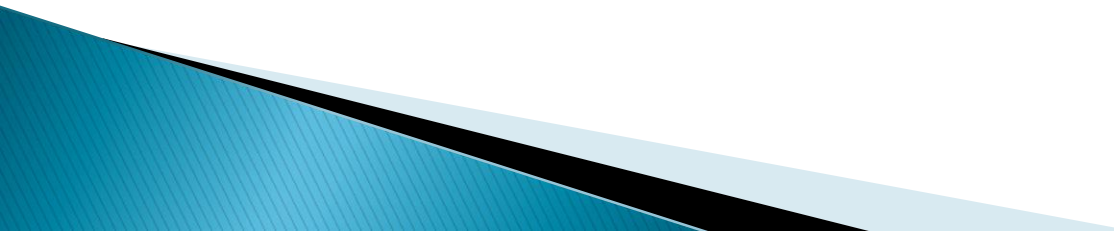


Recovery Expectations and WAD Recovery

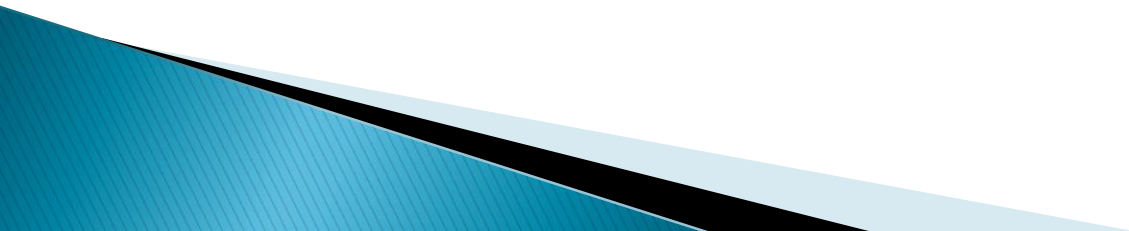
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Objectives

1. What is meant by “recovery expectations”?
 2. Expectations and WAD recovery: the evidence
 3. How are expectations formed?
 4. Implications for WAD management
- 

Expectations

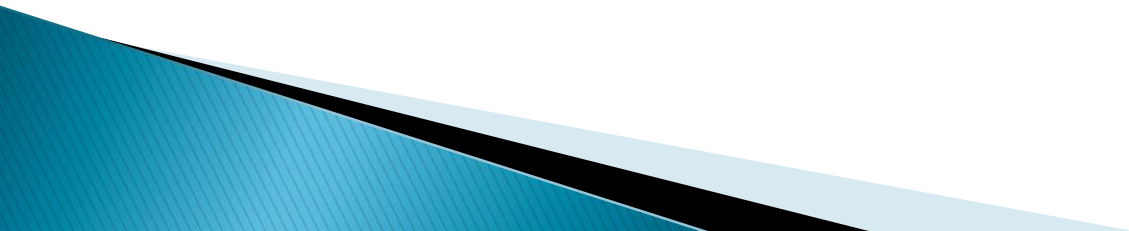
...the intervention itself may matter less than the patient's expectations... (Bialosky, Bishop & Cleland, 2010)



What are “Expectations”?

- ▶ Beliefs about pain determine the way we make sense of the experience of pain
 - thought to form part of the basis for our perceptions of pain.
- ▶ Expectations are a particular type of belief
 - Belief about the future
 - Recovery expectations are beliefs about future recovery.

Are recovery expectations associated
with WAD outcomes?



Are recovery expectations
associated with WAD outcomes?



Evidence: Sweden

- Holm et al: 2008.
 - Swedish insurance cohort
 - Outcome: disability at 6 months (N=1032 at 6 months)
- Compared to those anticipating good recovery
 - Those with intermediate recovery expectations twice as likely to have high disability
 - Those with low recovery expectations 4 X more likely

After controlling for post collision symptoms and pain, anxiety, depression, PTSD symptoms, coping, sociodemographic factors, prior health, prior injuries.

■ ■ ■

- ▶ Rydman et al. 2016
 - Swedish injury insurance claimants
 - Outcome: self-rated global recovery (N=116 at 6 months)
 - Of those expecting to fully recover, 42% had recovered at 6 months. Of those not expecting to recover, 21% had recovered at 6 months

No adjustment for confounding

Evidence: Canada

▶ Carroll et al., 2008

- Canadian insurance cohort (N=5,698 with follow-up data)
 - Outcomes: time to self-rated global recovery; disability resolution (score of 0 on Pain Disability Index); neck pain resolution (score of 0/1 on 11-point NRS)
 - Compared to those who did not expect to get better, those anticipating that they would get better soon...
 - self-reported global recovery over 3½ X faster
 - disability recovery 3 X faster
 - neck pain recovery almost 2 X faster

After adjusting for socio-demographic factors, self-reported prior health/injuries; collision factors; pain extent and intensity after the crash; other injuries besides WAD; hospitalization after crash; health care received and post-crash symptoms

■ ■ ■

- ▶ Ozegovic et al., 2009
 - Subcohort of Carroll et al.,
 - Still off work due to the collision at baseline
 - Outcome: time to self-rated global recovery (N=2050)
 - Those expecting to *return to usual job*
 - Recovered 1½ times more quickly

After adjusting for socio-demographic factors, self-reported prior health/injuries; direction of impact; pain extent and intensity after the crash; other injuries besides WAD; hospitalization after crash; health care received and post-crash symptoms



- ▶ Bohman et al., 2012
 - Subcohort of Carroll et al.,
 - seen for physical therapy in first few days
 - Outcome: time to self-reported global recovery (N=599 at 6 months)
 - Those with poor recovery expectations 50% less likely to have recovered at any given time point during follow-up

After adjusting for post collision symptoms and pain, anxiety, depression, PTSD symptoms, coping, sociodemographic factors, prior health, prior injuries, health care frequency.



▶ Bostick et al., 2013

- Canadian patients attending physiotherapy and chiropractic clinics for WAD
 - Outcomes: Neck disability and neck pain (N= 55 at 3 months, 48 at 6 months)
- Those believing WAD pain was permanent (arguably poor expectations)
 - Greater neck disability and greater pain at both 3 and 6 months

After adjusting for age, sex, history of WAD, baseline pain intensity and baseline disability



▶ Ferrari 2014

- Canadian patients attending a walk-in clinic
 - Outcome: self-rated global recovery at 3 months (N=116)
- Those with good recovery expectations
 - 2½ X more likely to have recovered by 3 months

Confounders considered were initial disability, age, sex

Evidence: Norway

- ▶ Vetti et al., 2010
 - Norwegian ER and clinic patients
 - Outcomes: neck disability (NDI > 8/50) and neck pain (≥ 4 on 11-point NRS) at 12 months (N=111)
 - Those with poor expectations
 - 5½ X more likely to have neck disability at 12 months
 - 4 X more likely to have neck pain at 12 months

No adjustment for confounding

Evidence: Denmark

- ▶ Gehrt et al., 2015
 - Danish referrals from GP or ED to a research unit
 - Outcome: Work capability at 12 months (N=651)
 - Those with poor initial expectations for future working ability
 - 3 X more likely to have reduced working capacity at 1 year

Confounders considered were education, age, sex, illness perceptions, baseline neck pain

Evidence: Great Britain

- ▶ Williamson et al., 2015
 - Persons attending ED in Great Britain and still experiencing pain 3 weeks after the collision; self-referred to a physical therapist as part of a RCT
 - Outcome: Neck disability (NDI > 30%) at 1 year (N=459)
 - Those predicting that recovery would take > 6 months (or were unsure they would recover) were twice as likely to have disability at 1 year

After adjusting for age, gender, previous neck pain, widespread chronic pain, social support, initial pain, psychological distress, coping, number of symptoms

Evidence: USA

- ▶ McClean et al., 2014
 - Americans presenting to emergency rooms in 4 states
 - Outcome: Pain non-recovery (≥ 4 on 11-point NRS) at 6 weeks post-collision (N=859 at 6 weeks)
 - Those expecting to take > 30 days to recover were 2.7 times more likely to have pain ≥ 4 at 6 weeks
 - for those not litigating (no association in litigants)

After adjusting for initial pain, catastrophizing

So...

- ▶ Why do people formulate these early expectations?

Expectations for Recovery

- ▶ But what does recovery mean?
 - Definitions used in quantitative studies vary
 - No neck pain
 - No neck symptoms
 - Neck pain ≤ 1 on 0–10 scale
 - Neck pain ≤ 3 on 0–10 scale
 - 0 on disability scale
 - NDI < 5 (10%)
 - NDI $< 30\%$
 - “Yes, I have recovered”
 - “all better or quite a bit improved”

Recovery

► Qualitative study

- “How will you know when you are recovered?”
 - Chronic neck pain of traumatic origin
- 5 themes
 - Symptoms absent or at least manageable
 - Able to participate in valued life roles
 - Having the physical capability I ought to have
 - Feeling positive emotions
 - Re-establish sense of self (feeling like myself again)

Walton et al., 2013

Recovery

► Qualitative study

- What does “recovery” mean to you?
 - MSK injury \leq 6 weeks prior, physiatrist or physical therapy patients
- 2 main themes
 - Recovery means complete symptom cessation and pain-free function
 - Recovery means being able to function despite some pain

Sources of recovery expectations

1. Physician diagnosis, plans for treatment
 - Especially dependent on radiographic imaging
 - Also affected by trust in the doctor, trust in the treatment facility they are being referred to



"I hate cats! I want a dog scan."

Sources of expectations

- 2. Prior experiences with injury, health
 - Past negative experience
 - “...I [don’t] expect to get better...anxiety based on my previous injury...”
 - Past positive experience
 - “...[expects to get better] in two months...I never really had an injury that’s lasted long.”
 - Contrast with prior experience
 - I’ve had strains before...but I’ve never had this before...I don’t feel like this is something that is going to get better by itself...”

Sources of Expectations

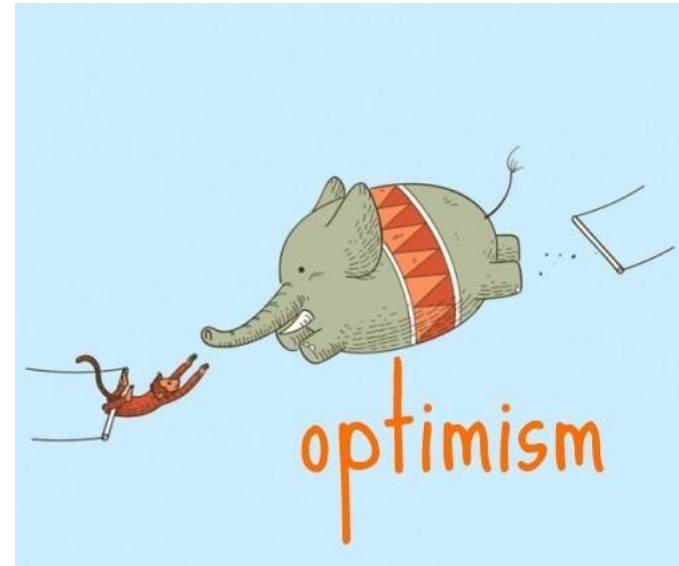
- 3. Others' experiences, expectations, attitudes
 - Reassuring
 - “I’ve heard [positive things] from other people who have had a similar treatment...”
 - Discouraging or frightening
 - “My Mom says you can’t ever lift anything again because of this...[the injury] can change the course of the things you can do for the rest of your life...”
 - No influence
 - “None. Its really up to you to get better.”

Sources of expectations

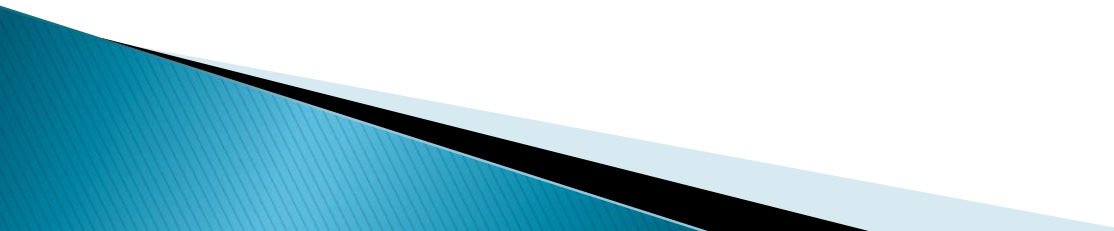
- 4. Personal knowledge or external sources of information influence expectations
 - “I’ve read some of the research ... how well people do recover.”
 - “Just reading online, you know, looking up every symptom I have...”

Sources of Expectations

- 5. “Who I am influences what I expect”
 - Recovery expectations driven by resilience and determination
 - “[my positive expectations] come from myself, my inner self. Because I’m very positive...”



Implications?

- ▶ In those with recent injuries, “recovery” may mean
 - Return to function despite residual pain (seen in some with prior pain problems or
 - Complete symptom cessation (most likely, even in those with prior unresolved pain)
 - ▶ Distinguish ideal vs. “good enough” recovery?
 - ▶ Distinguish “hope/wish” vs. “hope/expectation”
- 

Expectations and Hopes

- ▶ Distinguish wishes from expectations
- ▶ Over time...



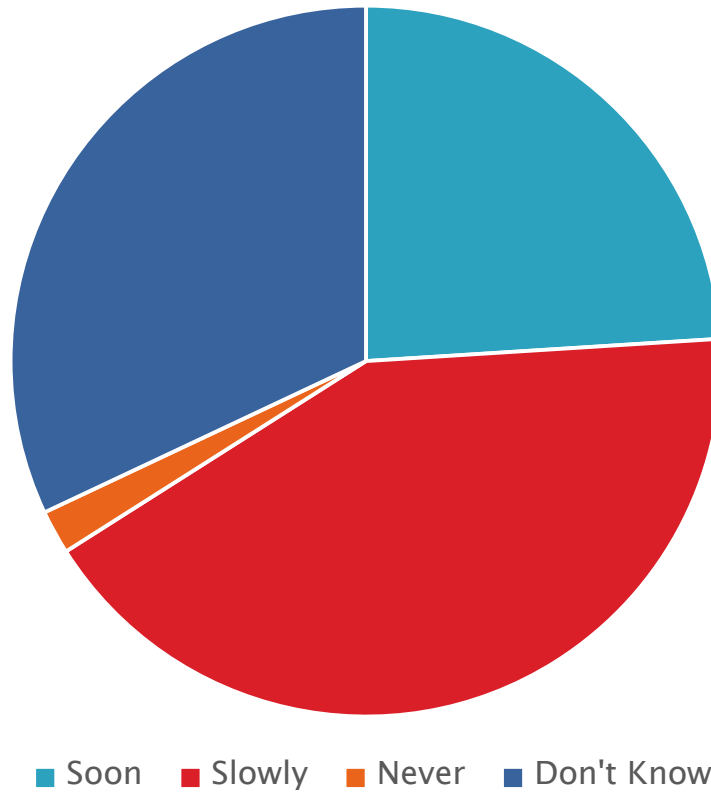
Implications

- ▶ Theory suggests health expectations influenced by characteristics of health condition
 - Qualitative study:
 - Early post-injury expectations driven by need for diagnosis involving radiographic confirmation



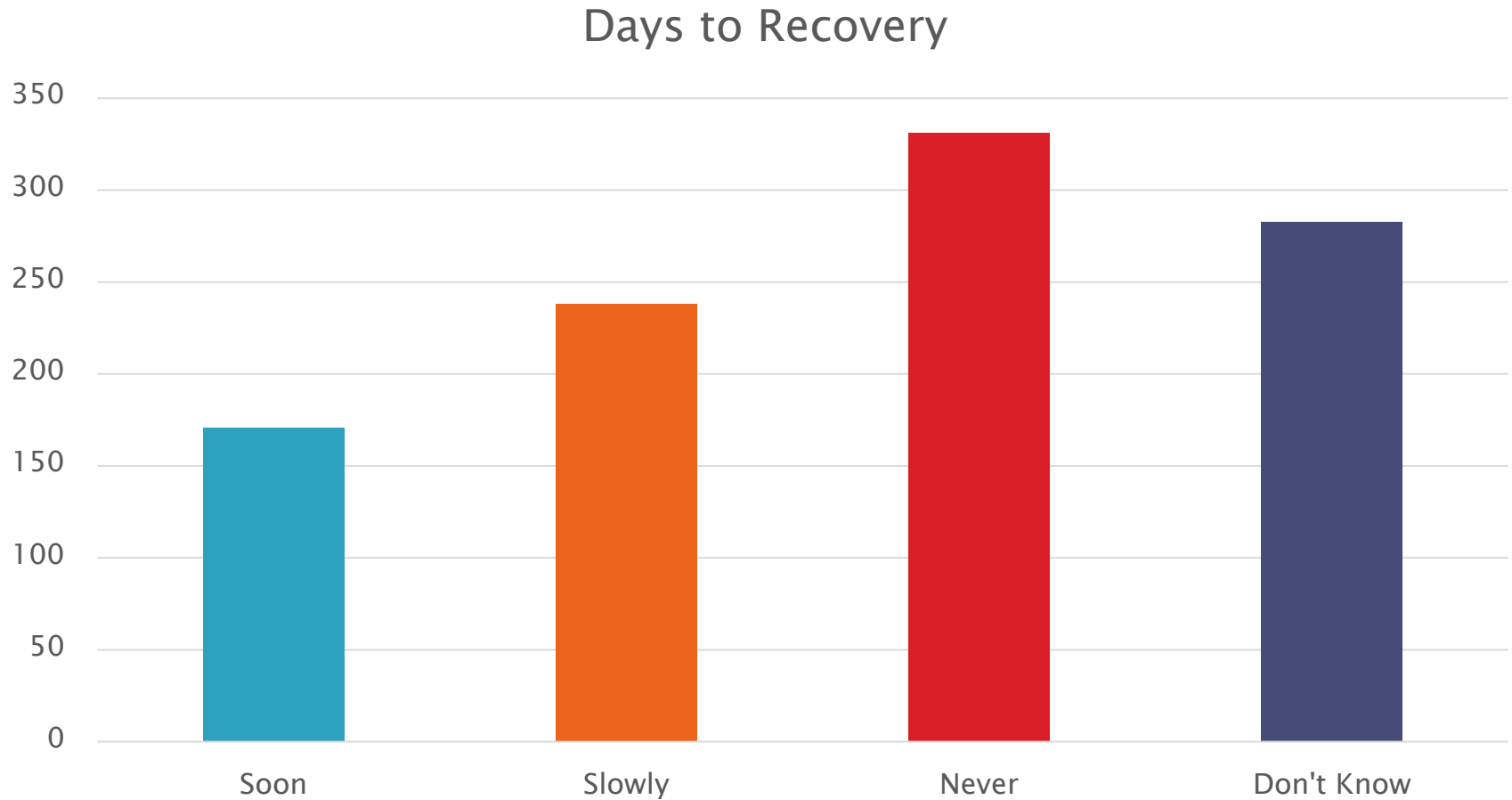
Expectations for Recovery

Expectations?



Carroll et al., 2009

Median time to Recovery



Carroll et al., 2009

Usual Course of Recovery

- ▶ Where recovery is defined as total cessation of symptoms
 - Median time to recovery seems to be about 6 months
- ▶ Where recovery is defined less strictly (e.g., pain intensity $\leq 3/10$)
 - Median time to recovery seems to be about 3 months

Carroll et al., Systematic review –
under review

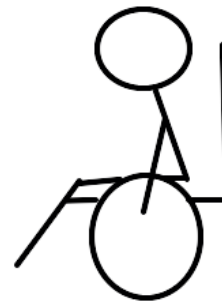
Clinical Implications

- ▶ Is patient education the key?
 - Information
 - Reassurance
 - Advice
- ▶ Effect limited, short term

Yu et al., 2014

Clinical Implications

- ▶ Important to ask about expectations
- ▶ Expectations are embedded in wishes/hopes, fears
 - Seems reasonable to ask directly about both
- ▶ Goal is positive and reasonable expectations
 - May require clinician/patient negotiation



Source of Expectations Important

- ▶ Difficult to address expectations unless you know what has influenced them

ALWAYS ...

CONSIDER
THE
SOURCE



In Conclusion

- ▶ Expectations for WAD recovery
 - Consistently shown to be associated with recovery
- ▶ Expectations for recovery
 - Influenced by a variety of factors
 - Injury itself (severity, etc.)
 - Health care provider's prognosis
 - Esp. patient's understanding of what is said
 - Prior personal history with health, injuries
 - Others' experiences with injuries
 - Other information (e.g., internet, tv)
 - Sense of personal characteristics (e.g., resilience)

In Conclusion

- ▶ Patients' expectations: **important conversation to have**
 - What does recovery mean to the patient?
 - Ideal recovery? Good enough recovery?
 - Expectations for reaching that outcome?
 - Hopes, fears
 - Sources of these hopes, fears, expectations
- ▶ Sets up the basis for discussion/negotiation
 - Development of recovery steps along the way + long term outcomes

Thank You