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

Total observations

- With physio: 38%
- With student: 27%
- With family: 26%
- Independently: 11%
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

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

<table>
<thead>
<tr>
<th>Date</th>
<th>One : One practice</th>
<th>Semi-supervised practice</th>
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<tbody>
<tr>
<td></td>
<td>Reps</td>
<td>Time</td>
</tr>
<tr>
<td>19/10/15</td>
<td>420</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>510</td>
<td>1370</td>
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<tr>
<td></td>
<td>1320</td>
<td>1670</td>
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</table>

| Reps done | 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

<table>
<thead>
<tr>
<th>26-30/10/15</th>
<th>Austaya's practice</th>
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<tbody>
<tr>
<td>Day</td>
<td>Mon</td>
</tr>
<tr>
<td>1</td>
<td>2216</td>
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Week 1 practice:

<table>
<thead>
<tr>
<th>Day</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
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<tbody>
<tr>
<td>1</td>
<td>2216</td>
<td>2100</td>
<td>2406</td>
<td>1965</td>
<td>1750</td>
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<table>
<thead>
<tr>
<th>Reps Semi-supervised</th>
<th>2216</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total reps</td>
<td>2216</td>
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Proportion of practice that is semi-supervised:

<table>
<thead>
<tr>
<th>Day</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100%</td>
<td>97%</td>
<td>100%</td>
<td>100%</td>
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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

<table>
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<tr>
<th>Date</th>
<th>24/10</th>
<th>25/10</th>
<th>26/10</th>
<th>27/10</th>
<th>28/10</th>
<th>29/10</th>
<th>31/10</th>
<th>2/11</th>
<th>3/11</th>
<th>4/11</th>
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<tbody>
<tr>
<td>Flexed with Ext Rot</td>
<td>90</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
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<tr>
<td>Shoulder Ext Rot</td>
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<td></td>
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<td></td>
<td>100</td>
<td>100</td>
<td></td>
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<tr>
<td>Thumb abd</td>
<td>200</td>
<td>70</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Elbow flex/ext</td>
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<td>100</td>
<td></td>
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<tr>
<td>Pronation/supination</td>
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<td></td>
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<tr>
<td>Wrist ext</td>
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<td></td>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>200</td>
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<tr>
<td>Second finger extension</td>
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<td></td>
<td>50</td>
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</tr>
<tr>
<td>Reach and transport cup/object</td>
<td>200</td>
<td>100</td>
<td>100 peg 100 cup</td>
<td>100 peg 100 cup</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td>100</td>
<td>70</td>
<td>90</td>
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<tr>
<td>Stacking cotton reels</td>
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<td></td>
<td>50</td>
</tr>
<tr>
<td>Clapping hands</td>
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<td>100</td>
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<td></td>
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<tr>
<td>Total</td>
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<td>230</td>
<td>700</td>
<td>900</td>
<td>900</td>
<td>120</td>
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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

<table>
<thead>
<tr>
<th></th>
<th>mon</th>
<th>tues</th>
<th>wed</th>
<th>thurs</th>
<th>fri</th>
<th>sat</th>
<th>sun</th>
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<tbody>
<tr>
<td>9.00</td>
<td></td>
<td></td>
<td></td>
<td>Champions class</td>
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<td>10.00</td>
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</tr>
<tr>
<td>11.00</td>
<td>Arm group</td>
<td>Arm group</td>
<td>Arm group</td>
<td>Weekend warriors</td>
<td>Weekend warriors</td>
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</tr>
<tr>
<td>12.00</td>
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<td></td>
<td></td>
<td>Lunch</td>
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<tr>
<td>1.30</td>
<td>Balance class</td>
<td>Dressing group</td>
<td>Balance class</td>
<td>Dressing group</td>
<td>Balance class</td>
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<tr>
<td>2.00</td>
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<td></td>
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<tr>
<td>3.00</td>
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</table>

### Mr K

![Mr K](image)
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

1000 Reps a Day workshop

Semi-supervised practice
Homemade device