

1000 reps a day: Practical strategies to increase practice after stroke

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Plan

- Activity levels in rehabilitation
- Semi-supervised practice
 - Classes
 - Family
 - Workstations
 - Devices
- Group activity – measuring exercise dose
- Group activity – implementing semi-supervised practice

Practice

One to one

Semi-supervised

Independent

Individual reflection

- Worksheet one

Patient and carer perceptions

Physical Environment:

- “A lack of opportunities . . . dead and wasted time” outside of therapy
- “waiting for something to happen.”

Eng et al 2014

Patient and carer perceptions

Organisation and culture:

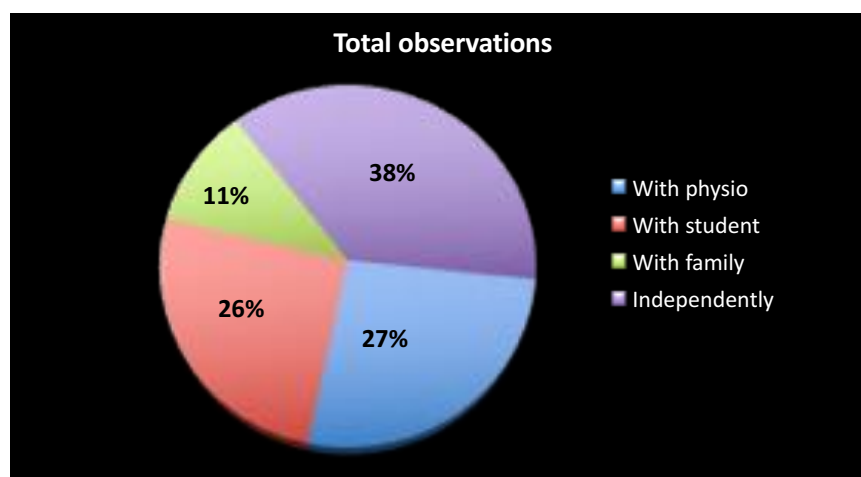
- Frequent unpunctuality of the clinical staff was a significant contributor to feeling out of control
- Lack of knowing what to do (patients and carers)
- “I’ll do anything to get out of here, but I just don’t know what to do.”

Eng et al 2014

Gym observation study - Bankstown

- 20 days – 4 times a day
 - 9.30, 10.30am and 2.30, 3.30pm
- 848 patient observations
- Average 13 patient in the gym area
- Half of all practice semi-supervised

Gym observation study - Bankstown



Gym observation study - Bankstown

Half of all practice semi-supervised

- 42 % of patients in gym in a classes or groups
- Practicing vs resting
 - 76% vs 24%

How many falls???

Semi-supervised practice

The problems -

- How to make it safe
- How to make it “good” practice
- How to record it

Effective Strategies

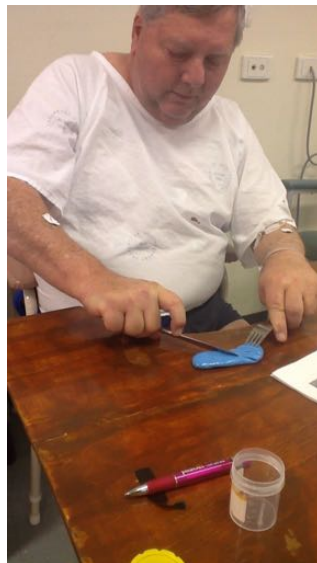
- Environment



Treacy 2015

Environment set up – guiding practice

How would you increase the quality of Rob's practice??



Environment set up – guiding practice



How would you increase the quality of Joe's practice??

Recording of practice

Most practice should be Semi-supervised



Week 1 practice

Austaya's practice					
19-23/10/15	mon	tues	wed	thurs	fri
One : One practice					
Foot tap with P/FI	50/50	100	250/200		
TM with harness	1.0 kph 5 min x2	1.0 kph 8 min			
Walking			6 MWT 178	50m x 4	50m x 4
Heel to tape stepping	320	200			
Reps 1:1	420	300	628	200	200
Semi-supervised practice					
STS	150	150	120	150	300
Stepping fwd	110/110	100/100	100 (L)	150/150	150/150
Foot tap		60/60	50 (R) up	100/100	100/100
Knee flex/ext against wall		100			
T/T Quads	400	800	250	500	380
T/T P/Flex			100	250	630
Hip abd			180		
Hip Flex	130				
TM with harness					1.5 kph 18 min 25 min
Balance class			510		742
Reps Semi-supervised	900	1370	1310	1400	2552
Total reps	1320	1670	1938	1600	2752
Proportion of practice that is S-S	68%	82%	68%	88%	93%

Week 1 practice

- Total reps = 9280
- One : one = 1748
- Semi-supervised = 7532
- **81% of practice is semi-supervised**

Week 2 practice

Austaya's practice

26-30/10/15

	mon	tues	wed	thurs	Fri (HV in am)
Stairs			3 x 6 stairs 8 x 6 stairs		
Reps 1:1			66		
STS	200		400	200	500
Stepping fwd	100/100		100/100	100/100	
Stepping with P/Flex	100 with son	100 with son			
Step over sandbag	100	100	100		
Step with heelstrike	100	200	100		250
Foot tap	100/100	100/100		200/200	200
Foot tap to cup					300
Stand and reach	100			105	
T/T Quads		500	350	500	
T/T P/Flex		300	250	250	
Hip Abd	250	450			
Hip Flex	200	250			
D/Flex	130		220	310	500
TM with harness			2 kph 1% incline 30 min	2 kph 1% incline 30 min	
Balance class	636		786		
Reps Semi-supervised	2216	2100	2406	1965	1750
Total reps	2216	2100	2472	1965	1750
Proportion of practice that is S-S	100%	100%	97%	100%	100%

Week 2 practice

- Total reps = 10569
- One : one = 66
- Semi-supervised = 10503
- **99% of practice is semi-supervised**

Most practice should be Semi-supervised



Most practice should be Semi-supervised

24th October



Most practice should be Semi-supervised

	24/10	25/10	28/10	29/10	31/10	2/11	3/11	4/11
Fw flexion with Ext Rot	95		100	100		200	200	
Shoulder Ext Rot						200	200	
Thumb abd	200	30	100	100		100	100	
Elbow flex/ext			100	100				
Pronation/supination					80			
Wrist ext			100	100		100	200	
Second finger extension					50			
Reach and transport cup/object	200	100	100 peg 100 cup	100 peg 100 cup	50 50	100	100	70
Stacking cotton reels								50
Clapping hands			100	100				
Total	495	130	700	700	230	700	900	120

2 weeks of practice

Total reps = 3975

ALL practice is semi-supervised

Most practice should be Semi-supervised

5th November





Classes

Participation

Attendance

Bankstown stroke unit timetable

	mon	tues	wed	thurs	fri	sat	sun
9.00	Champions class						
10.00	Champions class						
11.00	Arm group		Arm group		Arm group	Weekend warriors	Weekend warriors
12.00	Lunch						
1.30	Balance class	Dressing group	Balance class	Dressing group	Balance class		
2.00							
3.00							

Mr K



	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0730-0900	BREAKFAST SHOWER	BREAKFAST SHOWER	BREAKFAST SHOWER	BREAKFAST SHOWER	BREAKFAST SHOWER	BREAKFAST SHOWER	BREAKFAST SHOWER
0900-1100	GYM	GYM	GYM	GYM	GYM		
1100-1200	ARM GROUP	ARM PRACTICE	ARM GROUP	ARM PRACTICE	ARM GROUP	WEEKEND WARRIORS	ARM PRACTICE
1200-1230	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
1230-1330	REST BREAK	REST BREAK	REST BREAK	REST BREAK	REST BREAK	REST BREAK	REST BREAK
1330-1430	BED/CHAIR TRANSFERS	DRESSING GROUP	BED/CHAIR TRANSFERS	DRESSING GROUP	BED/CHAIR TRANSFERS	BED/CHAIR TRANSFERS	BED/CHAIR TRANSFERS
1430-1600	GYM	GYM	GYM	GYM	GYM		
1600-1700-1700-	REST BREAK DINNER	REST BREAK DINNER	REST BREAK DINNER	REST BREAK DINNER	REST BREAK DINNER	DINNER	DINNER
		SLEEP AT HOME		SLEEP AT HOME		SLEEP AT HOME	

Family and carers

Train families

- **Make it important**
 - Make an appointment
 - Teach families to be coaches
 - Train the necessary skills

Train families



Workstations

UL workstations from Hammel Rehabilitation Center, Denmark



Devices

Increase intensity of practice through
providing physical assistance/
feedback to practice

Sliding tilt table



Homemade device

