Peri-operative optimisation workshop:

Enhancing preparation for surgery through application of behaviour change techniques

Dr Anne M Haase, Dr Rachael Barlow, Prof Tom Wainwright
Overview

• Why it’s important....problem...

• What it looks like....behaviour change techniques
  – Key factors? Techniques/models
  – Communication style – motivation
  – Change – who best to target
  – Complexity of approaches – multiple strategies and flexibility

• How do we do it?.....practical interventions to try..
  – Cancer surgery exemplar (prostate)
  – Discussions
Why it’s important...Background

• ~1.7 million people undergo surgery each year in UK
• ~250,000 (15%) high risk patients.
• High risk patients - 4 out of 5 deaths after surgery

The Royal College of Anaesthetists Perioperative Medicine vision document:

‘We must use the time between the decision to perform surgery and the procedure itself to assess the needs of individual patients and to optimise the treatment of long term disease.’
Peri-operative optimisation (prehabilitation)

• Pre-admission interventions to improve patients’ health and fitness:
  – Physical activity, nutrition, education, psychological, clinical, smoking, alcohol drug cessation/reduction interventions

Multimodal / multicomponent
Policy – lifestyle change

Physical activity benefits for adults and older adults

- Benefits health
- Improves sleep
- Maintains healthy weight
- Manages stress
- Improves quality of life

Type II Diabetes: -40%
Cardiovascular Disease: -35%
Falls, Depression and Dementia: -30%
Joint and Back Pain: -25%
Cancers (Colon and Breast): -20%

What should you do?

- Be Active
- Sit Less
- Build Strength
- Improve Balance

Be physically active

Aim for at least 60 minutes everyday

All activities should make you breathe faster & feel warmer

Physical activity for children and young people (5–18 Years)

- Builds confidence & social skills
- Develops co-ordination
- Strengthens muscles & bones
- Improves concentration & learning
- Improves health & fitness
- Maintains healthy weight
- Makes you feel good

Be active

- Play
- Run/Walk
- Bike
- Active travel
- Swim
- Skate
- Sport
- PE
- Workout
- Dance

Sit less

- Break up sitting time
- 2 days per week

Move more

- Find ways to help all children and young people accumulate at least 60 minutes of physical activity every day

Policy – lifestyle change

Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

- Choose wholegrain or higher fibre versions with less added fat, salt, and sugar
- Choose unsaturated oils and use in small amounts

https://www.nhs.uk/change4life-beta/food-facts
Effect of total-body prehabilitation on postoperative outcomes: a systematic review and meta-analysis, Santa Mina et al, Physiotherapy, 2014

<table>
<thead>
<tr>
<th>Study</th>
<th>Surgical Population</th>
<th>Sample Size</th>
<th>Hedges g and 95% Confidence Interval</th>
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<tbody>
<tr>
<td>Arthur</td>
<td>Visceral</td>
<td>123</td>
<td></td>
</tr>
<tr>
<td>Carli</td>
<td>Visceral</td>
<td>56</td>
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<td>D'Lima TX1</td>
<td>Ortho</td>
<td>10</td>
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<tr>
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<td>Ortho</td>
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<td>Dronkers</td>
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<td>Visceral</td>
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<td>Hoogeboom</td>
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<td>Rosenfeldt</td>
<td>Visceral</td>
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<tr>
<td>Williamson</td>
<td>Ortho</td>
<td>60</td>
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Does it work?

- Randomised controlled trials (RCTs) show that prehabilitation interventions can:
  - Reduce postoperative complications
  - Decrease the length of hospital stay
  - Facilitate the patient’s recovery
But...how and why do interventions work?

- Mechanisms – behaviour change
- Why do we need to know this?
  - More effective, repeatable outcomes
  - Teachable moments
  - Postoperative care
  - Opportunity for sustainability of behaviour
Context of surgery (peri-operative care)

• Why it’s important....problem....

• What it looks like....behaviour change techniques
  – Factors to consider
  – Models – simple to complex

• How do we change behaviour.....practical interventions..
Why we change

“Factors that help us”
Theory of Planned Behaviour...extended

Belief system

- Behavioural beliefs
- Normative beliefs
- Control beliefs

How you feel & think about plans

- Expected outcome
- Value placed on outcome

What you perceive to be expected of you

- Perception of expectations
- Motivation to comply

How much control you think you have to do plans

What you say you plan to do

What you actually do

Social environment

- Descriptive norms
- Instrumental norms
- Self-identity
- Past behaviour
The Integrated Change Model (simplified)

- I-Change Model (deVries, 2016)

Awareness
  - Cognizance
  - Knowledge
  - Risk Perception
  - Perceived Cues

Motivation
  - (intention)
  - Attitude
  - Social Support
  - Self-Efficacy

Action
  - Self-Efficacy
  - Action Plans
  - Skills
  - Barriers

Behavior
Social-contextual factors: supportive vs controlling

Choice, control, connectedness

Motivation: autonomous vs controlled

How you act (behaviour)
Self-Determination Theory model

Social factors

Autonomy
- Supportive
  - Listen
  - Empathise
  - Provide rationale
- Controlling
  - Coerce
  - Pressure
  - Authoritarian

Need satisfaction

Autonomy
- To feel like the origin of your behaviour

Competence
- To feel able to enact the behaviour

Relatedness
- To feel connected to and understood by others

Motivation

Autonomous
- Fun
- Value benefits
- In line with values

Controlled
- Guilt
- Pressure from others
- Complying with demands

Behaviour

Physical activity
Eating behaviour
Sedentariness
Psychological needs

Autonomy
• To be the origin of one’s behaviour, to experience volition and psychological freedom

Belongingness (Relatedness)
• To feel mutually connected with and understood by others

Competence
• To be effective in one’s environment & pursuits.
• The needs are innate and when satisfied promote growth, wellbeing and positive forms of motivation
# Motivation to change

<table>
<thead>
<tr>
<th>Importance - Why</th>
<th>Confidence - How, what?</th>
<th>Readiness - When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it worthwhile?</td>
<td>Can I?</td>
<td>When?</td>
</tr>
<tr>
<td>Why should I?</td>
<td>How will I do it?</td>
<td>Should I do it now?</td>
</tr>
<tr>
<td>How will I benefit?</td>
<td>How will I cope with x,y,z?</td>
<td>What about other priorities?</td>
</tr>
<tr>
<td>What will change</td>
<td>Will I succeed if..?</td>
<td></td>
</tr>
<tr>
<td>At what cost?</td>
<td>What change?</td>
<td></td>
</tr>
<tr>
<td>Do I really want to?</td>
<td></td>
<td></td>
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<tr>
<td>Will it make a difference?</td>
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ERAS® Society
Why don’t people change?

• Conflict between two courses of action each of which has perceived costs and benefits associated with it.
• Unresolved ambivalence is often the reason why people get stuck.
• How ambivalence is handled influences outcome.

How can we help patients change – communication strategies....
Conclusions

• Key BCTs:
  – regulation, social support, goals and planning
• Only 2 studies reported use of theoretical model
• Quality reasonably good

• Implications for practice
  – Need for integrating theory and BCTs
  – Consider communication approach – MI based??
  – Sustaining behaviour change after surgery...
It’s **what** you say & **how** you say it

**Need-supportive language**

<table>
<thead>
<tr>
<th>Autonomy supportive language</th>
<th>Controlling language</th>
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<tbody>
<tr>
<td>Something you might find helpful is if you adjust your grip, can I show you?</td>
<td>You’re holding your racket all wrong, you should hold it like this, see?</td>
</tr>
<tr>
<td>This is a tricky activity isn’t it? Does anyone have any tips on how to get across the balance bar?</td>
<td>You need to focus on walking in a straight line to get this right.</td>
</tr>
<tr>
<td>Which warm up would you like to do today?</td>
<td>We’re going to do X warm up today.</td>
</tr>
<tr>
<td>Well done Finn, you tried really hard on your dribbling.</td>
<td>Well done Finn, you did that dribbling exactly the way I wanted.</td>
</tr>
<tr>
<td>You might find it easier to try this first.</td>
<td>Do it like this.</td>
</tr>
<tr>
<td>Almost there, you’re so close.</td>
<td>You should get it in a minute.</td>
</tr>
<tr>
<td>You may find that holding your hand like this helps to improve your relay hand over.</td>
<td>You two should work on your relay hand over.</td>
</tr>
<tr>
<td>Keep your speed down, just a bit of room!</td>
<td>Slow down!</td>
</tr>
</tbody>
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Motivational Interviewing
Useful method....

- “a client centred, directive method for enhancing intrinsic motivation to change by exploring & resolving ambivalence”

- To help clients explore and resolve ambivalence about exercise and eating behaviour
  - Collaborative
  - Evocative – draws on patient perspective/ideas
  - Honors client autonomy
2 phases of Motivational Interviewing

Phase I
- AIM
  - express empathy
  - minimise resistance
  - explore ambivalence
  - develop discrepancy
  - Increase readiness?
  - build confidence

Phase II
- AIM
  - explore options
  - agree goals
  - agree a plan
  - strengthen commitment
  - strengthen confidence

Decision to change

Tools and strategies
Key ideas to focus on for change

- **Good/bad practice**
  - Emphasis autonomy: sense of control, freedom of choice, ability or obligation to decide about their attitudes and actions towards change
  - Seek collaboration: seek consensus with the client regarding tasks, goals or directions of the session
  - Affirm: accentuate something positive about the client
  - Giving information: educates, provides feedback, or expresses a professional opinion without persuading, advising, or warning
  - Persuade: overt attempts to change the client’s opinions, attitudes or behavior using tools such as logic, compelling arguments, self-disclosure, or facts
  - Confronts: directly and unambiguously arguing, shaming, blaming, criticising, labeling, warning, ridiculing, or questioning the client’s honesty

The Power of And in Reflections

- **sustain talk**
- **change talk**
Questions to use for change....

**Change Talk – Evoking**

<table>
<thead>
<tr>
<th>Start with preparatory change questions:</th>
<th></th>
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<tbody>
<tr>
<td>Desire:</td>
<td>What would you <em>like</em> to change?</td>
</tr>
<tr>
<td>Ability:</td>
<td>How <em>could</em> you do it?</td>
</tr>
<tr>
<td>Reasons:</td>
<td>Why might you <em>want</em> to......?</td>
</tr>
<tr>
<td>Need:</td>
<td>What <em>needs</em> to change?</td>
</tr>
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<table>
<thead>
<tr>
<th>Move to mobilising when the client appears engaged and ready:</th>
<th></th>
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<tbody>
<tr>
<td>Commitment:</td>
<td>How do you <em>feel</em> about the change?</td>
</tr>
<tr>
<td>Action:</td>
<td>What <em>ideas</em> do you have for change?</td>
</tr>
<tr>
<td>Taking steps:</td>
<td>What have you <em>achieved so far</em>?</td>
</tr>
</tbody>
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### Communication techniques....

#### Motivational Interviewing

1. **Evoke their ideas** (open questions) *How do you feel about this, what do you want to do, what are your ideas?*
2. **Listen to be heard** (reflect/summarise)
   
   Reflect as much as you question! *You’re hoping to…, you’re worried about…, you’re feeling…,*
3. **Affirm the positive** (affirm) *You’ve put a lot of effort into this. You’re the expert on your situation, what do you think?*

#### MI for change: processes

1. **Engage:** *Shall we work together?* Seek to build rapport with and understand the client.
2. **Focus:** *What to change?* What is the client concerned about? Ask permission to share your concerns too. Negotiate a mutual agenda.
3. **Evoke:** *Why change?* Draw out the client’s own reasons to change.
4. **Plan:** *How to change?* If they want to, support them to plan changes.

#### MI advice giving: 3 stages

1. **Explore their ideas** *What are your thoughts on…? How are you managing this issue right now?*
2. **Ask permission and provide information**
   
   *I have some ideas about …………, would you be happy for me to share them? Would it be alright if we talked about……….?*
3. **Explore their response** *How do you feel about that? How does that sit with you?*

#### MI for change: ask – listen - reflect

1. **Engage:** *How are you? How are things at home?*
2. **Focus:** *What concerns, if any, do you have about ….? What might you want to talk about? Is there anything else?*
3. **Evoke:** *If you decided, how could you imagine doing it? Why might you want to make a change in handling finances? What are you ready to do?*
4. **Plan:** *What are you going to do next? How will go you about it, in order to succeed?*
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Communication techniques…. (1)

MI for change: processes

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   What is the client concerned about? Ask permission to share your concerns too. Negotiate a mutual agenda.

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   Draw out the client’s own reasons to change.

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Communication techniques....(2)

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4. Plan: What are you going to do next? How will go you about it, in order to succeed?
MI advice giving: 3 stages

1. Explore their ideas
   What are your thoughts on….? How are you managing this issue right now?

2. Ask permission and provide information
   I have some ideas about ............, would you be happy for me to share them? Would it be alright if we talked about.........?

3. Explore their response
   How do you feel about that?
   How does that sit with you?
Cancer exemplar

1. Each group/table has one of the communication strategy squares

2. Discuss how this might apply to this scenario:

   “A 58 year old man has been diagnosed with bowel cancer and needs to become more fit for surgery. During the peri-operative clinic, the anesthetist and clinic nurse mention enhanced preparation/prehab as part of the enhanced recovery programme.”

   Try out one communication strategy to engage patient in thinking about increasing levels of physical activity....

3. Discuss in group/feedback to general discussion
Time for some discussion

Key factors? Techniques/models
Communication style – motivation
Change – who best to target
Complexity of approaches
  – multiple strategies and flexibility
Fidelity – delivery
Thank you for your attention!

Any questions?

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