Yellow Flags: Reading signs on the road from acute injury to chronic pain states

Objectives
- Have a discussion regarding chronic pain mechanisms
- Introduce/review flags, particularly “yellow” flags and their place in the chronic pain picture, as well as what to do with them
- Clinical pieces; how do we know if we are heading to chronicity?
- Traditional and novel treatment strategies?
- Where to go next with yellow flags

Introduction, Disclaimer
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Stakeholders

Employers
Injured worker
Insurers
Clinicians

Defining “Flags”
Where have they come from?
Red Flags
- Trauma
- Age > 50 years
- History of cancer
- Fever, chills, night sweats
- Unexplained weight loss
- Recent infection
- Immunosuppression
- Rest/night pain
- Saddle anesthesia
- Bladder dysfunction
- Lower extremity neurological deficit

Yellow Flags, unfiltered
- Identified by Kendall and colleagues, 1997
- Psychosocial and environmental risk factors for disability

Original Yellow Flags
- **Attitudes and beliefs about back pain**
  - Pain is harmful, disabling; leads to fear avoidance
  - Pain must be absent before resuming work, normal activity
  - Expect increased pain with work, activity
  - Catastrophising, misreading bodily symptoms
  - Pain is uncontrollable
  - Passive attitude towards rehabilitation
Original Yellow Flags

**Behaviors**
- Extended rest, disproportionate downtime
- Lower activity levels, withdrawal from ADL
- Irregular, non-compliant with exercise, "boom-bust" tendency
- Avoidance of normal activity
- Reports of extremely high pain intensity ratings
- Excessive use of aids, appliances
- Reduced sleep quality since onset of LBP
- High intake of alcohol, other substances
- Smoking

Original Yellow Flags

**Compensation issues**
- Lack of financial incentive to return to work
- Delayed access to income support, disputed eligibility
- Claim(s) history due to pain, injury
- History of extended time off from pain, injury
- History of previous back pain, time missed from work
- Prior experience of ineffective case management

Original Yellow Flags

**Diagnosis and treatment**
- Health professional sanctioning disability
- Conflicting diagnoses/explanations for back pain, confusion
- Diagnostic language leads to fear, catastrophising
- Health professional promotes dependency, passive treatment
- Number of visits to provider (in the last year), aside from current episode
- Expectation of a "techno-fix"
- Lack of satisfaction in prior back pain treatment
- Advice to withdraw from job
Original Yellow Flags

**Emotions**
- Fear of increased pain with activity/work
- Depression, loss of sense of enjoyment
- Increased irritability
- Anxiety, heightened awareness of bodily sensations
- Feeling under stress and unable to maintain sense of control
- Social anxiety, disinterested in social activity
- Feeling useless and not needed

**Family**
- Overprotective partner/spouse, emphasizing fear of harm or encouraging catastrophisation
- Solicitous behavior from spouse (taking over tasks)
- Socially punitive responses from spouse
- Family member support for return to work attempts
- Lack of a support person to talk to about problems

**Work (part 1)**
- History of manual work
- Work history, including patterns of frequent job changes, experiencing stress at work, job dissatisfaction, poor relationships with peers or supervisors, lack of vocational direction
- Belief that work is harmful, will do damage
- Unsupportive, unhappy work environment
- Low educational background, socioeconomic status
- Job with significant bio-mechanical demands
- Job involves shift work or “unsociable hours”
Original Yellow Flags

- Work (part 2)
  - Job involves shift work or "unsociable hours"
  - Minimal availability of selected duties and graduated return to work pathways, poor implementation
  - Negative experience of workplace management of back pain
  - Absence of interest from employer

Blue Flags

- Workers perceptions of work environment as:
  - Stressful
  - Unsupportive
  - Unfulfilling
  - Highly demanding (physical and psychological)
  - Harmful
  - Fear of re-injury
  - RTW expectations
  - Work history may be indicative

Black Flags

- Actual workplace conditions that can influence disability
  - Employer and insurance system characteristics
  - Objective measures of physical demands and characteristics
Orange Flags

- Conditions more indicative of psychopathology

Yellow Flags, filtered

- Normal (?) but unhelpful psychological reactions
  - Catastrophizing
  - Fear avoidance beliefs
  - Passive coping mechanisms
  - Fear of re-injury, hurt = harm

So what?

  - "There is evidence for both yellow flags...and blue flags...as risk factors for long-term work disability. There also is evidence for the influence of pain severity and level of depressive symptoms on the transition to chronicity."  
  - "Taken as a whole, the evidence shows a clear relationship between psychological yellow flags and future clinical and occupational outcomes."
Screening Tools
How do I know if my worker/client/patient is at high risk?

- Questionnaires:
  - Orebro Musculoskeletal Pain Screening Questionnaire
  - STarT Back Screening Tool
  - Clinical interview

Prevention concepts

- Targeted interventions (psychological)
  - Prevention is main goal
  - Mixed bag

Symptoms of suspicion: are we heading towards Chronicville?

- Hyperalgesia
- Allodynia
- Two point discrimination
- Laterality recognition
Treatment approaches

- Aim for prevention first
- Reduction in symptoms when present:
  - Ice, heat, pharmaceuticals, ROM, conditioning exercises, passive modalities, TENS, education, etc.
- Novel/emerging treatments:
  - Graded motor imagery
  - Laterality retraining

References

- http://www.sahealth.sa.gov.au/wps/wcm/connect/747578804a59d4b2afd4ef7633bbffe0/YellowFlagScreeningStartTextRahAllHealth+/1202122.pdf?MOD=AJPERES&CACHEID=747578804a59d4b2afd4ef7633bbffe0