Transdisciplinary Allied Health

enables a single staff member to assess across multiple domains of Allied Health and function, and provide appropriate treatments and referrals

it moves away from the traditionally discrete roles of Allied Health
catalyst  noun
  cat-a-lyst  |  \ˈkə-tə-ləst\  

Definition of catalyst

1  : a substance that enables a chemical reaction to proceed at a usually faster rate or under different conditions (as at a lower temperature) than otherwise possible

2  : an agent that provokes or speeds significant change or action
   // That waterway became the catalyst of the area's industrialization.
   // He was the catalyst in the native uprising.
Chapter 1: 2008

Jane Hawkless

Review of care for stroke patients across the continuum identified:

Patients are seen by too many different AH therapists eg > 10

\[ \text{Duplication} + \text{handover} \quad = \quad \text{Inefficiency}++ \]

Lack of congruence between inpatient therapy and ongoing social/functional context
The solution...

Allied Health care **across** the continuum by **ONE** multidisciplinary team

A radical idea that made sense from a patient perspective but...

**HOW** could this be achieved practically??
Chapter 2: 2013

Transdisciplinary Allied Health

- Early, thorough assessment with enhanced identification of Allied Health need +/- ongoing referral
- Timely intervention
- Less duplication
- Greater efficiency:
  - reduced clinical OOS/time
  - reduced patient Length of Stay
Improved patient outcomes over 6 month follow-up:

- Quality of life
- Mobility
- ADL function
- Reduced hospital re-admission LOS
Readmission at 6 months

Readmission length of stay (days)

<table>
<thead>
<tr>
<th></th>
<th>AHCL</th>
<th>SC</th>
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</thead>
<tbody>
<tr>
<td>6 months</td>
<td>6.3 days</td>
<td>25.3 days</td>
</tr>
</tbody>
</table>
Chapter 3: March to August 2018

Mild stroke patients: doing more with less?

Re-consider the radical proposal from 2008...
could Trans-disciplinary AH provide a way to actually do this?!

Mild stroke patients: anticipated LOS < 7 days

Inpatient and initial outpatient PT & OT
Mild stroke sucks!

Forgetful

Unbalanced

Can't sleep

Isolated

Fatigue easily

Pain

Can't find the right word

Isolated

Carer stress

Dizzy

Can't drive

Vision loss

Weakness

Unbalanced

Sex drive

Can't concentrate

Unable to work

Anxious

Low mood
Patients with mild stroke may be at significantly greater risk of cognitive and functional impairments, and mood disturbance, than has been previously recognised

Bivard et al 2018
### Who were the patients?

<table>
<thead>
<tr>
<th></th>
<th>2017 (n=22)</th>
<th>2018 (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOCA mean /30 (n)</td>
<td>24.2 (6)</td>
<td>22.8 (26)</td>
</tr>
<tr>
<td>Delayed recall mean /5 (n)</td>
<td>2.3 (4)</td>
<td>2.0 (24)</td>
</tr>
<tr>
<td>MBI mean /100 (n)</td>
<td>89 (5)</td>
<td>94.2 (29)</td>
</tr>
<tr>
<td>Timed Up and Go Test mean sec (n)</td>
<td>24.1 (2)</td>
<td>11.9 (25)</td>
</tr>
<tr>
<td>BOOMER mean /16 (n)</td>
<td>11.2 (12)</td>
<td>13.0 (25)</td>
</tr>
<tr>
<td>DEMMI mean /100 (n)</td>
<td>60.1 (9)</td>
<td>71.0 (16)</td>
</tr>
<tr>
<td>Delay 9 Hole Peg Test mean secs (n)</td>
<td>8.7 (24)</td>
<td></td>
</tr>
<tr>
<td>Grip Strength weakness mean kg (n)</td>
<td></td>
<td>4.2 (25)</td>
</tr>
</tbody>
</table>

**Age:** 72.0 (mean)  
**Live alone:** 26%  
**Working:** 33.9%
Interventions

Balance retraining
Gait aid trial
Mobility retraining

ADL retraining
Home modification advice
Arm and hand function retraining
Home equipment trial
Fatigue management

Education++
Cognitive/memory strategies
Strategies for vision loss
Community access/activities

Carer support
Link to others...
Services, SW, DT, Psychology,
GP liaison
What tasks can be skill shared??

**Local consultation++**
PT/OT/SP/DT/SW/POD/Psych clinicians and Directors

**Task analysis**

**Risk Analysis**

**Training**
Patrick

78 years old. Lives with supportive wife.

High level function: billiards, competition shooting, bee-keeper solo hunting expeditions, plays music in band

POCS stroke: loss of half visual field
MOCA 21/30 – delayed recall 2/5

Assessment: Mobility (outdoors, community), shower

Treatment: Strategies for VF loss/ADL retraining, fatigue management, home equipment

AAHP activity: 300 minutes in 2x OOS

Discharge home: 64.5 hours
Patrick’s home
9 days later...

“I feel feeble”

“I can’t sleep”

“I am worried about my headaches”

Low mood!
Poor engagement in normal activities
Worried wife

Assessment
meal preparation
MOCA 23/30  ?language issues

Treatment:
1. Education and re-assurance... encourage return to normal activities with modified expectations (not hunting!)
2. Outdoor mobility, billiards
3. Fatigue management
4. Activities to retrain memory and cognition

Referrals to Day Therapy Psychology (+6 days)
Social Work (+13 days) and OT (+22 days)
**Engaged in therapy in life**

<table>
<thead>
<tr>
<th>DATE &amp; TIME</th>
<th>occupational therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.7.18</td>
<td>1400hrs. Pt, Emma Kay OT, OT Student, and wife Anne present. Consent obtained for student to conduct therapy. S/Pt reported going well since previous session. Feels he is &quot;160%&quot; better. Pt reported attending 3 shooting competitions since previous session and that his accuracy is equal to before the CVA. Pt reported that he has returned to gardening and guitar playing since previous session. He has not played billiards/pool as doesn't want to disappoint himself—considering playing billiards/pool soon. Pt and his wife report being very busy w/appointments so have had limited time for leisure activities. Pt reported completing all visual tracking and scanning exercises provided (no session). Feels accuracy improved. Wife reported she would grade it an A. Pt reported tracking using his finger works effectively for reading—only finding reading numbers vertically.</td>
</tr>
<tr>
<td>1345</td>
<td></td>
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</tbody>
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**OCCUPATIONAL THERAPY**

4.7.18

1545

Managing using tracking strategy. Pt reported increasing upcoming notes to playing guitar when previously read ahead working effectively.

Appts.: A and wife reported MRI found the blood clot in C's brain to have resolved by over half. Wife reported they can both return to driving as an OT after the 21/7/18.
## Outcomes

<table>
<thead>
<tr>
<th></th>
<th>2017 (n=22)</th>
<th>2018 (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of stay: mean hours</strong></td>
<td>105.5</td>
<td>72.0</td>
</tr>
<tr>
<td><strong>I/P PT+OT+AAHP: mean mins.</strong></td>
<td>340</td>
<td>276</td>
</tr>
<tr>
<td><strong>I/P PT+OT+AAHP: mean occasions</strong></td>
<td>5.0</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>I/P costs: mean $ per patient</strong></td>
<td>$6973</td>
<td>$6133</td>
</tr>
<tr>
<td><strong>% patients with outpatient follow-up</strong></td>
<td>54.5%</td>
<td>94.1%</td>
</tr>
<tr>
<td><strong>Delay to follow-up: mean days</strong></td>
<td>35.3</td>
<td>8.4</td>
</tr>
<tr>
<td><strong>% patients with home visit</strong></td>
<td>13.6</td>
<td>50.0</td>
</tr>
<tr>
<td><strong>O/P PT+OT+AAHP: mean mins.</strong></td>
<td>79.8</td>
<td>264.3</td>
</tr>
<tr>
<td><strong>O/P PT+OT+AAHP: mean occasions</strong></td>
<td>1.5</td>
<td>3.4</td>
</tr>
</tbody>
</table>

- **Quicker discharge**
- **More efficient PT+OT**
- **Cost savings $840 pp**
- **Timely follow-up for almost all, often at home**
- **More outpatient activity**
Hospital Admissions

% of patients

6 months prior to stroke

Stroke

6 months after stroke

2018

2017

14.7

13.6

32.3

50.0

LOS 76.1 hours (median)
Cost $12,644

LOS 21.4 hours (median)
Cost $1,286

2018

2017
Epilogue: 2019 onwards

Mild stroke patients need Allied Health

Transdisciplinary Allied Health can be a catalyst...
for comprehensive, timely, efficient care across the continuum

To be continued...
Acknowledgements:

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- Acute Stroke Unit Team Toowoomba Hospital
- GARSS Inpatient and Day Therapy Staff
- AHPOQ

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