An Interdisciplinary Approach to Activity-Based Stroke Rehabilitation

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The Association for the Rehabilitation of the Brain Injured (ARBI) is a multidisciplinary community-based long-term rehabilitation centre that acts as a bridge to improve clients' community integration and participation.

ARBI uses an activity-based interdisciplinary program model to address client needs while ensuring meaningful and functional practice during the recovery process.

E.T. Qualities
Young male (44 years)
Enjoyed hockey, theatre, guitar and singing
Motivated and hard working
Suffered a left MCA stroke:
• right hemiparesis
• expressive aphasia

E.T. COPM Goals
To play hockey
To play guitar
Karaoke DJ

Outcome Measure
Admission (18 month post-injury) Re-assessment (six months post-admission)

<table>
<thead>
<tr>
<th>COPM performance</th>
<th>1</th>
<th>1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPM satisfaction</td>
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<td>1.4</td>
</tr>
<tr>
<td>CB &amp; M</td>
<td>6/9/6</td>
<td>7/8/6</td>
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<tr>
<td>AFT</td>
<td>24</td>
<td>29</td>
</tr>
<tr>
<td>LCM</td>
<td>58/9</td>
<td>62/9</td>
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*Score from “Conversation & Expository Speech” subtest of the Boston Diagnostic Aphasia Examination - Third Edition (BDAE - 3).

Singing, acting and role-playing build confidence in speaking and improve expressive language skills.

SaeboFlex® splint practice increases strength and upper extremity function.

Guitar playing incorporates fine motor skills, coordination, speed and client passion.

Rollerblading simulates skating and allows for indoor, consistent clinical practice. Stick handling incorporates arm and hand function, while providing additional balance assistance.

Running promotes speed and power while enhancing endurance and coordination of trunk and limbs.

Evidence shows that task-specific training, compared with traditional practice and repetition, induces adaptive cortical reorganization and neural plastic changes necessary for motor learning (Takeuchi & Izumi, 2013; Bayona et al, 2005).

Evidence for E.T.
He has progressed to weekly community skating with the assistance of one person while using his hockey stick for balance and puck control.

Conclusion
E.T.'s success demonstrates that significant long-term recovery is possible when an activity-based program is implemented. As such, clinicians are encouraged to complement therapeutic approaches with client's motivation and relevant functional goals, through all phases of recovery.

Future Plans for E.T.
Community ice skating
Fitness centre membership
Volunteering (music)
Ongoing vocational rehabilitation