STarT Back
– the Biopsychosocial Approach in the Management of Low Back Pain

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OVERSEAS CORPORATE SCHOLARSHIP PROGRAM (OCSP)

17 MAY 2017
Content

• STarT Back Approach
• Psychologically informed practice for high risk group
• UK physiotherapy clinics and STarT Back research team
• The way forward
The Biopsychosocial Management of Complex Low Back Pain: A Stratified Care Approach

Intensive Lectures and workshops

Meeting with research team

Clinical attachment

Haywood Hospital visit
Low back pain

Treatment
### Stratified care approaches

More systematic approach to management decision

**STarT Back**: Subgroups for Targeted Treatment

“Get the right patient to the right person at the right time”

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**The Keele STaRT Back Screening Tool**

<table>
<thead>
<tr>
<th>Question</th>
<th>Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My back pain has spread down my leg(s) at some time in the last 2 weeks</td>
<td></td>
<td></td>
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<tr>
<td>2. I have had pain in the shoulder or neck at some time in the last 2 weeks</td>
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<td></td>
</tr>
<tr>
<td>3. I have only walked short distances because of my back pain</td>
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<td></td>
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<tr>
<td>4. In the last 2 weeks, I have dressed more slowly than usual because of back pain</td>
<td></td>
<td></td>
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<tr>
<td>5. It’s not really safe for a person with a condition like mine to be physically active</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Worrying thoughts have been going through my mind a lot of the time</td>
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<td></td>
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<tr>
<td>7. I feel that my back pain is terrible and it’s never going to get any better</td>
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<td></td>
</tr>
<tr>
<td>8. In general I have not enjoyed all the things I used to enjoy</td>
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</table>

9. Overall, how much has your back pain been in the last 2 weeks?

<table>
<thead>
<tr>
<th>Scale</th>
<th>Score</th>
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<tbody>
<tr>
<td>Not at all</td>
<td>0</td>
</tr>
<tr>
<td>Slightly</td>
<td>1</td>
</tr>
<tr>
<td>Moderately</td>
<td>2</td>
</tr>
<tr>
<td>Very much</td>
<td>3</td>
</tr>
<tr>
<td>Extremely</td>
<td>4</td>
</tr>
</tbody>
</table>

Total score (max 9): __________ Sub score (Q5-Q8): __________

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*Hill et al 2008*

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**Matched Treatment Pathways**

Hill et al 2011

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**Significantly decreased disability related to back pain**

Hill et al 2011
The Keele STarT Back Screening Tool

Thinking about the last 2 weeks tick your response to the following questions:

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<tr>
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9. Overall, how bothersome has your back pain been in the last 2 weeks?

<table>
<thead>
<tr>
<th>Degree</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very much</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
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</table>

Total score (all 9): ____________  Sub Score (Q5-9): ____________

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Funded by Arthritis Research UK

- A simple prognostic screening questionnaire
- 9 Questions: Disagree/Agree
- Identify modifiable risk factors (biomedical, psychological, social) for on-going back pain disability
STarT Back Tool Scoring System

- **Total score**
  - 3 or less: Low
  - 4 or more:
    - Sub score Q5-9
      - 3 or less: Medium
      - 4 or more: High
Matched Treatment Pathways

Aim: To reduce pain and disability and enable patients to actively self manage LBP

**HIGH RISK**
Additional psychological obstacles to recovery

**MEDIUM RISK**
Mainly physical obstacles to recovery

**LOW RISK**
Low risk of chronicity

- Advice sheet
- S/E
- Back book
- Physical exam
- Self management
- Local exercise venues
- 15 min DVD “Get Back Active”

30 min face to face session
**Matched Treatment Pathways**

**Aim:** To restore function (including work), minimize disability even if pain is unchanged and to support appropriate self-management.

- **HIGH RISK**
  - Additional psychological obstacles to recovery
  - Advice information
  - Reassurance

- **MEDIUM RISK**
  - Mainly physical obstacles to recovery
  - Manual therapy
  - Ex to ↑ function

- **LOW RISK**
  - Low risk of chronicity
  - Acupuncture
  - RTW advice

- **45 mins session**
- **6 sessions**
- **3 months**
**Matched Treatment Pathways**

**Aim:** To restore function, minimize disability even if pain is unchanged, improve psychological functioning and enable patient to manage ongoing +/- future episodes of back pain.

- **HIGH RISK**
  - Additional psychological obstacles to recovery

- **MEDIUM RISK**
  - Mainly physical obstacles to recovery

- **LOW RISK**
  - Low risk of chronicity

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**Cognitive behavioural approach**

**Psychologically Informed Practice**

Main et al 2012

**60 mins session**
**6 sessions**
**3 months**
Investigate patient’s specific belief/expectations as a precursor to identifying targets for intervention and obstacles to recovery.

- **Attitude & beliefs**
  - Expect quick and easy cure

- **Family**
  - Family emphasizing fear of harm

- **Emotions**
  - Loss of enjoyment and mastery

- **Compensation**
  - Rx cost incurred
  - Sig withdrawal from normal ADL

- **Dx & treatment**
  - Diagnosing language leading to catastrophising and fear

- **Work**
  - Poor job satisfaction

Kendall et al 1997

As precursor to identifying targets for intervention and obstacles to recovery.
Common pain related beliefs

Hurt = Harm

Pain is uncontrollable

Passive treatments are the answer
Pain and Suffering

Pain

Suffering multiplied

Lost freedom & opportunity

Struggling with pain

Failure

Success

Freedom & opportunity

Maintained life direction

Suffering controlled

Dr. Kelvin Vowles
Understanding typical emotional reaction to pain

Linton and Shaw, 2011

<table>
<thead>
<tr>
<th>Anxiety</th>
<th>Fear</th>
<th>Anger</th>
</tr>
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<tbody>
<tr>
<td><img src="image1.png" alt="Anxiety Image" /></td>
<td><img src="image2.png" alt="Fear Image" /></td>
<td><img src="image3.png" alt="Anger Image" /></td>
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- Open avenues for understanding pain
- Patient feel being understood

<table>
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<tr>
<th>Guilt</th>
<th>Frustration</th>
<th>Depression</th>
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<tr>
<td><img src="image4.png" alt="Guilt Image" /></td>
<td><img src="image5.png" alt="Frustration Image" /></td>
<td><img src="image6.png" alt="Depression Image" /></td>
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- Enhance engagement and treatment
Communication Skill

Active listening

• Exchange thoughts, feeling and ideas, verbal and non-verbal
• To build up rapport and trust with patients
• To facilitate self-disclosure
• To co-produce the agenda

Reflecting
Paraphrasing
Clarifying
Summarizing

Help resolve ambivalence in the direction of change

Motivational Interviewing
Establish successful behavioural change

- Values based
- Generated by patient
- Important
- Realistic
- Enhance motivation

Baseline 20% off average capacity

Graded exposure / pacing

e.g. Hiking x 60'

Target
Building up confidence to cope with pain

**Self efficacy**
- Confidence in performing a particular behaviour
- Overcoming barriers

Vicarious learning

Mastery experience

Social persuasion

Experience of doing
Comparison of stratified primary care management for low back pain with current best practice (STaT Back): a randomised controlled trial


Summary
Background: Back pain remains a challenge for primary care internationally. One model that has not been tested is stratification of the management according to the patient's prognosis (low, medium, or high risk). We compared the clinical effectiveness and cost-effectiveness of stratified primary care (intervention) with unstratified current best practice (control).

Methods: 1573 acute (aged 20-88 years) patients with back pain (with or without radiology) consultations with general practitioners in England responded to invitations to attend an assessment clinic. Eligible participants were randomly assigned by use of computer-generated stratified blocks with a 2:1 ratio to intervention or control group. Primary outcome was the effect of treatment on the Roland Morris Disability Questionnaire (RMDQ) score at 12 months. In the economic evaluation, we focused on estimating incremental quality-adjusted life years (QALY) and healthcare costs related to back pain. Analysis was by intention to treat. This study is registered, number is ICTRN/12014096.

Findings: 851 patients were assigned to the intervention (n=564) and control groups (n=287). Overall, adjusted mean changes in RMDQ scores were significantly higher in the intervention group than in the control group at 4 months (1.7 [SD 3.5] vs 0.3 [3.5], between-group difference 1.4 [95% CI 1.1-1.6]; p<0.001), and at 12 months (4.3 [6.4] vs 3.3 [6.2], 1.06 [2.5-3.5]; p=0.01), equating to effect sizes of 0.32 (95% CI 0.20-0.45) and 0.30 (0.04-0.56) respectively. At 12 months, stratified care was associated with a mean increase in generic health benefit (0.012 quality-adjusted life years (QALY) and cost savings (£24.91 vs £274.40) compared with the control group.

Interpretation: The results show that a stratified approach, by use of prognostic screening with matched pathways, will have significant implications for the future management of back pain in primary care.

Hill et al, 2011 (n=851)

At 4 and 12 months post D/C:

- Fear avoidance beliefs
- Time off work
- Patient satisfaction
- QOL
Clinical Attachment

Cheadle Hospital
Biddulph Primary Care Centre
Cobridge Primary Care Centre
Bentilee Neighbourhood Centre
Rising Brook Clinic
Greyfriars Therapy Centre
• Implementation of stratified care (STarT Back) in clinical services

• Recent & ongoing musculoskeletal research

• Presentation of services in HK in relation to implementation challenges & opportunities
Haywood Hospital Visit

- Occupational Therapist
- Consultant Rheumatologist
- Physiotherapist
- Clinical Psychologist
- Rehabilitation Consultant Doctor
Our reflection

• Stratified care alters decision-making for the better
• Low risk patients are not over-treated
• Medium / high risk patients have a greater chance of treatment and this greatly improves outcome
• Training upskill the physiotherapists
MSK ASP

Pilot new service model

Therapists’ perception, knowledge and acceptance

STarT Back Approach

Pilot new service model

Information material
1) Adoption of STarT Back Approach in Back Pain Management in Hong Kong: From Incubation to Implementation

2) New Stratified Care Model for Back Physiotherapy Adopted from The United Kingdom: A Pilot Study in a Regional Hospital in Hong Kong
THANKS!

IAAHS,
AHG HAHO
Colleagues