at 12 months did not receive any outings compared with 73% of control stroke survivors (adjusted risk difference 12%, 95% CI -9 to 34; p=0.25). 1.1 (SD 0.9) outings during therapy were delivered to experimental stroke survivors, audited at 12 months compared with 0.6 (SD 1.0) delivered to control stroke survivors (adjusted mean difference 0.5, 95% CI -0.4 to 1.4; p=0.26) (Table 4).

Characteristics of stroke survivors observed at 6 months

Between July 2011 and November 2013, 115 stroke survivors were recruited; 15 were lost to follow-up at six months (Figure 1). Cluster randomisation of teams achieved balance between experimental and control group stroke survivors observed at six months in terms of stroke type, home access, driving status, and walking ability (Table 5). However, more of the experimental group received publicly-funded, centre-based therapy than the control group.

Effect of intervention on stroke survivor behaviour: outings undertaken in real life

Experimental stroke survivors observed at six months undertook 9.0 (SD 3.0) outings per week in real life, compared with 7.4 outings (SD 4.0) undertaken by control stroke survivors (adjusted mean difference 0.5, 95% CI -1.8 to 2.8; p = 0.63) (Table 6). Experimental stroke survivors undertook 1.1 (95% CI 0.2 to 1.9; p = 0.02) more outings for home or personal maintenance reasons than control stroke survivors. There were no other statistically significant differences between groups for other purposes of outings, mode of travel, distance travelled or on the Life Space Assessment.

DISCUSSION

Community teams that received the Out-and-About program did not deliver more outings or outdoor-related sessions during therapy to stroke survivors than control teams that received guidelines only. Despite the use of evidence-based implementation strategies of audit and feedback, a training workshop, printed educational materials and identifying barriers to change, the behaviour of experimental teams did not change significantly. Consequently, in real life, stroke survivors that were seen by these experimental teams did not go on more

outings or travel further than those seen by control teams. Neither experimental nor control stroke survivors increased their number of outings.

The current trial was planned on the basis of the original study by Logan (4) in which 4.7 outdoor-related sessions delivered from home resulted in more than twice as many outdoor 'journeys' in real life than a control group, and the Out-and-About pilot study (10) which resulted in 18% more stroke survivors receiving ≥ 4 outdoor-related sessions during therapy. Furthermore, a recent multi-centre trial by Logan (19) of 6.8 outdoor-related sessions from home resulted in 1.4 times more outings per day in real life than a control group. However, the Out-and-About program delivered to 11 teams in the current trial did not increase outdoor-related sessions (1.5 at baseline vs 2.1 at 12 months) or outings (0.5 at baseline vs 1.0 at 12 months) during therapy. It was not surprising that the intervention did not increase outings undertaken in real life by stroke survivors (8.2/wk at baseline vs 8.2/wk at 12 months).

There are several possible reasons for the lack of behaviour change in the experimental teams. First, the intervention may not have been delivered by teams as planned. Staff turnover was high with up to 50% of staff leaving within the 12 months. New staff were often unaware of the study. Furthermore, despite staff training, experimental teams may have felt reluctant to coerce eligible stroke survivors to go outdoors, particularly early after discharge, as reported by therapists in the pilot study (13). Second, we may have recruited a different stroke population compared to previous studies (4). Although these stroke survivors stated that they wanted to get out more often, many were already going out at least once a day soon after discharge, similar to healthy older adults aged 75 years+, who report 8-10 weekly outings (20, 21). Therapists and stroke survivors may have decided that outings during therapy were not a priority if outings were already occurring daily. Third, the trial may have lacked the statistical power to detect a clinically significant difference. However, the mean difference of 4% of stroke survivors receiving > 4 outings during therapy was not clinically significant, and the confidence intervals (-9 to 17) did not cross the *a priori* worthwhile effect of 20%, suggesting that the trial was adequately powered. Finally, report-writing may have been poor, and teams may not have recorded outings. However, we are confident that outings were novel, time-consuming events, which were reported in detail.

One implication of the findings is that screening stroke survivors with a self-report diary may be useful, so that services can be allocated accordingly. For example, if a stroke survivor is already going out at least once daily, is satisfied with their level of participation and confident walking outdoors, no escorted outings may be needed. However, stroke survivors who are going out less than once daily may benefit from escorted outings. Therapists can explore individual barriers to getting out and offer targeted sessions. Another implication is that staff turnover needs to be factored into any implementation of evidence-based practice since high staff turnover is common in allied health professions, often due to maternity leave. Procedures for orienting new staff to interventions, and 'passing on knowledge' are needed.

A strength of this study was that the 22 teams were representative of teams delivering post-hospital stroke rehabilitation across Australia. A recent national audit (22) found that 49% of stroke survivors were referred for centre-based outpatient rehabilitation or day therapy and 37% referred for home-based rehabilitation, similar to our trial. The main limitation was the small number of medical records audited for some teams, which may not represent actual practice, despite records being selected consecutively.

CONCLUSIONS

The Out-and-About program did not change team or stroke survivor behaviour. Most stroke survivors were already getting out and about as often as people of the same age without stroke, therefore time-consuming outings cannot be recommended as *routine* practice for that population. However, it may be useful to screen community-dwelling stroke survivors for frequency of outings in order to identify those who do, and do not need, to be escorted on outings during therapy.

CONFLICT OF INTEREST: None declared.

AUTHORS' CONTRIBUTIONS

AM conceptualised the study. AM and LA developed the protocol. PK, AM and AK conducted analyses. All authors contributed to the design and checked the final manuscript.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article at the publisher's website:

Appendix 1. Description of the Out-and-About behaviour change program

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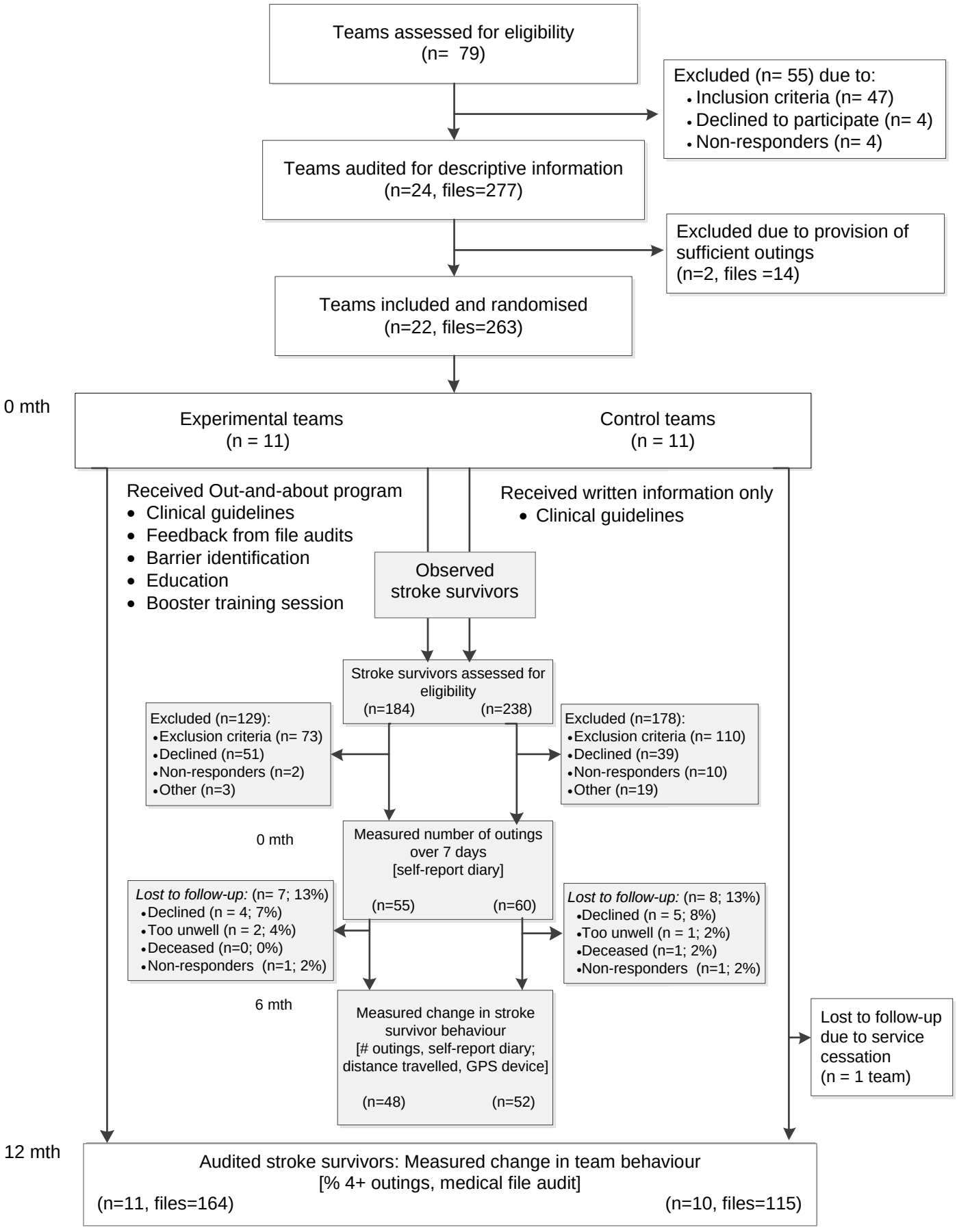


Fig. 1 Design and flow of teams, audited stroke survivors and observed stroke survivors through the trial

Table 1 Characteristics of teams at baseline

Characteristic	All	Randomised	
	(n=22)	Experimental (n=11)	Control (n=11)
Location of team, n (%)			
Centre-based	17 (77)	8 (73)	9 (82)
Outpatient	8 (36)	1 (9)	7 (64)
Day therapy	9 (41)	7 (64)	2 (18)
Home-based	5 (23)	3 (27)	2 (18)
Funding of team, n (%)			
Public	17 (77)	8 (73)	9 (82)
Private	5 (23)	3 (27)	2 (18)
Therapists employed per team, med (IQR)	3 (2-13)	3 (2-13)	3 (2-13)
Outings during therapy, n stroke survivors (%)			
≥ 1	63 (23)	34 (21)	29 (25)
≥ 2	34 (12)	18 (11)	16 (14)
≥ 3	22 (8)	14 (9)	8 (7)
≥ 4	13 (5)	9 (6)	4 (3)
Outdoor-related sessions (#), mean (SD)			
Outings	0.5 (1.3)	0.5 (0.4)	0.5 (0.4)
Outdoor practice	0.7 (1.6)	0.6 (0.6)	0.8 (0.8)
Outdoor information	0.3 (0.7)	0.3 (0.3)	0.3 (0.3)
Total	1.5 (2.3)	1.4 (0.8)	1.6 (1.0)

Table 2. Characteristics of stroke survivors audited at baseline and 12 months

Characteristic	Baseline		12 months	
	Experimental (n=146)	Control (n=117)	Experimental (n=164)	Control (n=115)
Location of team, n stroke survivors (%)				
Centre-based	101 (69)	86 (74)	118 (72)	75 (65)
Outpatient	14 (10)	56 (48)	23 (19)	47 (63)
Day therapy	87 (60)	30 (26)	95 (81)	28 (37)
Home-based	46 (53)	40 (47)	46 (28)	40 (35)
Funding of team, n stroke survivors (%)				
Public	100 (68)	87 (74)	108 (66)	87 (76)
Private	46 (32)	30 (26)	56 (34)	28 (24)
Age (yr), mean (SD)	67 (16)	67 (14)	68 (14)	67 (15)
Sex, n male (%)	81 (55)	66 (56)	102 (62)	68 (59)
Marital status, n (%)				
Single	28 (19)	11 (9)	11 (7)	10 (9)
Married	72 (49)	81 (69)	101 (62)	73 (64)
Divorced	7 (5)	7 (6)	14 (9)	9 (8)
Widowed	28 (19)	4 (3)	18 (11)	19 (17)
Unknown	11 (8)	14 (12)	20 (12)	4 (4)
Living situation, n (%)				
Alone	32 (22)	16 (14)	37 (23)	25 (22)
Family/spouse	101 (69)	95 (81)	120 (73)	86 (75)
Other	7 (5)	2 (2)	3 (2)	3 (3)
Unknown	6 (4)	4 (3)	4 (2)	1 (1)
# Time post-stroke (days), med (IQR)	50 (31-85)	64 (34-122)	43 (24-84)	64 (43-104)
Side of stroke, n (%)				
Left	70 (48)	55 (47)	66 (41)	49 (43)
Right	55 (38)	44 (38)	81 (50)	63 (55)
Unknown	21 (14)	18 (15)	16 (10)	3 (3)
Type of stroke, n (%)				
Infarct	58 (40)	44 (38)	119 (73)	77 (67)
Haemorrhage	20 (14)	22 (19)	21 (13)	25 (22)
Unknown	68 (47)	51 (44)	24 (15)	13 (11)
Stroke severity (SSS 0-60), mean (SD)	51 (4)	53 (4)	53 (4)	52 (3)
Dependency (mRS 0-5), med (IQR)	2 (2-3)	3 (2-3)	2 (2-3)	3 (2-3)
0-1, n (%)	8 (5)	10 (9)	34 (21)	7 (6)
≥ 2, n (%)	108 (74)	72 (62)	122 (74)	98 (85)
Unknown	30 (21)	35 (30)	8 (5)	10 (9)
Post-inpatient therapy received				
^ Wait time (days), med (IQR)	14 (6-36)	15 (6-57)	17 (8-51)	21 (7-55)
Duration (days), med (IQR)	69 (36-131)	63 (28-104)	59 (30-110)	76 (41-126)
Sessions (number), med (IQR)	10 (4 - 25)	13 (5 - 22)	10 (4 - 25)	13 (5 - 22)

mRS = modified Rankin Scale, SSS = Scandinavian Stroke Scale. # Time post-stroke = days between stroke (or hospital admission) and first session with the therapy team. ^ Wait time = days between hospital discharge and first session with the therapy team

Table 3 Number (%) of stroke survivors audited at 12 months that received outings during therapy (0 to ≥ 4 outings) by group, and risk difference (95% CI, p) between groups

Outings during therapy	Group			Difference between groups
	All *	Experimental * (n=146)	Control * (n=117)	Experimental relative to control **
0	173 (66)	88 (60)	85 (73)	-12 (-34 to 9, 0.25)
≥ 1	90 (34)	58 (40)	32 (27)	12 (-9 to 34, 0.25)
≥ 2	48 (18)	35 (24)	13 (11)	12 (-7 to 31, 0.20)
≥ 3	28 (11)	20 (14)	8 (7)	7 (-10 to 25, 0.38)
≥ 4	19 (7)	13 (9)	6 (5)	4 (-9 to 17, 0.54)

* Unadjusted raw data
** Adjusted for cluster randomisation

Table 4 Mean (SD) number of outdoor-related sessions during therapy for stroke survivors audited at 12 months by group and mean difference (95% CI) between groups

Outdoor-related sessions during therapy	Groups			Difference between groups
	All *	Experimental * (n=146)	Control * (n=117)	Experimental minus control **
Outings	1.0 (1.9)	1.1 (0.9)	0.6 (1.0)	0.5 (-0.4 to 1.4, 0.26)
Outdoor practice	0.8 (1.9)	0.7 (0.8)	0.8 (1.1)	-0.1 (-1.0 to 0.8, 0.79)
Outdoor information	0.2 (0.6)	0.2 (0.2)	0.2 (0.2)	0.0 (-0.2 to 0.2, 0.99)
Total	2.1 (3.1)	2.0 (1.6)	1.7 (2.1)	0.4 (-1.3 to 2.1, 0.64)

* Unadjusted raw data
** Adjusted for cluster randomisation

Table 5 Characteristics of stroke survivors observed at baseline and six months

Characteristic	Included		Lost to follow-up	
	Experimental (n = 48)	Control (n = 52)	Experimental (n = 7)	Control (n = 8)
Location of team, *n* stroke survivors (%)				
Centre-based	46 (96)	36 (69)	6 (86)	6 (75)
Home-based	2 (4)	16 (31)	1 (14)	2 (25)
Funding of team, *n* stroke survivors (%)				
Public	42 (88)	34 (65)	6 (86)	4 (50)
Private	6 (12)	18 (35)	1 (14)	4 (50)
Age (yr), mean (SD)	69 (12)	68 (12)	63 (16)	59 (12)
< 55, n (%)	6 (13)	5 (10)	2 (29)	2 (25)
>55, n (%)	42 (87)	47 (90)	5 (71)	6 (75)
Sex, *n* male (%)	30 (63)	35 (67)	4 (57)	6 (75)
Marital status, *n* (%)				
Married	25 (52)	36 (69)	5 (71)	6 (75)
Divorced	8 (17)	6 (12)	2 (29)	2 (25)
Widowed	10 (21)	7 (14)	0 (0)	0 (0)
Never married	5 (11)	3 (6)	0 (0)	0 (0)
Living situation, *n* (%)				
Family/spouse	35 (73)	42 (81)	7 (100)	7 (86)
Alone	11 (23)	10 (19)	0 (0)	1 (13)
Other people	2 (4)	0 (0)	0 (0)	0 (0)
Time post-stroke (days), med (IQR)	63 (44-92)	91 (62-130)	47 (24-79)	79 (54-120)
Side of stroke, *n* (%)				
Left	28 (58)	20 (39)	2 (29)	3 (38)
Right	16 (33)	29 (56)	4 (57)	5 (50)
Bilateral	2 (4)	2 (4)	0 (0)	1 (13)
Unknown	2 (4)	1 (2)	1 (14)	0 (0)
Dependency (mRS 0-5), med (IQR)	3 (2-3)	3 (2-3)	3 (2-3)	3 (2-3)
0-1, n (%)	9 (19)	7 (13)	1 (14)	2 (25)
≥ 2, n (%)	39 (81)	45 (87)	6 (86)	6 (75)
Type of dwelling, *n* (%)				
House/townhouse	43 (90)	42 (81)	6 (86)	6 (75)
Unit/apartment	4 (8)	7 (14)	1 (14)	2 (25)
Institution	1 (2)	3 (6)	0 (0)	0 (0)
Home access, *n* (%)				
Stairs	32 (67)	35 (69)	7 (100)	6 (75)
Ground level access	12 (25)	9 (18)	0 (0)	2 (25)
Ramp/rails	3 (6)	4 (8)	0 (0)	0 (0)
Lifts	1 (2)	3 (6)	0 (0)	0 (0)
Driving status, *n* (%)				
Drove before stroke	39 (48)	43 (52)	5 (71)	7 (88)
Drivers that resumed driving	8 (21)	5 (12)	0 (0)	0 (0)
Walking capacity (6MWT m), *n* (%)				
<100 m	7 (15)	10 (20)	0 (0)	1 (12.5)
100-199 m	15 (31)	13 (26)	1 (14)	0 (0)
200-299 m	8 (17)	8 (16)	1 (14)	2 (25)
300-399 m	12 (25)	12 (24)	3 (43)	4 (50)
≥400 m	6 (13)	8 (16)	2 (29)	1 (13)
Walking aids used outdoors, *n* (%)				
None	23 (48)	18 (35)	4 (57)	3 (38)
Single-point/quad stick	11 (23)	17 (33)	2 (29)	3 (38)
Walking frame	9 (19)	8 (15)	1 (14)	1 (12.5)
Wheelchair	4 (8)	7 (14)	0 (0)	1 (12.5)
Scooter	0 (0)	2 (4)	0 (0)	0 (0)
Crutches	1 (2)	0 (0)	0 (0)	0 (0)

mRS = modified Rankin Scale, Time post-stroke = days between stroke and baseline measure, 6MWT = 6-min Walk Test

Table 6 Mean (SD) number of outings and nature of outings undertaken (#/wk) by observed stroke survivors by group and mean (95% CI, p) difference between groups

Nature of outings	Groups				Difference between groups
	Month 0 *		Month 6 *		Month 6
	Experimental * (n=55)	Control * (n=60)	Experimental * (n=55) ^	Control * (n=60) ^	Experimental minus control **
Outings (#/wk)	8.6 (2.5)	7.8 (2.8)	9.0 (3.0)	7.4 (4.0)	0.5 (-1.8 - 2.8, 0.63)
Purpose of outings (#/wk)					
Home/personal maintenance	2.9 (1.2)	2.0 (1.0)	3.1 (1.5)	2.0 (1.0)	1.1 (0.2 - 1.9, 0.02)
Health-related	2.1 (0.9)	2.1 (0.9)	1.4 (0.7)	1.1 (0.9)	0.4 (-0.4 - 1.1, 0.35)
Social	1.8 (1.0)	2.4 (0.9)	2.6 (1.3)	2.5 (2.0)	-0.2 (-1.6 - 1.2, 0.75)
Exercise-related	1.3 (1.2)	1.1 (0.7)	1.6 (2.1)	1.6 (0.8)	-0.2 (-1.5 - 1.0, 0.70)
Other	0.5 (0.5)	0.2 (0.2)	1.2 (1.7)	0.8 (0.8)	0.4 (-0.8 - 1.6, 0.50)
Mode of travel during outings (#/wk)					
Car	5.8 (1.7)	5.0 (2.1)	4.7 (1.7)	4.2 (3.1)	-0.1 (-2.5 - 2.4, 0.94)
Bus	0.4 (0.2)	0.5 (0.7)	0.4 (0.6)	0.5 (0.6)	-0.2 (-0.6 - 0.1, 0.23)
Train	0.1 (0.2)	0.1 (0.2)	0.2 (0.2)	0.1 (0.2)	0.1 (-0.1 - 0.2, 0.45)
Taxi	0.1 (0.2)	0.1 (0.2)	0.0 (0.1)	0.1 (0.2)	0.0 (-0.1 - 0.1, 0.59)
Scooter	0.0 (0.0)	0.3 (0.5)	0.2 (0.4)	0.2 (0.4)	0.3 (-0.1 - 0.7, 0.12)
Walk	2.9 (1.2)	2.2 (2.0)	3.8 (2.9)	2.2 (2.2)	0.4 (-1.2 - 2.1, 0.58)
Wheelchair	0.2 (0.3)	0.4 (0.4)	0.0 (0.0)	0.0 (0.1)	0.0 (-0.1 - 0.1, 0.96)
Distance travelled during outings (km/wk)	-	-	184 (170)	207 (343)	-23 (-296 - 251, 0.86)
Life Space Assessment (0-120)	54 (18)	47 (11)	61 (12)	51 (12)	5 (-5 - 15, 0.29)

^ Up to 16 observations carried forward across both groups
* Unadjusted raw data
** Adjusted for cluster randomisation and baseline value

SUPPLEMENTARY FILE

The Out-and-About trial:

INTERVENTION DESCRIPTION

Appendices:

1. Description of the experimental intervention
2. Slides and handout provided during the initial (and booster) workshop
3. Case studies presented during the initial workshop
4. Printed educational materials
5. Individualised audit feedback report
6. Audit criteria

Appendix 1: Description of the Experimental Intervention

Name

The experimental intervention was a behaviour change program referred to as the Out-and-About program.

Rationale

The aim of the behaviour change program was to increase the number of outings delivered to stroke survivors during outpatient rehabilitation. A target of six or more escorted outings was set for each stroke survivor, to be delivered by the treating occupational therapists and/or physiotherapists. The Out-and-About program included strategies that were known to be effective for changing practice, namely, educational meetings (7), printed educational materials including clinical guidelines (8), and audit and feedback (9). The program was piloted with five community rehabilitation teams (10) and was feasible to deliver. Furthermore, after 12 months, 39% of stroke survivors in the pilot sample received four or more outdoor-related sessions during therapy compared with 21% pre-intervention.

Description of the Out-and-About behavior change program

The experimental intervention consisted of the following components: a 2-hour initial training workshop with barrier analysis, and a 1-hour booster workshop 12 months later, printed educational materials, audit and feedback. Workshops were conducted onsite, face-to-face with each team, and presented by Dr Annie McCluskey. All available physiotherapists, occupational therapists and therapy assistants employed by the team were invited to attend in addition to the team leader.

The initial 2-hour training workshop involved:

- A description of the original evidence by Logan and colleagues (4) and related 2010 stroke guideline recommendation (5)
- Provision of verbal and written feedback from audits of the team's medical files about the number of outings delivered during therapy to 15 of their previous stroke survivors
- Summary of barriers identified during the pilot study, and identification of local barriers to providing outings
- Identification of enablers to providing more outings in the future
- Printed educational materials and resources to help teams with implementation and delivery of six outings per stroke participant in future. The educational materials were compiled into a single handout, and consisted of (a) a screening checklist that enquired about frequency of outings, usual modes of travel pre-and post-stroke and driving intentions, (b) strategies for progressing outings from 'easier' to 'more challenging' while walking, taking a bus or train, using a motorised scooter, (c) the approved return to driving process and legislation, (d) links to local transport

resources and service providers; and (e) a checklist for teams to record the number of outings delivered during a stroke participant's rehabilitation.
- Presentation of two case studies (from the pilot study) demonstrating how six outings might be provided by a team to individual stroke survivors
- Summary of the process and steps involved in the trial

Outings were to be conducted in local streets and suburbs by treating therapists (not by the researchers), and could include public transport training, practice walking over uneven ground, to parks and shopping malls, supervised practice using mobility equipment such as a motorised scooter where relevant, advice about and help with return to driving, and provision of written information about transport options in the local area.

Outings were to be delivered by a physiotherapist, an occupational therapist and/or or a therapy assistant (if one was available) employed by each team. No additional therapy staff were provided or required. The configuration of outings and specifics of outing content were individually tailored by treating therapists.

See **Appendix 2** for the slides and handout provided during the initial workshop, and **Appendix 3** for case studies presented.

The 1-hour booster workshop was also conducted by Dr Annie McCluskey, onsite for individual experimental teams, one year after the initial workshop. Identical slides and a handout from at the initial workshop were presented. The booster workshop consisted of:
- Re-presentation of the original feedback from audits of medical files to existing and new staff
- Discussion of barriers to stroke survivor outings, and how team barriers were being addressed.

Printed Educational Materials

The following materials were presented during the workshops and collated into a single document (see **Appendix 4)**:

What	Who designed	Who prepared
Strategies for delivering outings and increasing level of difficulty (from 'easier' to 'more challenging'), when walking, using buses and trains, a motorised scooter. Web links were also provided for local transport resources/ services	Dr Annie McCluskey (Occupational therapist) Prof Louise Ada (Physiotherapist)	Ms Aspasia Karageorge (Psychology graduate)
Screening checklist	Dr Annie McCluskey (Occupational therapist) Prof Louise Ada (Physiotherapist)	Ms Aspasia Karageorge (Psychology graduate)
Checklist for recording outings	Dr Annie McCluskey (Occupational therapist) Prof Louise Ada (Physiotherapist)	Ms Aspasia Karageorge (Psychology graduate)

Case studies x 2 **Appendix 2**	Dr Annie McCluskey (Occupational therapist)	Ms Aspasia Karageorge (Psychology graduate)
Written feedback from medical record audit (individualised report) **Appendix 5**	Dr Annie McCluskey (Occupational therapist)	Ms Aspasia Karageorge (Psychology graduate) Ms Janine Vargas (Physiotherapist)

Audit and Feedback

Consecutive medical records of the most recently discharged stroke survivors were audited for each team, after recruitment to the study, at baseline but before teams were randomised. A sample of 20 medical records from the previous 12 months were requested, with the expectation that at least 15 records could be audited per team. Auditors were blinded to team allocation.

Data extracted from the medical records included demographics (age, gender, date of stroke, time post-stroke to first therapy session, stroke severity), duration for therapy program from first to last session, number and type of therapy sessions overall, number of escorted outings and outdoor-related sessions provided. See **Appendix 6** for audit criteria. Data were recorded directly into an Excel spreadsheet, onsite, during audits.

Audit data were reported in tables and graphs, and presented to each experimental team at the initial workshop, and booster workshop, with comparisons provided for other teams (control and experimental teams). See **Appendix 5** for a sample audit report provided to experimental teams only.

Appendix 2:

Slides and handout provided during the initial (and booster) workshop

The Out-and-About trial:

Translating Evidence into Practice and Increasing Outings after Stroke

McCluskey A *(USyd)*
Ada L *(USyd)*
Middleton S *(ACU)*
Grimshaw J *(Uni Ottawa)*
Goodall S *(UTS)*
Kelly P *(USyd)*
Longworth M *(NSW ACI)*
Logan P *(Uni Notts)*

NHMRC Project Grant
2010-2012

Nov 2012

Workshop Aims

By the end of today, you should be able to:

- **Describe original RCT findings** that you will be implementing (ie the evidence)
- **Use audit feedback** to discuss how team practice matches against 'best evidence'
- **Identify local barriers** to your service/team providing more escorted outings to relevant clients
- **Identify strategies** that the service/team can use to overcome local barriers

2

The Out-and-About Trial:
Background to the Study

3

The Out-and-About trial

- Cluster randomised trial, 2010-2012
  - 20 teams (with OT and PT, NSW)
  - 300 people with stroke
- Study aims:
  - To assist teams of OT/PT to increase outings after stroke
  - Determine the efficacy and cost effectiveness of the 'Out-and-About' training program for OTs/PTs

4

Study Design and Flowchart

- 10+ stroke patients/yr
- At least one OT & PT
- Public and private
- Day programs
- Out-patient services

Teams screened for eligibility

Teams eligible to participate

Time

Month 0

Measure team outcomes [**baseline file audits**]
Randomise teams

= 22 teams

- Recruited (n=22)
- Baseline audits (n=21)

Experimental Teams
(n=11 teams x 15 stroke patients)

Receive *Out-and-About* implementation training program (audit feedback, identify /discuss barriers, education)

Stroke patients:
Outcomes measured at baseline and after 6 months

Control Teams
(n=11 teams x 15 stroke patients)

Receive written education materials

Stroke patients:
Outcomes measured baseline and after 6 months

Month 12

Measure team outcomes [**follow-up audits**]

5

The Evidence

6

RCT by Logan et al (2004) BMJ

Cite this article as: BMJ, doi:10.1136/bmj.38264.679560.8F (published 25 November 2004)

Papers

Randomised controlled trial of an occupational therapy intervention to increase outdoor mobility after stroke

P A Logan, J R F Gladman, A Avery, M F Walker, J Dyas, L Groom

Abstract

Objective To evaluate an occupational therapy intervention to improve outdoor mobility after stroke.
Design Randomised controlled trial.
Setting General practice registers, social services departments, a primary care rehabilitation service, and a geriatric day hospital.
Participants 168 community dwelling people with a clinical diagnosis of stroke in previous 36 months: 86 were allocated to the intervention group and 82 to the control group.
Interventions Leaflets describing local transport services for disabled people (control group) and leaflets with assessment and up to seven intervention sessions by an occupational therapist (intervention group).
Main outcome measures Responses to postal questionnaires at four and 10 months; primary outcome measure was revenue

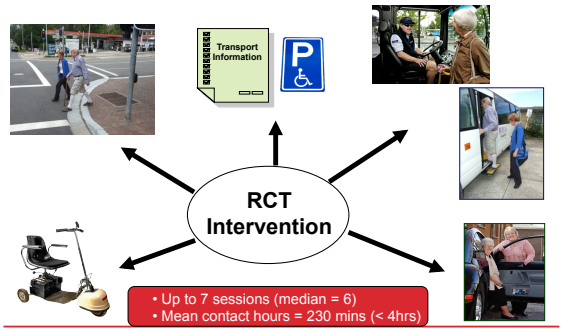
Our primary objective was to establish whether people who received the intervention were more likely to get out of the house as much as they wanted. Our secondary objectives were to examine whether the intervention increased the number of journeys taken outdoors, affected the performance of activities of daily living, leisure activity, or psychological wellbeing, and affected the psychological wellbeing of partners or carers.

Methods

We identified patients with a clinical diagnosis of stroke in the previous 36 months from general practice registers and other sources in the community. We included people in care homes. A research occupational therapist (PAL) visited those who had shown interest in invitations by post and asked for their written

7

Intervention to improve participation
Logan et al (2004), BMJ



- Up to 7 sessions (median = 6)
- Mean contact hours = 230 mins (< 4hrs)

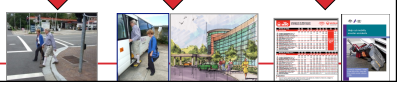
2.4 Activities of daily living (ADL)		Grade
a)	Patients with difficulties in performance of daily activities should be assessed by a trained clinician.	A 98, 602
b)	Patients with confirmed difficulties in personal or extended ADL should have specific therapy (e.g. task-specific practice and trained use of appropriate aides) to address these issues.	B 98, 603
c)	Staff members and the stroke survivor and their carer/family should be advised regarding techniques and equipment to maximise outcomes relating to performance of daily activities and sensorimotor, perceptual and cognitive capacities.	GPP
d)	People faced with difficulties in community transport and mobility should set individualised goals and undertake tailored strategies such as multiple (i.e. up to seven) escorted outdoor journeys (which may include practice crossing roads, visits to local shops, bus or train travel), help to resume driving, aids and equipment, and written information about local transport options/alternatives.	B 604

9

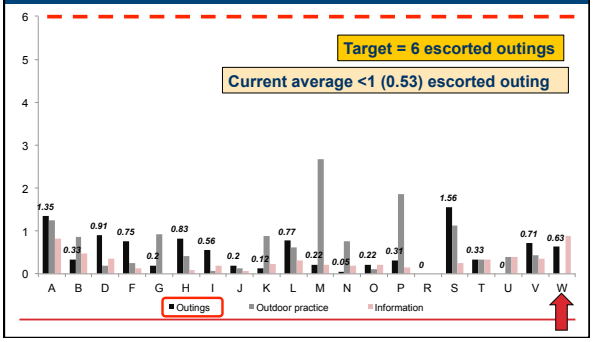
The Evidence-Practice Gap: Audit Feedback

Baseline Audits

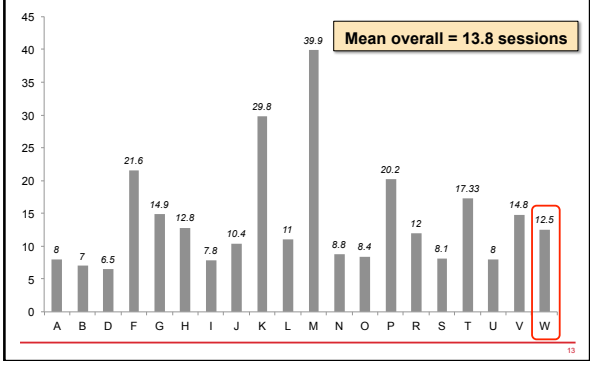
- 10 -15 client records per site
  - Consecutive stroke referrals, previous 12 months
- **Days** post-stroke/discharge to 1st assessment
- **Duration of PT /OT program** (days)
- **Number PT /OT sessions**
  - **Total**: Including other interventions (eg UL, domestic etc)
  - **Outdoor mobility**: Outings, outdoor practice, information provision



Mean **number of escorted outings, outdoor practice and information sessions** provided to people with stroke by OTs/PTs



Mean **number of OT/PT sessions** per person with stroke



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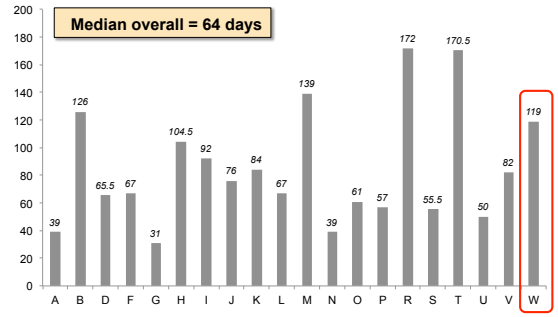
Median **duration of therapy (days)** per person with stroke



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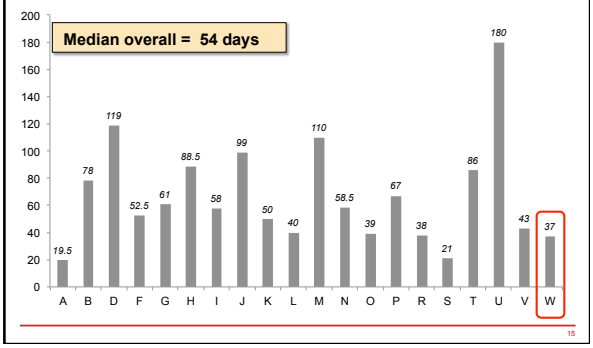
Median **number of days post-stroke to first contact** with OT/PT on team



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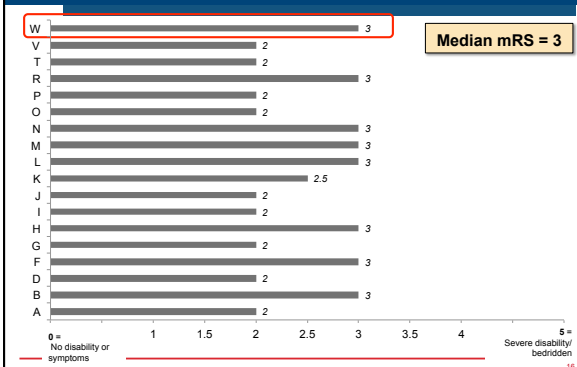
Median **stroke severity** (modified Rankin Scale) per patient



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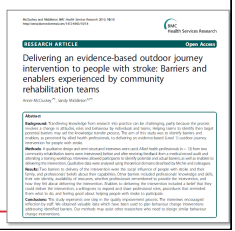
Barriers to Providing Escorted Outings

17

Feasibility Study

- Participants: 13 AHPs interviewed across 2 teams
- **Key barriers**:
  - Client and family expectations about therapy
  - Therapists' skills and knowledge
  - Therapists' role expectations


RESEARCH ARTICLE Open Access

Delivering an evidence-based outdoor journey intervention to people with stroke: Barriers and enablers experienced by community rehabilitation teams

BMC Health Services Research (2010)

Client and Family Expectations

Sometimes family members won't let the person go out…..they're worried what might happen….

They expect us to focus on their upper limb

McCluskey & Middleton, [2010]

Therapists' Skills and Knowledge

I don't use public transport – I wouldn't know where to catch a bus or how much it costs for a ticket

I've never done transport training….it might be risky…what If someone has a fall in the shopping centre?

Professional Role Expectations

We ask about shopping and banking…..so we SHOULD do something to help people get there…..

I wouldn't think to refer to OT for transport training… I've never seen them do that..

Enablers

If it was on our [assessment] form, that would prompt us to ask screening questions

We can involve the therapy assistant for some sessions

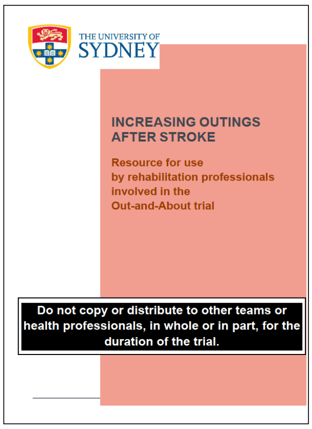
What are local barriers (and **Enablers**) for your team?

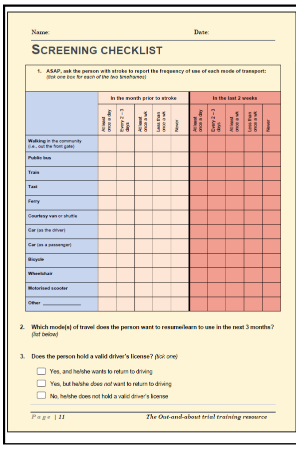
Category	Examples
Professional	Knowledge, skills, intentions, beliefs, attitudes, roles
Patient-related	Expectations, beliefs
Team/care processes	Role extension or sharing, referral processes, use of support staff
Organisational/ resources	Space, equipment, vehicles, clinic times, printing of forms
Political/ economic	Social influences, flow-on effects of withdrawing treatment, sustainability

Translating Evidence into Practice: Maintaining fidelity and therapy dosage

Training Manual

- Screening checklist
- Intervention checklist
- Links to resources
- Not for distribution
- BUT: Pages may be copied for personal use/ new team members





Screening

- To prompt team members to SCREEN all clients for:
  - Frequency of outings
  - Modes of travel
  - Driving intentions
- To prompt discussion about:
  - Transport preferences
  - Dependence on others
  - Participation *early* post-discharge
  - Social isolation
  - Confidence in *local* streets etc

Goal Setting: Common goals

"To walk in local area" = 22% [1] & 36% [2]

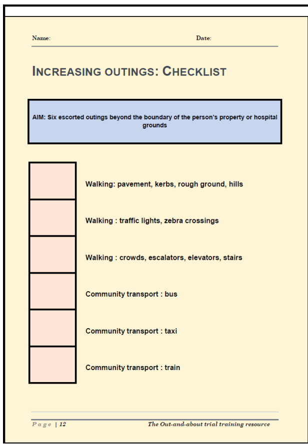
"To walk outside local area" = 30% [2]

"To catch the bus" = 17% [1]

"To resume driving" = 10% [1]

"To use a mobility scooter" = 15% [2]

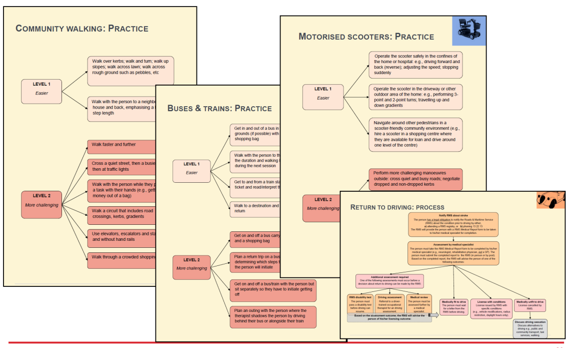
1 Logan et al (2006), n=78 files
2 Logan et al, unpublished, n=33 files



Dosage of therapy

- For clients who want to get out more often, change mode of travel or improve confidence
- To help MONITOR number of **escorted** outings:
  - Divide between OT / PT/ assistant
  - Beyond hospital/home boundary
  - Shared across usual 6-12 sessions of OT and PT
- Target:
  - **6 escorted outings**

Suggestions for Practice & Resource Info



Case Studies

Out-and-About trial – original 2012-2013training workshops – prepared by Annie McCluskey

Other local barriers (and Enablers)?

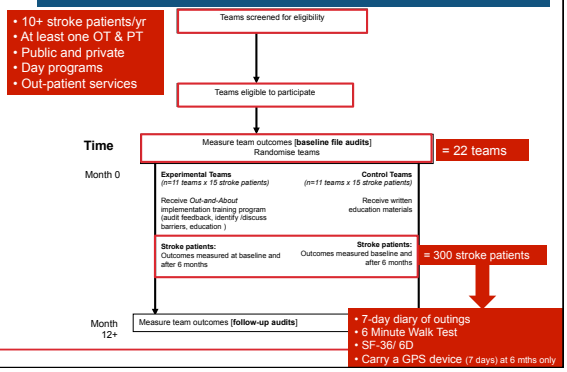
Category	Examples
Professional	Knowledge, skills, intentions, beliefs, attitudes, roles
Patient-related	Expectations, beliefs
Team/care processes	Role extension or sharing, referral processes, use of support staff
Organisational/ resources	Space, equipment, vehicles, clinic times, printing of forms
Political/ economic	Social influences, flow-on effects of withdrawing treatment, sustainability

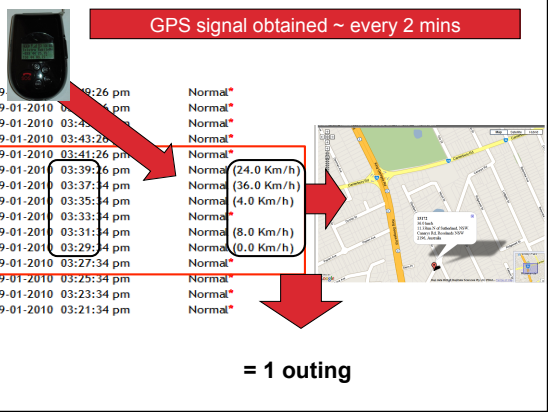
Summary and Next Steps

Next Steps

- Team member asks clients if we may phone them
  - **All** stroke patients/clients until 15 people recruited
  - Minimise team member 'gatekeeping'

Study Design and Flowchart





Next Steps

- Team member asks clients if we may phone them
  - **All** stroke patients/clients until 15 people recruited
  - Minimise team member 'gatekeeping'
  - We ask 2 screening questions about activities
  - If eligible, we invite them to provide measures of participation now and 6 months later
    - 6 Minute Walk Test, SF-36, 7-day diary (taxi to campus)
    - Carry a GPS device for 7 days in 6 months
- Repeat file audit in 12 months
  - 15 files per team/service

Final Qs?

Contact Details

The Out-and-About trial

Annie McCluskey, Louise Ada,
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Stephen Goodall, Patrick Kelly,
Mark Longworth, Pip Logan

Chief Investigator: annie.mccluskey@sydney.edu.au
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Appendix 3:

Case studies presented during the initial workshop

OUT AND ABOUT:
Walking in the community and taking a train after stroke

MR T
Case study 1

Acknowledgement: Michelle Dettrick-Janes, occupational therapist, previously at RPAH Stroke Outreach Service

Background: Mr T

- 53 years old
- Lived with his wife
- Admitted to hospital for 8 weeks
- Referred to a **hospital-based** outpatient rehabilitation service for 8-12 weeks for physiotherapy and occupational therapy
- Difficulty walking; required a walking stick

Therapy overview: Initial Asst

- **6MWT** : 300 m with stick/close supervision
- **Local streets:** Able to walk half a block (~ 200 m) with supervision in 15 mins and return (30 mins)
- Walk to local shops = 4 blocks. Not yet able to manage distance

Screening checklist

	In the month prior to stroke					In the last 2 weeks				
	At least once a day	Every 2 – 3 days	At least once a wk	Less than once a wk	Never	At least once a day	Every 2 – 3 days	At least once a wk	Less than once a wk	Never
Walking in the community (i.e., out the front gate)	✓						✓			
Public bus				✓						✓
Train					✓					✓
Taxi				✓						✓
Ferry					✓					✓
Courtesy van or shuttle					✓				✓	
Car (as the driver)		✓								✓
Car (as a passenger)				✓				✓		
Bicycle					✓					✓
Wheelchair					✓					✓
Motorised scooter					✓					✓
Other _____										

Screening checklist cont.

2. **Which mode(s) of travel does the person want to resume/learn to use in the next 3 months?** *(list below)*
   - Walking in the community - train
3. **Does the person hold a valid driver's license?** *(tick one)*
   - ☑ Yes, and he/she wants to return to driving
   - ☐ Yes, but he/she *does not* want to return to driving
   - ☐ No, he/she does not hold a valid driver's license

Long term goals:

- To return to driving when possible – (information needed about return to driving)
- To return to work as a lawyer, initially working from home then from inner-city office (sessions to focus on catching trains)
- To walk the City to Surf in 12 months (sessions to focus on increased walking endurance and speed)

1. Return to driving goals

To return to driving within 6 months

To notify RTA of stroke within 1 week

To discuss return to driving suitability with GP within 2 weeks

If formal assessment required, to refer himself to a driver-trained OT for assessment within 2 months

Return to driving

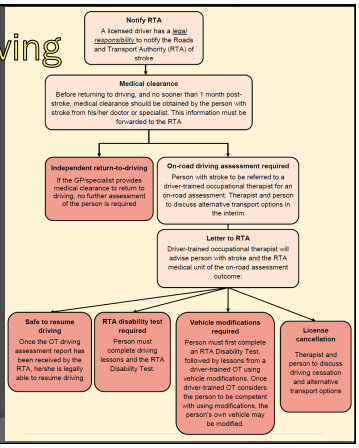
Week 2: Return-to-driving process discussed with OT

Week 3: Mr T made appointment with his GP to discuss return to driving

Week 4: Mr T's doctor recommended an on-road driving assessment before return to driving

Week 6: OT provided Mr T with contact details for driver-trained OT's in his area

3 months: The first on-road driving assessment took place.



2. Walking goals

Within 5 weeks, to independently walk to the local coffee shop (700m), have coffee, and return home

To be able to negotiate kerbs independently within 2 weeks

To walk to the coffee shop in less than 30min, within 3 weeks unsupervised

To walk to the corner of street (400m) and back home in less than 20 mins within 2 weeks unsupervised

3. Train travel goals

To independently use a train to travel to his workplace in the city within 6 weeks

To confidently handle money and purchase a train ticket at the train station within 3 weeks

To catch a train to his workplace in the city, with the assistance of a therapist, within 4 weeks

Week 1

FIRST OUTING:

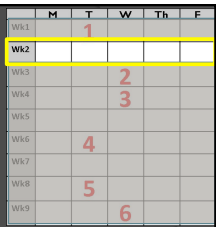
Escorted walk with OT & PT (joint session) for ½ a block beyond the hospital grounds

Week 2

No outings this week

Gym/home/community practice with PT: endurance, distance steps, kerbs

Return to driving process discussed with OT



Week 3

SECOND OUTING:

OT met Mr T at his home. Escorted walk to the train station at an off-peak time. Purchased a ticket, caught train 2 stops

Therapy assistant met Mr T and OT and the train stop and drove them home

Week 4

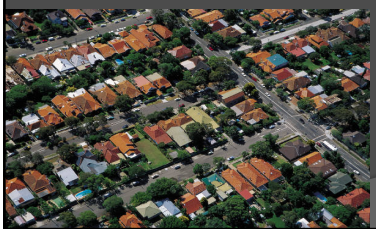
THIRD OUTING:

TA escorted Mr T to train station and caught a train to his workplace in the city then home again

Week 5

No outing this week

Unsupervised practice at home/community

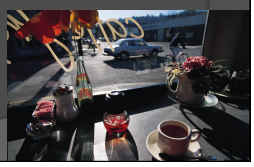


Week 6

FOURTH OUTING:

With OT, walked to coffee shop, ordered coffee, walked home

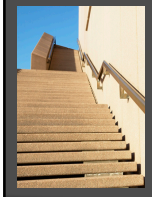
Goal: less than 30 mins each way



Week 7

No outings this week. Therapy with PT:

- walking up and down external stairs of the hospital.

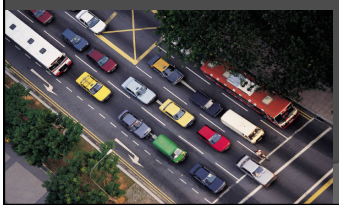


- Reviewed walking time and distance goals

Week 8

FIFTH OUTING:

Crossing busy/wide road, traffic lights and kerbs with PT outside hospital grounds



Week 9

SIXTH OUTING:

Mr T walked to local coffee shop and back escorted by OT, no breaks, less than 25 mins each way

	M	T	W	Th	F
Wk1		1			
Wk2					
Wk3			2		
Wk4			3		
Wk5					
Wk6		4			
Wk7					
Wk8		5			
Wk9			6		

Escorted Outings with Therapists

Physiotherapist:
- 2 x outings (near hospital)
- No home visits

Occupational therapist:
- 4 x home visits/ outings (one with PT, one with TA)

Therapy assistant:
- 2 x outings (one with OT)

Joint sessions:
- Initial walking assessment (PT and OT)
- Train station session (OT and TA)

Results

AIM: Six escorted outings beyond the boundary of the person's property or hospital grounds

///	Walking: pavement, kerbs, rough ground, hills
/	Walking : traffic lights, zebra crossings
	Walking : crowds, escalators, elevators, stairs
	Community transport : bus
	Community transport : taxi
///	Community transport : train

General Advice

- **When going on an outing, remember/consider taking:**
  - Mobile phone
  - Map/street directory
  - Enough money to catch a taxi
  - Water, medications, and food (especially if diabetic)
  - Umbrella
- **Managing with limited hand function:**
  - Cue cards
  - Different kinds of bags
- **Other tips:**
  - Know the environment and the person's functional status
  - Advise family of estimated time of return
  - Provide family with your contact number

OUT AND ABOUT

Using a bus to access the community

Mrs H: Case study 2

Acknowledgement :
Corrine Medlin, physiotherapist, TACP service, Bankstown-Lidcombe Hospital

Background: Mrs H

- 81 years old, lived alone, own home
- Main problems: poor balance (4WW rec. by inpatient PT) and unsteady gait; reduced hand function
- Referred to rehabilitation team immediately after discharge for 6 week PT/OT program
- Very active pre-stroke:
  - Drove a car
  - Walked to shops (approx 300m away, up hill, one pedestrian crossing)

Initial Assessment

- **Mod Barthel:** 92 (0 to 100)
- **TUG:** 13 s
- **6-MWT :** 341 m
- **x3 STS test:** 18 s
- **Berg BS:** 48 (0 to 56)

Screening checklist

	In the month prior to stroke					In the last 2 weeks				
	At least once a day	Every 2 – 3 days	At least once a wk	Less than once a wk	Never	At least once a day	Every 2 – 3 days	At least once a wk	Less than once a wk	Never
Walking in the community (i.e., out the front gate)	✓						✓			
Public bus					✓					✓
Train					✓					✓
Taxi				✓					✓	
Ferry					✓					✓
Courtesy van or shuttle					✓					✓
Car (as the driver)		✓								✓
Car (as a passenger)				✓			✓			
Bicycle					✓					✓
Wheelchair					✓					✓
Motorised scooter					✓					✓
Other _____										

Screening checklist cont.

2. **Which mode(s) of travel does the person want to resume/learn to use in the next 3 months?** *(list below)*

-Return to driving ***-Public buses***

3. **Does the person have a valid driver's license?** *(tick one)*

- [x] Yes, and he/she wants to return to driving
- [ ] Yes, but he/she *does not* want to return to driving
- [ ] No, he/she does not hold a valid driver's license

Goals & sub-goals

To *independently* travel to the local shops and home again using the bus within 6 weeks

To walk *unaided* to the local bus stop (250m) and home again within 2 weeks

To complete a return bus journey to local shops *with supervision* within 4 weeks

To confidently board the bus, negotiate seating and manage money, and then exit the bus on her own within 3 weeks

Week 1

FIRST OUTING:

PT escorted Mrs H beyond hospital entrance with her 4WW

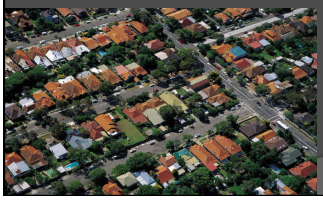
	M	T	W	Th	F
Wk1		1			
Wk2				2	
Wk3			3		
Wk4			4		
Wk5				5	
Wk6					
Wk7					6

Week 2

SECOND OUTING:

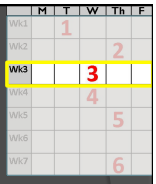
Home visit. PT escorted Mrs H to the bus stop with 4WW

	M	T	W	Th	F
Wk1		1			
Wk2				2	
Wk3			3		
Wk4			4		
Wk5				5	
Wk6					
Wk7					6



Week 3

First OT session held at hospital. Discussion about return to driving, bus timetables and money management.



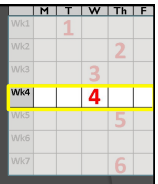
THIRD OUTING:

OT: Escorted Mrs H to bus stop, caught bus in one direction, driven home by TA.

Week 4

FOURTH OUTING

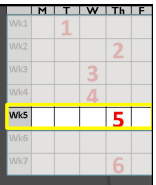
PT escorted Mrs H for a walk outside the grounds of the hospital, focussing on kerbs and uneven ground, without the 4WW.

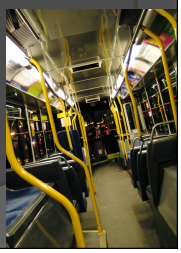


Week 5

FIFTH OUTING:

Home visit. OT escorted Mrs H to bus stop without 4WW. Practised use of shoulder bag to carry money and ticket. Caught bus one stop, then home again.

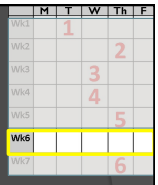




Week 6

No outing this week.

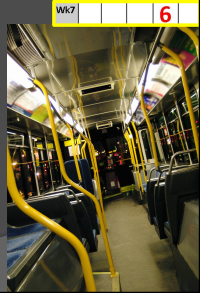
PT: At hospital, focussed on part practice of balance exercises and strength training for steps (on/off bus)



Week 7

SIXTH OUTING:

TA escorted Mrs H on a shopping trip, via bus, to local shops and home again. Mrs H carried shopping home in shoulder bag.



Escorted Outings with Therapists

- **Physiotherapist:**
  - 3 x sessions overall
  - incl 1 x home visit
- **Occupational therapist:**
  - 3 x sessions overall
  - incl 2 x home visits
  - 1 x with TA
- **Therapy Assistant**
  - 2 x sessions
    - 1 x with OT, 1 x alone

Discharge ax

- **MBI** (0 to 100) : 92 → **100**
- **TUG:** 13s → **8.6s**
- **6-MWT :** 341m → **400m (unaided)**
- **x 3 STS test:** 18s → **10s, no hands**
- **Berg BS** (0 to 56) 48 → **54, tandem > 30s**

Results

AIM: Six escorted outings beyond the boundary of the person's property or hospital grounds

//	Walking: pavement, kerbs, rough ground, hills
	Walking : traffic lights, zebra crossings
/	Walking : crowds, escalators, elevators, stairs
///	Community transport : bus
	Community transport : taxi
	Community transport : train

Appendix 4:

Printed Educational Materials

THE UNIVERSITY OF SYDNEY

INCREASING OUTINGS AFTER STROKE

Resource for use by rehabilitation professionals

Created as part of the Out-and-About trial 2010-2013

Enquiries

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Logan and colleagues (2006) reported that walking outdoors was an important goal for people with stroke. Of 78 main goals, 22% focussed on walking outdoors

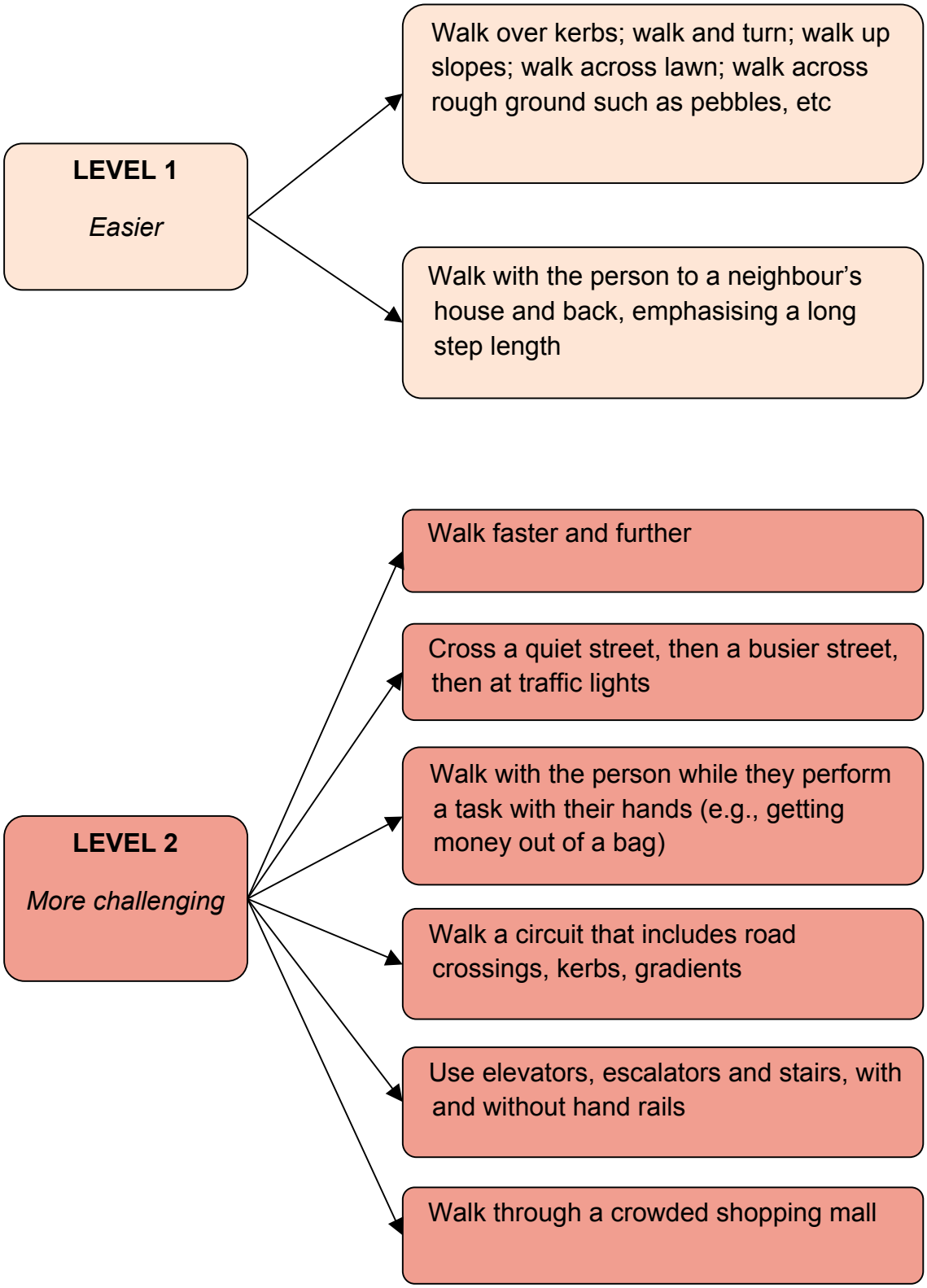
Acknowledgements

The Out-and-About trial was supported by a grant awarded by the National Health and Medical Research Council (NHMRC) Project Grants Scheme to Dr Annie McCluskey, Associate Professor Louise Ada, Professor Sandy Middleton, Dr Stephen Goodall, Professor Jeremy Grimshaw and Dr Patrick Kelly. The NHMRC administers funding for health and medical research on behalf of the Australian government.

This resource and the protocols were adapted from an earlier version, developed in conjunction with rehabilitation professionals from St Joseph's and Bankstown-Lidcombe Hospitals and the Stroke Outreach Service based at the Royal Prince Alfred Hospital, Sydney during a feasibility study in 2007.

This resource builds on research conducted by Associate Professor Pip Logan and colleagues from the University of Nottingham. Assistance in creating this resource was also gratefully received from Kathleen O'Neil, Lorraine Lancaster, Jane Horne, Janet Darby and Charlotte Callinan, collaborators on the English HTA-funded trial TOMAS (Outdoor Mobility After Stroke).

COMMUNITY WALKING: PRACTICE



COMMUNITY WALKING: RESOURCES

General information for pedestrians:

Information about the different kinds of road crossings and signals for pedestrians in NSW (e.g., pedestrian, pelican, raised):
http://www.rta.nsw.gov.au/roadsafety/pedestrians/pedestrian_crossings.html

Pedestrian Council of Australia's policy statement on crossing roads (includes advice from the Australian Road Rules 1999 legislation:
http://www.walk.com.au/pedestriancouncil/Page.asp?PageID=2724

Walking groups:

There are free-to-join **Walking for Pleasure** clubs all around NSW that walk regularly in places such as National Parks, places of historical interest, beaches and your local area.
http://www.dsr.nsw.gov.au/active/whatson_walk.asp

Mall Walking

Many shopping centres hold free mall walking programs each week, catering for all ages and fitness levels. This can be a safe and social way to get out and about in the community. Below are examples of centres that have a Mall Walking program, however it is a good idea to check with your local centres too.

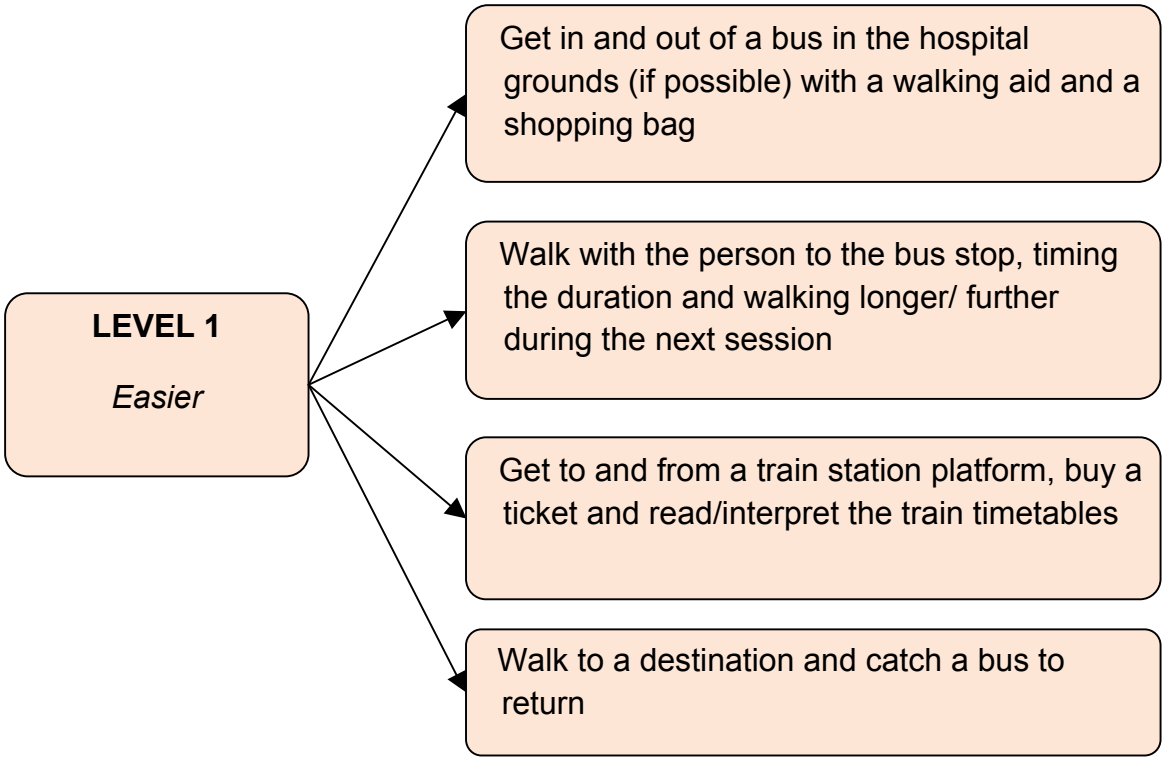
Macquarie Centre , North Ryde: every Wednesday from 7.00am - 8.00am. Phone 9887 0800

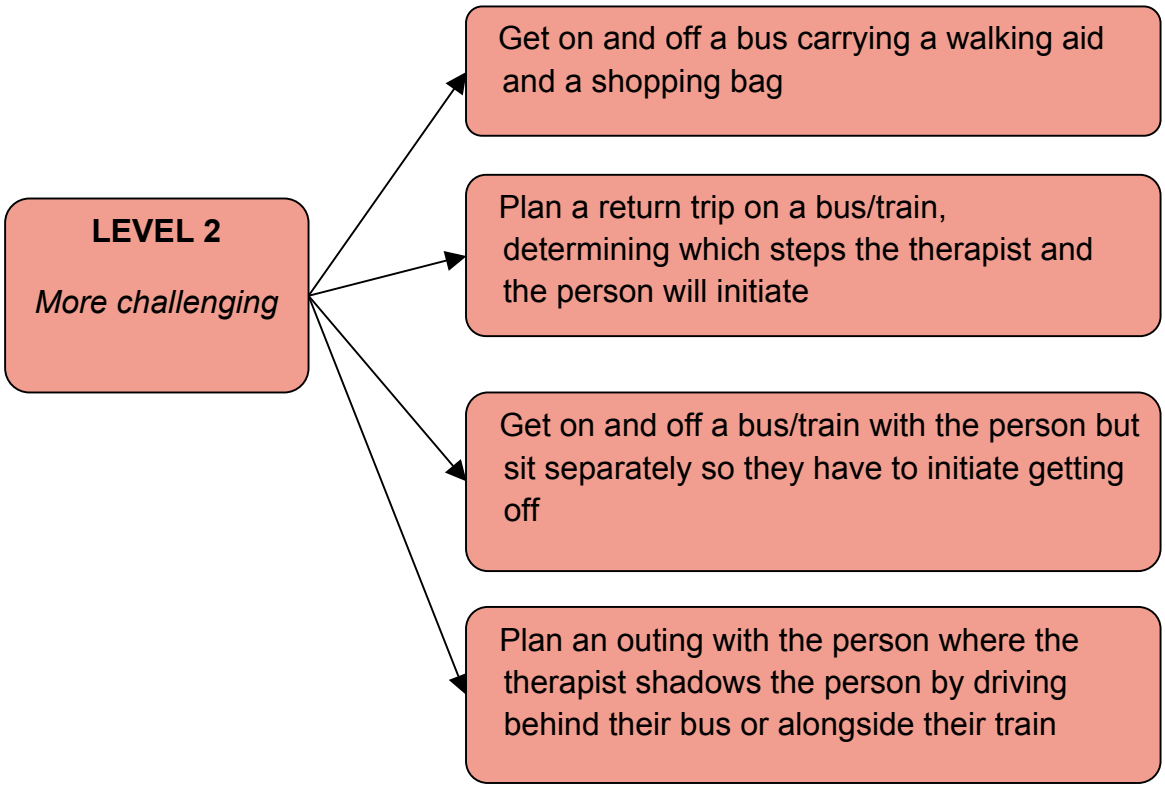
Stocklands Green Hills Centre: East Maitland, NSW 2323
http://www.stockland.com.au/shopping-centres/nsw/stockland-green-hills_13232.htm

Warringah Mall
http://www.warringahmall.com.au/Community/Mall-Walkers.aspx

Westfield Southland
http://westfield.com.au/southland/news-and-events/westfield-southland-striders

BUSES & TRAINS: PRACTICE





COMMUNITY TRANSPORT: RESOURCES

Public buses, trains and ferry:

Route planner (incl. CityRail trains, government bus services and Sydney ferries) http://www.131500.com.au/plan-your-trip/trip-planner

Fares and Trip Cost Calculators (incl. CityRail trains, government bus services and Sydney ferries) http://www.131500.com.au/tickets/fares/fares

Veolia Transport extensive bus network in Sydney's western & south western suburbs. Timetables and ticketing guide available: http://www.veoliatransportnsw.com.au/

Light Rail links Central Station & Sydney's inner western suburbs. Ticketing information available: http://www.metrotransport.com.au

General safety information for seniors travelling on buses: http://www.sydneybuses.info/travelling-with-us/seniors

Other community transport:

Contact information for **taxi companies across NSW**, including links to online booking forms: http://www.transport.nsw.gov.au/taxi/network-contacts.html

NSW Community Transport Contact List: http://www.transport.nsw.gov.au/lact/community-trans-orgs.html

Accessibility:

Ferries: all ferry terminals are wheelchair accessible. Maps, timetables and fares: http://www.sydneyferries.info/wharves-and-maps.htm

Bus accessibility: Tips on how to find and access low-floor buses with ramps. http://www.sydneybuses.info/travelling-with-us/bus-accessibility

A complete list of low-floor bus routes (PDF document): http://www.sydneybuses.info/global_files/wheelchair_services.pdf

Train accessibility: All CityRail trains are accessible using a boarding ramp. Not all train stations are wheelchair-accessible, however. Find out if a specific train station is wheelchair accessible: http://www.cityrail.info/stations/station_details

Zero200 wheelchair-accessible taxi service: The Zero200 fleet is made up from all the wheelchair accessible vehicles that are registered in Sydney. Book by calling (02) 8332 0200 or book online: http://www.zero200.com.au/bookings.htm

Subsidised community travel:

Senior Card holders: www.transport.nsw.gov.au/concessions/seniors-card.html

Pensioner Concession: www.transport.nsw.gov.au/concessions/pensioners.html

NSW War Widow/ers: www.transport.nsw.gov.au/concessions/war-widow.html

MOTORISED SCOOTERS: PRACTICE

LEVEL 1

Easier

- Operate the scooter safely in the confines of the home or hospital: e.g., driving forward and back (reverse); adjusting the speed; stopping suddenly
- Operate the scooter in the driveway or other outdoor area of the home: e.g., performing 3-point and 2-point turns; travelling up and down gradients
- Navigate around other pedestrians in a scooter-friendly community environment (e.g., hire a scooter in a shopping centre where they are available for loan and drive around one level of the centre)

LEVEL 2

More challenging

- Perform more challenging manoeuvres outside: cross quiet and busy roads; negotiate dropped and non-dropped kerbs
- Park and secure the scooter in a community location (e.g., outside a shop)
- Complete a return-journey in the scooter to a nearby shop or friend's house; navigate the scooter outdoors and indoors, and then drive home

MOTORISED SCOOTERS: RESOURCES

Scooter hire in shopping centres:

Motorised scooters can be trialled at a local shopping complex. Examples include:

Campbelltown Mall: wheelchair and electric scooter hire - ph 4629 9200
Warringah Mall: A free service supplies scooters to customers – ph 1800 245 642

Stockland shopping centres: Motorised scooters are available for hire. To book, phone:
Glendale: (02) 4954 9666
Wetherill Park: (02) 9609 7766.
Merrylands: (02) 9682 1855

Westfield shopping centres: All Westfield shopping centres provide free scooters for customers. Bookings can be made by calling the local customer service desk.
Penrith: (02) 4721 4354
Liverpool: (02) 9602 6633
Eastgardens: (02) 9344 6766
Parramatta: (02) 9891 3929
Hornsby: (02) 9477 5111
Chatswood: (02) 9412 1555

Scooter hire in the community:

www.walkonwheels.com.au
www.wheelchairs.sydney.net
www.mobilityoptions.com.au
www.metalite.com.au/hire.html

Purchasing a motorised scooter

www.scootersaus.com.au
www.mobsol.com.au
www.mobilityshop.com.au
www.metalite.com.au

Scooter Smart offer a free, no obligation, in-house scooter trial. They also offer advice on the best scooter for the person's needs.
www.scootersmart.com.au

Second-hand mobility equipment for sale through the NSW Independent Living Centre:
www.ilcnsw.asn.au/assets/2h_Equip.pdf

Scooter Safety

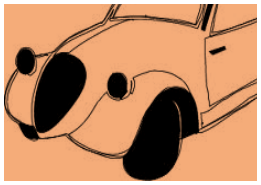
In NSW and the ACT, a **licence, registration and insurance** are not required provided that:

- The scooter does not weight more than 110kg, and
- The scooter does not travel faster than 10 km/h.
  (see www.seniorsmovingsafely.org.au/scooters.html)

Scooter Safety Guide including a self-assessment checklist:
www.hastings.nsw.gov.au/resources/documents/Scooter_Drivers_Guide.pdf
Help Cut Mobility Scooter Accidents guide, published by the ACCC:
www.accc.gov.au/content/index.phtml/itemId/945577

Funding Options

www.australian-mobilityscooters.com/funding-for-mobility-scooters.html



RETURN TO DRIVING: PROCESS

Notify RMS about stroke

The person has a legal obligation to notify the Roads & Maritime Service (RMS) about the condition prior to driving by either,
a) attending a RMS registry, or **b)** phoning 13 22 13
The RMS will provide the person with a *RMS Medical Report* form to be taken to his/her medical specialist for completion.

Assessment by medical specialist

The person must take the *RMS Medical Report* form to be completed by his/her medical specialist (e.g., neurologist, rehabilitation physician, *not* a GP). The person must submit the completed report to the RMS (in person or by post). Based on the completed report, the RMS will advise the person of one of the following outcomes:

Additional assessment required

One of the following assessments must occur before a decision about return to driving can be made by the RMS:

RMS disability test
The person must pass a disability test before driving can resume.

Driving assessment
Referral to a driver-trained occupational therapist for an driving assessment.

Medical review
The person must be assessed further by a medical specialist.

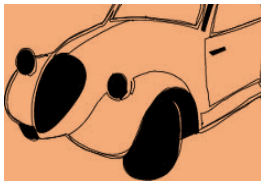
Based on the assessment outcome, the RMS will advise the person of his/her licensing outcome:

Medically fit to drive
The person must wait for a letter from the RMS before driving.

License with conditions
License issued by RMS with specific conditions (e.g., vehicle modifications, radius restriction, daylight hours only).

Medically unfit to drive
License cancelled by RMS.

Discuss driving cessation
Discuss alternatives to driving e.g., public and community transport, taxi services, walking.



RETURN TO DRIVING: INFORMATION

> " Legislation requires **a driver** to advise the [Roads and Maritime Service] of any permanent or long-term injury or illness that affects his or her safe driving ability. These laws can impose penalties for failure to report "
>
> *Austroads* (2006) p.10

General information:

For general information regarding return to driving, visit the **Roads and Maritime Service NSW website** at: http://www.rms.nsw.gov.au

Organising an occupational therapy driving assessment:

- A list of **driver-trained occupational therapists** can be found at the website of the OT-Australia-NSW website under the heading '*Find an OT*' http://www.otnsw.com.au/index.php, or

  http://www.otnsw.com.au/ot/ppdir.php

- **Occupational therapy driving assessments:**
  These may be conducted by private or public services:
  - *Public services* are usually geographically limited
  - *Private services* are more expensive, but generally have shorter wait-lists

Name: **Date**:

SCREENING CHECKLIST

1. **ASAP, ask the person with stroke to report the frequency of use of each mode of transport:** *(tick one box for each of the two timeframes)*

	In the month prior to stroke					In the last 2 weeks				
	At least once a day	Every 2 – 3 days	At least once a wk	Less than once a wk	Never	At least once a day	Every 2 – 3 days	At least once a wk	Less than once a wk	Never
Walking in the community (i.e., out the front gate)										
Public bus										
Train										
Taxi										
Ferry										
C**ourtesy van** or shuttle										
Car (as the driver)										
Car (as a passenger)										
Bicycle										
Wheelchair										
Motorised scooter										
Other _____										

2. **Which mode(s) of travel does the person want to resume/learn to use in the next 3 months?** *(list below)*

3. **Does the person hold a valid driver's license?** *(tick one)*

- ☐ Yes, and he/she wants to return to driving
- ☐ Yes, but he/she *does not* want to return to driving
- ☐

Name: **Date**:

No, he/she does not hold a valid driver's license

INCREASING OUTINGS: CHECKLIST

AIM: Six escorted outings beyond the boundary of the person's property or hospital grounds

	Walking: pavement, kerbs, rough ground, hills
	Walking : traffic lights, zebra crossings
	Walking : crowds, escalators, elevators, stairs
	Community transport : bus
	Community transport : taxi
	Community transport : train

Appendix 5:

Individualised audit feedback report

Contact details for the Out-and-about trial:
Principal Investigator, Dr Annie McCluskey: (02) 9351 9834 / annie.mccluskey@sydney.edu.au
Project Coordinator, Aspasia Karageorge: (02) 9351 9598 / aspasia.karageorge@sydney.edu.au

The Out-and-About trial: Improving quality of life after stroke

– Feedback from audits of 7 medical records for people with stroke treated by Team T –

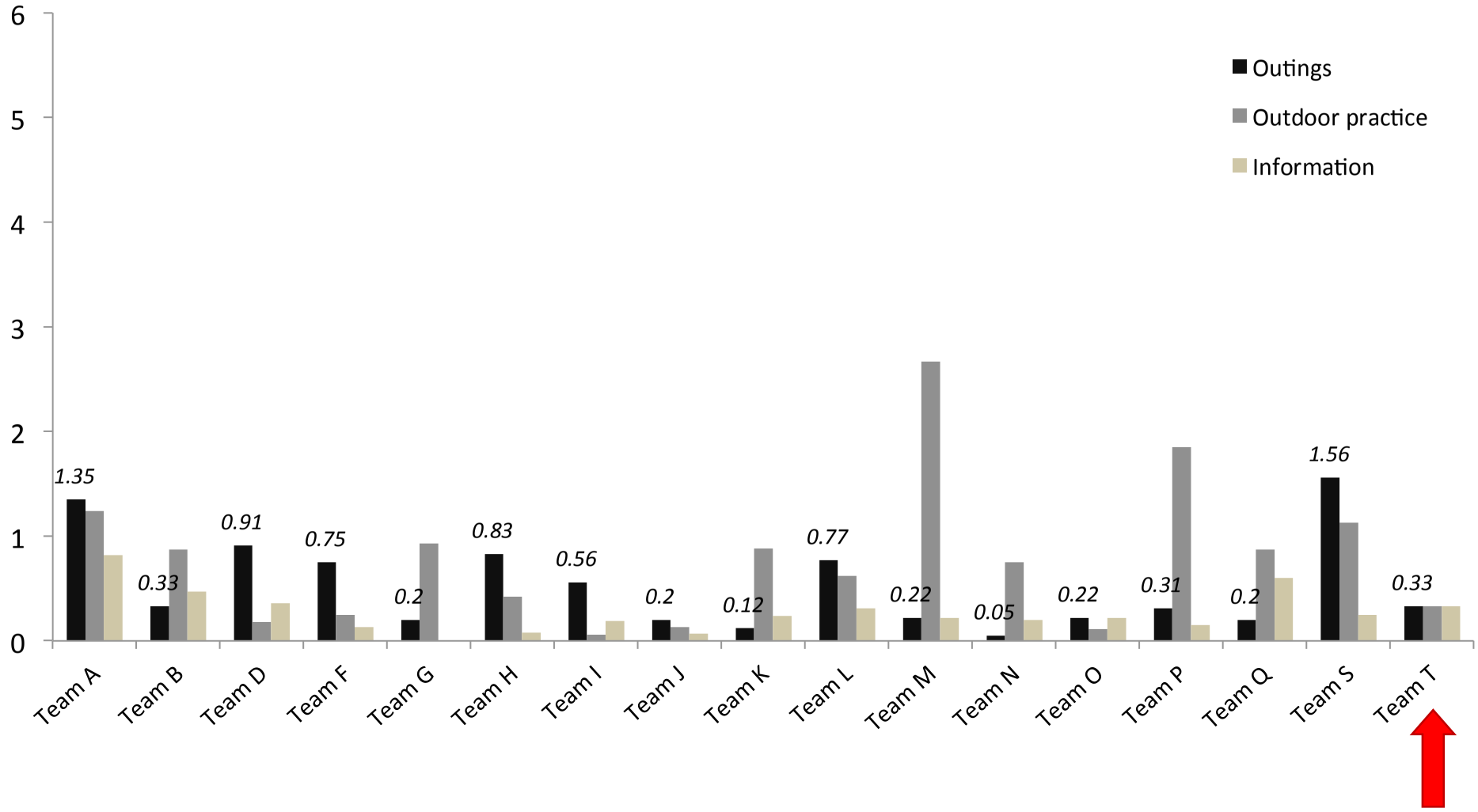
Presented by Dr Annie McCluskey
Monday 8 October
2012

Outings = An event whereby the patient and therapist travel outside of the front gate of the person's house or the perimeter of the hospital/rehab unit.

Outdoor practice = An event whereby the patient and therapist travel outdoors, but within the confines of the patient's home or the hospital/rehab unit grounds.

Information provision = An event whereby the therapist provides specific information (verbal or written) to a patient about modes of accessing the community (includes info provision about external rails, community transport services, mobility scooters and return to driving processes)

Mean **number of outings, outdoor practice and information sessions** provided to a person with stroke by OTs/PTs



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Outings, Outdoor practice and Information Provision provided to patients (per team)

		All teams	A	B	D	F	G	H	I	J	K	L	M	N	P	R	S	T
OUTINGS	**Mean**	.52	**1.28**	**.33**	**.91**	**.75**	**.20**	**.83**	**.60**	**.20**	**.12**	**.77**	**.25**	**.05**	**.31**	**.00**	**1.50**	**.33**
	SD	*2.18*	*2.08*	*.62*	*1.37*	*1.61*	*.56*	*1.34*	*1.40*	*.56*	*.33*	*1.16*	*.71*	*.23*	*1.11*	*.00*	*1.83*	*.52*
	Median	0	.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.00	.00
	UQ – LQ	*1 – 0*	*1 - 0*	*1 – 0*	*1 – 0*	*1 – 0*	*0 – 0*	*2 –0*	*0 –0*	*0 –0*	*0 –0*	*1 - 0*	*0 – 0*	*0 – 0*	*0-0*	*0 - 0*	*2.5 - 0*	*1 - 0*
	Min- Max	0-7	0 – 7	0 – 2	0 – 4	0 – 6	0 – 2	0 – 4	0 – 4	0 – 2	0-1	0 - 3	0 - 2	0 – 1	0 - 4	0 – 0	0 – 6	0 - 1
OUTOOR PRACTICE	**Mean**	.76	**1.17**	**.87**	**.18**	**.25**	**.93**	**.42**	**.07**	**.13**	**.12**	**.62**	**3.00**	**.75**	**1.85**	**.00**	**1.08**	**.33**
	SD	*1.74*	*1.85*	*1.64*	*.40*	*.77*	*2.31*	*.67*	*.26*	*.35*	*.33*	*1.04*	*4.12*	*1.97*	*2.03*	*.00*	*1.00*	*.52*
	Median	0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.50	.00	2.00	0	2.00	.00
	UQ – LQ	*1 –0*	*1 – 0*	*1 – 0*	*0 – 0*	*0 – 0*	*1 – 0*	*1- 0*	*0 –0*	*0 –0*	*0 –0*	*1 –0*	*5 – 0*	*0 – 0*	*2 - 0*	*0 – 0*	*2 – 0*	*1 – 0*
	Min- Max	0-12	0 – 6	0 – 6	0 – 1	0 – 3	0 – 9	0 – 2	0 – 1	0 – 1	0 - 1	0 – 3	0 - 12	0 - 8	0 – 6	0 – 0	0 – 2	0 - 1
INFORMATION	**Mean**	.27	**.78**	**.47**	**.36**	**.13**	**.00**	**.08**	**.20**	**.07**	**.24**	**.31**	**.13**	**.20**	**.15**	**.00**	**.17**	**.33**
	SD	*.72*	*1.16*	*1.30*	*.92*	*.34*	*.00*	*.29*	*.41*	*.26*	*.44*	*.48*	*.35*	*.41*	*.38*	*.00*	*.58*	*.52*
	Median	0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	UQ – LQ	*0-0*	*1 – 0*	*0 – 0*	*0 – 0*	*0 – 0*	*0 – 0*	*0 –0*	*0 –0*	*0 –0*	*0 –0*	*0 - 0*	*0 – 0*	*0 – 0*	*0 –0*	*0 – 0*	*0 – 0*	*1 – 0*
	Mn - Max	0-5	0 – 4	0 – 5	0 – 3	0 – 1	0 – 0	0 – 1	0 – 1	0 – 1	0 - 1	0 - 1	0 - 1	0 – 1	0 – 1	0 – 0	0 -2	0 – 1
	# of files	251	18	15	11	16	15	12	15	15	17	13	10	20	13	9	16	7

SD = Standard Deviation; UQ = Upper Quartile (.75); LQ = Lower Quartile (.25)

Duration, frequency and latency of physiotherapy and/or occupational therapy provided to patients (per team)

		All teams	A	B	D	F	G	H	I	J	K	L	M	N	P	R	S	T
Therapy duration (days)	**Mean**	**96.1**	**40.7**	**97.7**	**84.9**	**78.6**	**53.2**	**207**	**91**	**72.6**	**122.8**	**80.2**	**403.7**	**54.2**	**51.7**	**307.5**	**71.83**	**163**
	SD	*130*	*28*	*57*	*98*	*75*	*46*	*292*	*76*	*22*	115	67	*356*	*61*	*24*	*293*	*55*	*114*
	Median	64	37.5	126	65.5	67	31	104.5	76	76	83	67	382.5	39	57	172	56	171
	UQ – LQ	*98 - 35*	*64 –15*	*133 -54*	*117 -11*	*87 –35*	*91 –20*	*269- 49*	*152-16*	*85 –61*	*143 -42*	*97 - 44*	*712 -71*	*58 - 21*	*69 –37*	*563-81*	*103 -33*	*231 -69*
# PT/OT sessions	**Mean**	**14.5**	**7.6**	**7.0**	**6.5**	**21.5**	**14.9**	**12.8**	**6.5**	**10.4**	**29.8**	**11.0**	**44.7**	**8.8**	**20.2**	**12.0**	**6.75**	**17.33**
	SD	*16.1*	*5.5*	*8.17*	*5.95*	*21*	*12*	*17.0*	*9.6*	*5.3*	*26*	*8.9*	*50.4*	*9.0*	*12.3*	*11.2*	*4.0*	*10.3*
	Median	11	6	5	4	15.5	11	5.5	2	11	17	8	14.5	5.5	20	8.5	6.5	17
	UQ – LQ	*19 – 5*	*11 – 3*	*7 – 2*	*12 – 1*	*25 – 9*	*23 – 7*	*17 – 3*	*9 – 2*	*14 – 6*	*44 –12*	*18 - 4*	*104 - 7*	*11 - 4*	*24-13*	*17-4*	*10 - 4*	*22-10*
Days post stroke to 1st team contact	**Mean**	**72.1**	**36.9**	**82.1**	**127.3**	**64.0**	**91.6**	**250.4**	**75.2**	**119.5**	**59.9**	**54.0**	**151.1**	**67.9**	**85.8**	**83.7**	**39.8**	**135**
	SD	*72*	*43*	*37.3*	*51.9*	*56*	*34*	*351*	*66*	*52*	*53.5*	*57*	*81.0*	*37.1*	*60*	*84*	*48*	*124*
	Median	50	15	78	119	52.50	61	101.5	60.5	99	45.5	40	110.5	58.5	67	38	21	86
	UQ – LQ	*88 - 31*	*53 –11*	*104 -57*	*155 -51*	*74 –23*	*109 -45*	*262 -49*	*97 –36*	*137 -36*	*57 –39*	*63 - 18*	*230 -84*	*84 - 41*	*106-42*	*164-31*	*40 –17*	*247-31*
Days post hospital d/c to 1st contact	**Mean**	**28.4**	**5.3**	**32.5**	**42.0**	**13.6**	**13.9**	**150.3**	**25.6**	**42.4**	**24.2**	**25.5**	**104.3**	**33.5**	**59.8**	**33.0**	**11.73**	**38**
	SD	*42*	*2.9*	*35.6*	*31.9*	*18*	*16*	*188*	*17*	*45*	*31*	*59*	*93.7*	*24.6*	*72*	*26.8*	*17.1*	*34*
	Median	13	6	18	30	5.5	7	71	27	26	13.5	7	85	26	25	24.5	6	25
	UQ -LQ	*34 - 5*	*7 – 3*	*48 –12*	*75 – 16*	*11 – 2*	*22 – 4*	*209 -28*	*36 –14*	*55 –15*	*25 – 6*	*15 - 5*	*188 -26*	*48 - 16*	*72-14*	*49-18*	*13 – 2*	*59 - 16*

SD = Standard Deviation; UQ = Upper Quartile (.75); LQ = Lower Quartile (.25)

Patient stroke severity, at time of intake, for files audited (per team)

		All teams	A	B	D	F	G	H	I	J	K	L	M	N	P	R	S	T
MRS score *	**Mean**	**2.58**	**2.17**	**3.00**	**2.40**	**2.81**	**2.07**	**3.10**	**2.29**	**2.14**	**2.50**	**2.67**	**3.00**	**2.55**	**2.45**	**2.67**	**2.81**	**2.33**
	SD	.81	*.92*	*.76*	*.52*	*.91*	*.96*	*.88*	*.83*	*.69*	*.52*	*.52*	*.82*	*.89*	*.89*	*.52*	*.82*	*.52*
	Median	*3*	*2*	*3*	*2*	*3*	*2*	*3*	*2*	2	2.5	3	3	3	2	3	3	2
	UQ – LQ	*3 – 2*	*3 - 2*	*4 - 2*	*3 - 2*	*3 - 2*	*3 - 1*	*3 - 3*	*3 - 2*	*3 - 2*	*3 - 2*	*3 – 2*	*4 - 2*	*3 - 2*	*3 – 2*	*3 – 2*	*3 – 2*	*3 - 2*
SSS score **	**Mean**	**51.9**	**52.0**	**49.1**	**53.5**	**49.8**	**53.7**	**49.4**	**51.7**	**51.4**	**53.0**	**53.2**	**50.4**	**51.3**	**51.5**	**52.0**	**51.2**	**52**
	SD	*4.0*	*13.2*	*5.57*	*2.88*	*5.36*	*2.18*	*6.26*	*4.46*	*2.57*	*3.58*	*2.79*	*4.16*	*3.08*	*3.00*	*2.97*	*2.18*	*1.67*
	Median	52	55.5	47	54.5	51	54	52	52	52	52	53	52	52	53	52	52	52
	UQ – LQ	*55-51*	*57 -54*	*55 - 44*	*55 - 51*	*53 - 49*	*55 - 52*	*52 - 50*	*52 - 51*	*52 - 49*	*56 - 52*	*56 - 50*	*53 - 47*	*53 - 50*	*54 - 50*	*54 - 52*	*55 – 50*	*54 - 51*

***** = The **Modified Rankin Scale (MRS)** is a single item, global outcomes rating scale for patients post-stroke. It is used to categorize level of functional independence, ranging from 0 (no symptoms at all) to 6 (dead).

****** = The **Scandinavian Stroke Scale (SSS)** is a categorical scale, where several endpoints for neurological performance (speech, gait, motor performance, etc) are rated on several multi-item subscales. This measure focuses on the side of the body affected by stroke. The individual ratings are added and summarized as a total score ranging from 2 (most severe disability) to 58 (least severe disability).

Appendix 6:

Audit criteria

Date: Site #: Auditor Initials:

SECTION 1: Demographic Information

ID Number	Date of Birth	Age at Stroke	Gender Male = 1, Female = 0	Marital status 1=married, 2=divorced, 3=widowed, 4=single, 5=unknown	Living Situation 1=spouse/family, 2=alone, 3=other, 4=unknown	Date of Stroke	Side of Stroke 1-right, 2-Left, 0-unknown	Type of Stroke 0-unknown, 1-infarct, 2-hemmorage	Type of Stroke (write notes)	Date of Hospital D/C
		0								

SECTION 2: OT/PT Session and General Notes

Date	Therapist Type	Notes	Coded as:	Entered SPSS?

SECTION 3 Goals and Screening

Note the screening question below along with the date

Examples of screening question: How is the client getting ou

write outdoor mobility, transport and community par

EXACTLY as they are reported in the patient file and by whi

Any other Notes about Patient and file:

Referral Date (referral to the service)	**Date of First Contact with an OT/PT in team**	**Date of D/C from Program or last session**	**Days Since Hospital D/C to 1st Contact with team**	**Days Post Stroke to 1st Assessment**	**Days in the program**	**Stroke Within Previous 6 Months** yes=1, no=0	Stoke Severity **MRS Score**	Stoke Severity **SSS Score**	**Number of PT/OT Sessions**	**Screening Questions Asked** Yes=1, N=0	**Goals Made?** Yes=1, N=0
			0	0	0						

and which team member.

t and about? Family? Transit? Driving? Who is doing the shopping, etc?

ticipation goals in the general notes section

ch professionals.