

Prognostic factors in chronic pain: who will do better who will not?

Self-Management of Pain Workshop

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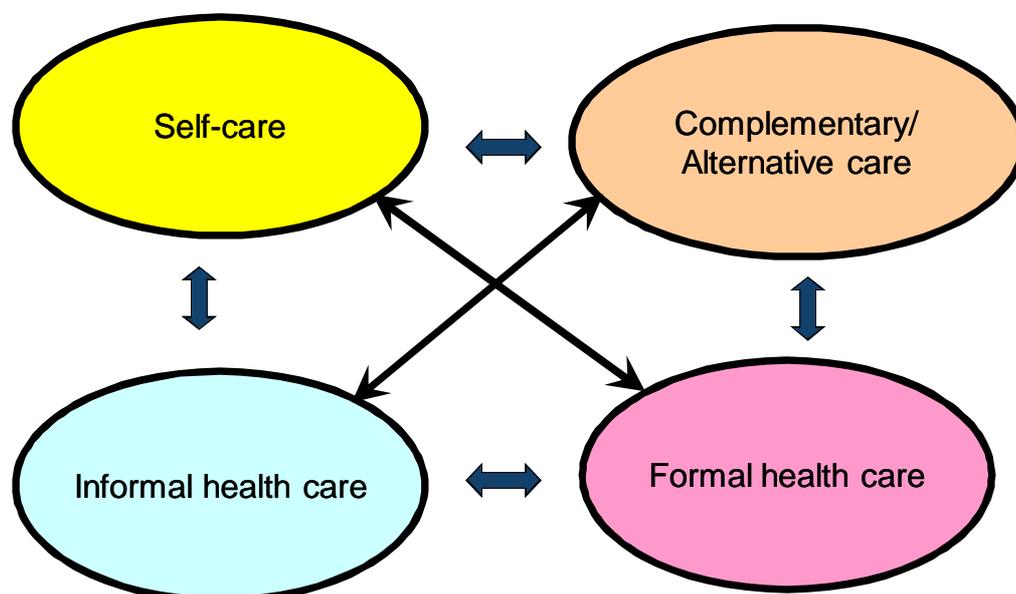


## In this talk...

- › Current use of self-management strategies in chronic pain
  - › Potential for using self-management strategies earlier in the course of the 'pain journey' to modify prognosis/outcome
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- › How self-management fits in the bigger picture of chronic pain in the community: an Australian perspective
  - › How should self-management interventions be delivered in the community: some evidence from the UK
- 

## Types of care used in the Australian community



- › Trying a range of helpful & unhelpful self-care strategies
- › getting advice from lots of places
- › self-medicating
- › using alternative therapies
- › **AND seeing their local doctor**



Pain 113 (2005) 285–292

www.elsevier.com

Self-management of chronic pain: a population-based study

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Table 1  
Coding for self-management strategies

Active strategies		Passive strategies	
Active behavioural	Cognitive	Passive behavioural	Conventional medical
Correct posture	Relaxation	Diet	Medication
Exercise	Distraction	Avoiding activity	Physiotherapy
Modified use	Prayer	Rest	TENS
Social activities	Meditation	Hot baths/shower	Braces
Work	Reduce stress	Hot/cold packs	Acupuncture
Usual tasks		Smoking/alcohol	Chiropractor
		Massage	

2092 adults in NSA  
474 with chronic pain  
1998

Table 2  
Types of self-management strategies used

Strategy types	N of pain respondents <sup>a</sup>	% (95% CI)
<i>Active behavioural</i>	156	34.0 (29.3–38.8)
Exercise	120	25.8 (21.5–30.2)
Posture	52	12.1 (8.7–15.4)
Other <sup>b</sup>	8	1.7 (0.5–3.0)
<i>Passive behavioural</i>	277	59.3 (54.5–64.2)
Rest	150	31.5 (27.0–36.1)
Hot/cold packs	109	23.4 (19.1–27.6)
Massage	83	18.0 (14.2–21.8)
Hot showers	34	7.3 (4.7–9.9)
Hot baths	29	6.8 (4.2–9.4)
Change diet	16	3.1 (1.4–4.7)
Other <sup>c</sup>	4	0.9 (0.0–1.9)
<i>Cognitive</i>	51	11.2 (8.1–14.4)
Relaxation	39	8.9 (6.0–11.8)
Other <sup>d</sup>	15	3.0 (1.4–4.6)
<i>Conventional medical</i>	252	52.1 (47.2–57.1)
Take medication	228	47.0 (42.0–51.9)
Brace/other support	28	5.9 (3.6–8.2)
Chiropractic treatment	12	2.3 (0.9–3.7)
Physiotherapy	11	2.6 (0.9–4.3)
Other <sup>e</sup>	5	1.0 (0.1–1.9)

<sup>a</sup> Totals are for any mention of that category.

<sup>b</sup> Modified activities 7 (1.4%); social activities 1 (0.3%).

<sup>c</sup> Smoking/alcohol 2 (0.5%); avoided certain activities 2 (0.5%).

<sup>d</sup> Meditation 7 (1.4%); distraction 6 (1.4%); reduced stress 1 (0.1%); prayer 1 (0.1%).

<sup>e</sup> TENS machine 3 (0.7%); acupuncture 2 (0.3%).

Table 3  
Patterns of self-management strategies used

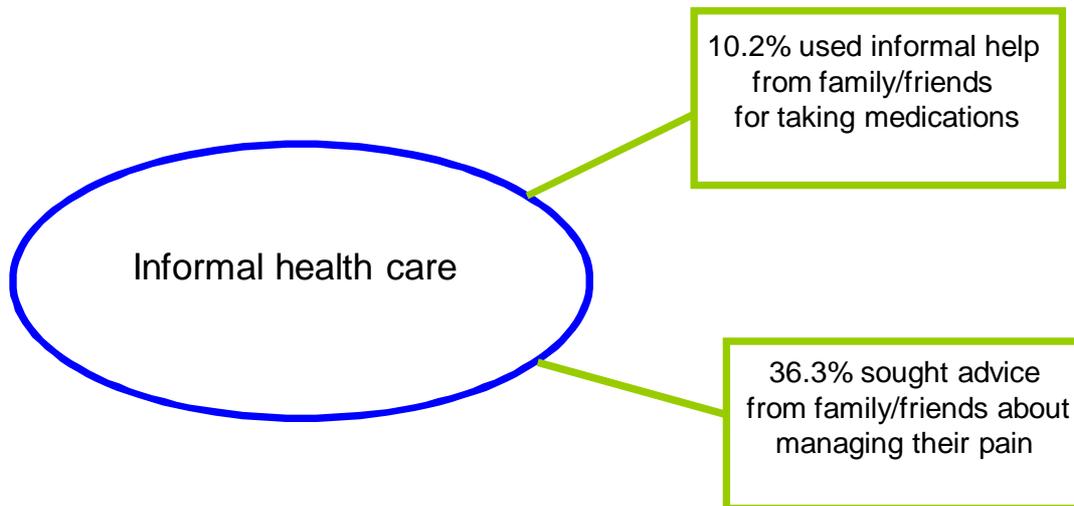
Combinations of strategies	N of pain respondents	% (95% CI)
Conventional and passive behavioural	95	19.7 (15.8–23.6)
Passive behavioural	91	19.5 (15.5–23.5)
Conventional	80	16.9 (13.5–20.3)
Active behavioural	49	9.8 (7.0–12.7)
Active behavioural and passive behavioural	35	8.4 (5.6–11.2)
Conventional and active behavioural	30	6.3 (4.1–8.5)
Conventional and active behavioural and passive behavioural	26	5.1 (3.0–7.1)
Nil	17	3.6 (1.9–5.3)
Conventional and passive behavioural and cognitive	11	2.8 (1.0–4.5)
Passive behavioural and cognitive	10	2.1 (0.8–3.4)
Cognitive	9	1.9 (0.7–3.1)
Active behavioural and cognitive	6	1.3 (0.3–2.3)
Conventional and cognitive	5	1.1 (0.1–2.0)
Active behavioural and passive behavioural and cognitive	5	1.1 (0.1–2.0)
Conventional and active behavioural and passive behavioural and cognitive	4	0.8 (0.0–1.7)
Conventional and active behavioural and cognitive	1	0.2 (0.0–0.6)

Table 5  
Adjusted odds ratios multivariate logistic regression modelling with pain-related disability and health care visits as the dependent variables

Dependent variable	Self-management strategies variables	Explanatory variables	Adjusted odds ratios <sup>a</sup> (95% C.I.)	P-value
Pain-related disability (Chronic pain Grade III/IV)	4 categories	Past or current legal claim related to pain	3.13 (1.43–6.85)	0.004
		Uses conventional medical self-management strategies	2.15 (1.26–3.67)	0.005
		Poor/fair self-rated health	1.92 (1.10–3.35)	0.021
		Psychological distress <sup>b</sup>	1.74 (0.93–3.23)	0.082
Pain-related disability (Chronic Pain Grade III/IV)	2 categories	Uses active behavioural self-management strategies	0.48 (0.27–0.85)	0.011
		Past or current legal claim related to pain	3.52 (1.56–7.94)	0.003
		Poor/fair self-rated health	1.83 (1.07–3.14)	0.028
		Psychological distress <sup>b</sup>	1.72 (0.93–3.20)	0.085
Top quartile of doctor/allied health practitioner visits	4 categories	Only uses active self-management strategies	0.18 (0.06–0.49)	0.001
		Uses opioid medication	3.74 (1.63–8.60)	0.002
		Chronic Pain Grade III or IV	3.05 (1.45–6.41)	0.003
		Uses passive behavioural self-management strategies	3.62 (1.69–7.73)	0.001
		Uses conventional medical self-management strategies	3.57 (1.54–8.30)	0.003
Chronic pain due to injury	2.96 (1.42–6.15)	0.004		
Uses informal or formal help at home due to pain	2.23 (1.03–4.84)	0.043		

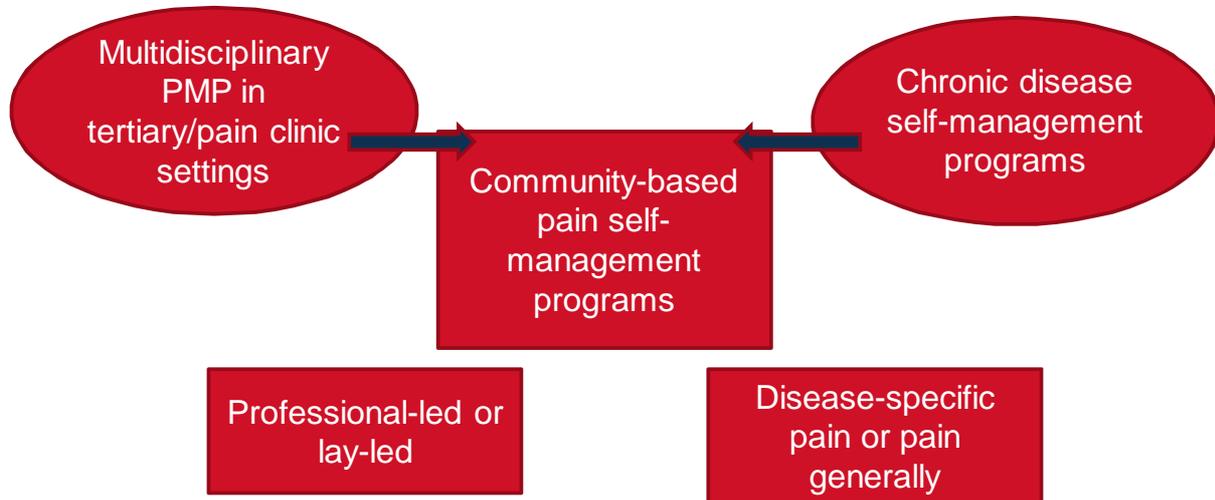
<sup>a</sup> Age and sex terms included.

<sup>b</sup> Retained for improved model fit.



## Self-management can take different forms





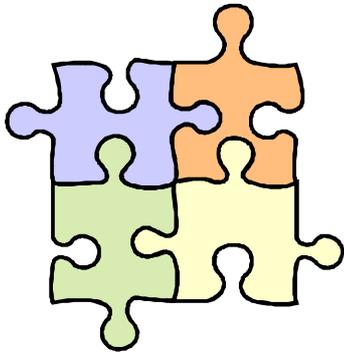
- › Instead of trying to change pain reports, mood, and disability by analgesia alone
- › CBT involves identifying what is maintaining pain behaviours, distressed mood, and disability:  
(eg. unhelpful beliefs, poor coping strategies, family interactions)
- › Then helping the patient to change these contributors
- › Normally done in a collaborative way

Von Korff et al. (1997) Ann Int Med, 127, 1097-1102

- › “Medical care for chronic illness is rarely effective in the absence of adequate self-care (by patient)”
  - › **Collaborative care** = patients + providers : shared goals, sustained working relationship, mutual understanding of roles/responsibilities, requisite skills for carrying them out
- 

- › **Reconceptualise pain** (hurt ≠ harm)
  - › **Active role** for patient
  - › **Set achievable, goals** (desired by patient)
  - › **Specify steps towards those goals**
  - › **Systematic** encouragement for progress towards these goals
  - › **Identify likely obstacles + plan for solving them**
  - › **Teach skills for dealing with obstacles** (eg. problem-solving, coping strategies, like activity pacing)
  - › **Maintenance plan**
-

## What are we doing in these SM Programs?



- › how many intervention targets can be included?
- › do all targets get the same “dose” of the intervention?
- › how important is “dose tailoring” to individuals?
- › how do we measure adherence?
- › What is the right “maintenance dose” that will lead to lasting gains?

*Allore et al, Clin Trials 2005*

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## Translating self-management programs from the clinic to the community

- › Senior-ADAPT study underway at RNSH PMRI
  - › Multi-disciplinary program of pain self-management for people aged 65 and over
  - › Ultimate aim is to translate the program into community settings
-

- › Self-management approaches an increasingly important aspect of healthcare for chronic pain and other chronic illnesses
  - › But little evidence of their systematic use in elderly chronic pain patients
  - › Within Australia, current health practices for people with chronic pain conditions are predominantly passive treatment modalities (eg.heat packs, analgesic medications)
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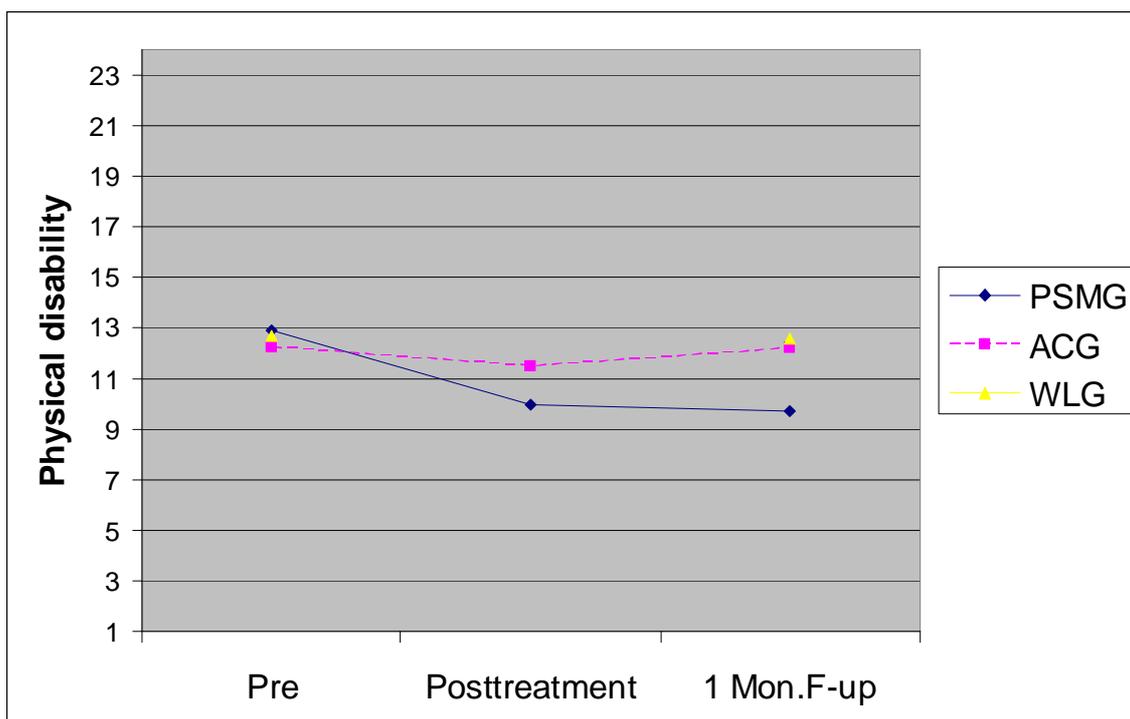
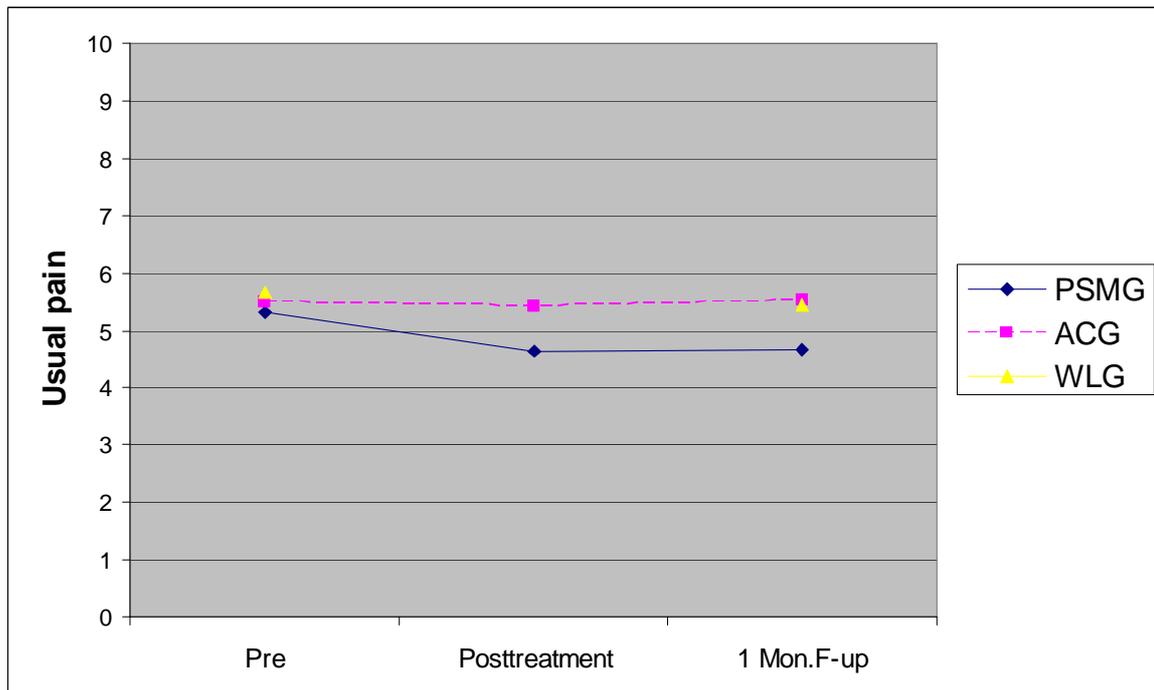
- › Support the efficacy of CBT interventions with this population (Puder et al., 1988; Keefe et al., 1990; Cooke, 1998; Ersek et al., 2003; 2008)
  - › Study limitations (small sample sizes, institutionalised sample, restricted pain-site sample) restrict the generalisability of their findings
  - › A recent non-randomised, quasi-experimental Australian study did find some support for the use of education about pain and a range of options for the self-management of chronic pain in community-dwelling older people, but findings restricted by the non-randomised design (Kung et al., 2000)
-

- › Inclusion criteria – Aged 65 plus with chronic pain; Independent living, not cognitively impaired, no major psychiatric disorders, able to attend (GP agreement)
  - › 21 groups of 8 randomised to:
  - › **Intervention** – tailored physical exercise, CBT, education, optional analgesic reduction (16 hrs – 2x2 hrs per week for 4 weeks). PACING and UPGRADING
  - › **Attention-control** – same time structure, general instructions about exercises but no pacing and upgrading, sessions with psychologist (sympathetic listening)
  - › **Waiting list control** – assessed at baseline and again at 3 months, then exit study and offered program
- 

- › Main outcome measure – reduced pain-related disability at 1, 6 and 12 months
  - › Self-reported physical functioning, distress, disability (Roland and Morris scores)
  - › Physical functioning – timed walk, 10 metre walk, step test, other balance tests (from Berg)
-

- › Cognitive therapy fine if focussed around maintenance of personal functional goals
  - › Great interest in medication reduction, even though not a primary therapeutic target
  - › Attention-control credible
  - › Staff enjoyment
- 

- › Respondent burden – “batteries”
  - › Missing data – fatigue effects, systematic
  - › Psychometric performance
  - › Relationships between important domains (e.g. mood, self-efficacy, medication use)
-



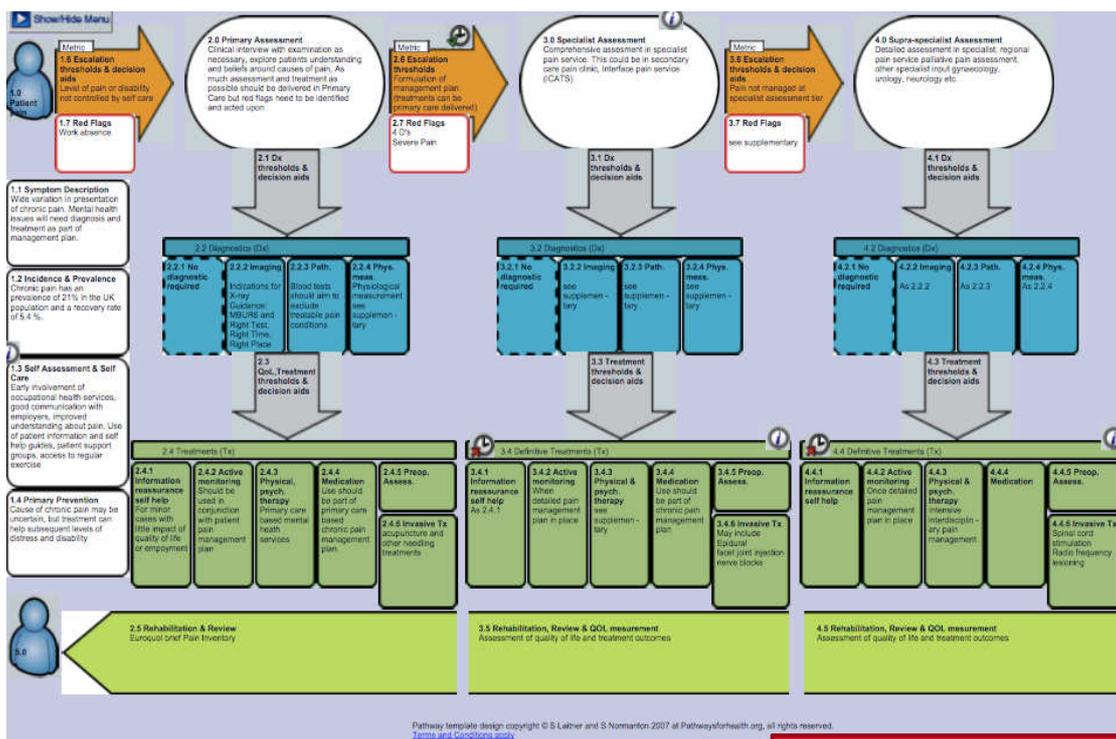
- › Interest from local division of GPs & nursing home staff in intervention program for aged care residents
  - › Pilot studies to train physiotherapists who work in residential aged care facilities in skills needed to run the program
  - › GP engagement is an ongoing process
- 

UK models:

- › Integration into comprehensive program
  - › Views from the consumer perspective
  - › Evaluation of lay-led programs
-

- › Southampton NHS Trust (Dr Cathy Price)
- › Scottish Pain Association (Mr David Falconer)

## 18 week elective care commissioning pathway for chronic pain



Basingstoke and North Hampshire NHS Foundation Trust  
 Winchester and Eastleigh NHS Healthcare NHS Trust  
 Southampton University Hospitals NHS Trust

## Persistent Pain

### Guidelines for the Pharmacological management of pain in Primary Care/ Non-specialist Centres and referral to Specialist Secondary Care Services

Approved by Basingstoke, Southampton and Winchester District Prescribing Committee.  
 May 2009  
 Chair: M. Stephens

The printing of this document has been funded by unrestricted educational grants from NAPP and Pfizer. The companies have not influenced the content of the guideline.

### The Pain Toolkit

...is for people who live with persistent pain

A persistent pain problem can be difficult to understand and manage on an everyday basis.

The Pain Toolkit is a simple information booklet that could provide you with some handy tips and skills to support you along the way to manage your pain.

**Tool 1 - Accept that you have persistent pain...and then begin to move on**  
**Tool 2 - Get involved - building a support team**  
**Tool 3 - Pacing**  
**Tool 4 - Learn to prioritise and plan out your days**  
**Tool 5 - Setting Goals/Action Plans**  
**Tool 6 - Being patient with yourself**  
**Tool 7 - Learn relaxation skills**  
**Tool 8 - Stretching & Exercise**  
**Tool 9 - Keep a diary and track your progress**  
**Tool 10 - Have a set-back plan**  
**Tool 11 - Team Work**  
**Tool 12 is keeping it up... putting into daily practice the tools from 1-11.**

It is not meant to be the last word in pain self-management but a handy guide to help you get started - all you need to be is willing to read it and take on board some of the suggestions.

Good luck!  
 Pete Moore

Pete Moore who has persistent pain, asthma and osteoarthritis, has put these tools together with the help of friends, family and health care professionals (special acknowledgement to the Bradford Pain Rehabilitation Programme team and NHS Kirkcaldy PCT). These tools have helped many people and could also help you!

### GUIDANCE AND COMPETENCES FOR THE PROVISION OF SERVICES USING PRACTITIONERS WITH SPECIAL INTERESTS (PwSIs)

PAIN MANAGEMENT

Slide courtesy of Dr Cathy Price

## How effective are expert patient (lay led) education programmes for chronic disease? BMJ | 16 JUNE 2007 | VOLUME 334

### SUMMARY POINTS

In the United Kingdom the expert patients programme will be rolled out to 100 000 patients by 2012

Four randomised trials set in the UK indicate that although lay led programmes increase patients' confidence to manage their disease, they are unlikely to reduce either hospital admissions or the use of other healthcare resources in the NHS

Lay led programmes in the UK need evaluation before they can be recommended over other programmes with established impact

role has surrounded the UK expert patient programme, and it has received funding—but will its impact meet expectations?

### Content of standard six week chronic disease self management programme

Session 1—Course overview; acute and chronic conditions compared; cognitive symptom management; better breathing; introduction to action plans

Session 2—Feedback; dealing with anger, fear and frustration; introduction to exercise; making an action plan

Session 3—Feedback; distraction; muscle relaxation; fatigue management; monitoring exercise; making an action plan

Session 4—Feedback; making an action plan; healthy eating; communication skills; problem solving

Session 5—Feedback; making an action plan; use of medication; depression management; self talk; treatment decisions; guided imagery

Session 6—Feedback; informing the healthcare team; working with your healthcare professional; looking forward.

Found that professionally-led self-management programs were more effective: WHY?

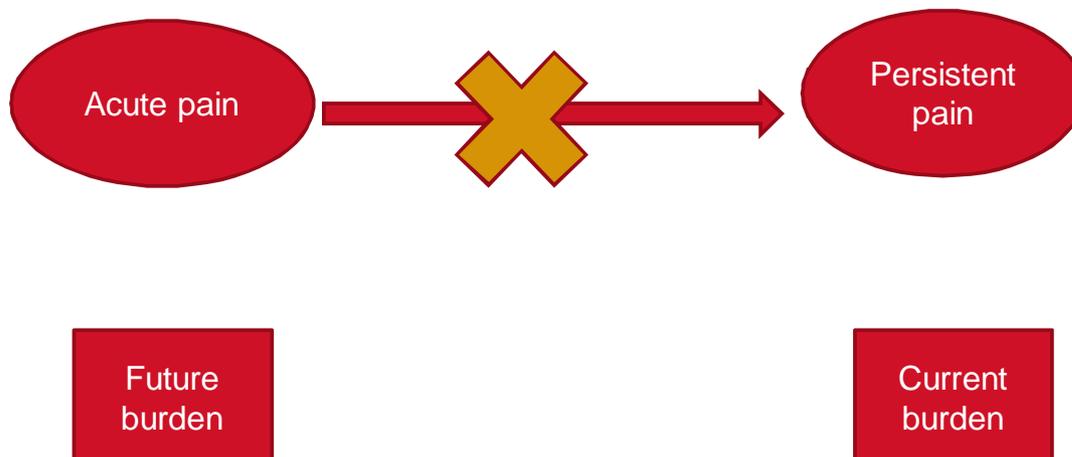
## Why might professionally-led self-management programs be more effective?

- › Better targeted (to patients and also to specific aspects of chronic disease in question)
  - › Combine self-management with other interventions (e.g. graded exercise, medication reduction) that are tailored, behaviourally-based (i.e. practice not just advice)
  - › Health professional led=better integration and credibility
  - › Is a hybrid model best?
- 

## In this talk...

- › Current use of self-management strategies in chronic pain
  - › Potential for using self-management strategies earlier in the course of the 'pain journey' to modify prognosis/outcome
-

- › There is a large burden of chronic pain in the community that needs to be addressed
  - › One part of the strategy is to deal with the current burden
  - › Another part must be to reduce the burden in the future through primary and secondary prevention of chronic pain
  - › Can self-management play a role in reducing the progression from acute to chronic pain?
- 



**Conclusion** The most helpful components for predicting persistent disabling low back pain were maladaptive pain coping behaviors, nonorganic signs, functional impairment, general health status, and presence of psychiatric comorbidities.

Definitions	No. of Studies	References	Timing of Outcome Assessment	Median (Range) LR
<b>Fear avoidance behaviors or coping strategies</b>				
Intensity of fear avoidance	4	23,33,35,36	3-6 mo	
High				2.2 (1.5-4.9)
Medium				1.1 (1.0-1.5)
Low				0.46 (0.30-0.73)
Intensity of fear avoidance	2	23,37	1 y	
High				2.5 (2.2-2.8)
Medium				1.2 (1.2-1.3)
Low				0.39 (0.38-0.40)

## Prognostic risk factors for pain

*Mallen et al, Br J Gen Pract 2007*

- › Systematic review of prognostic factors for musculoskeletal pain in primary care
- › 45 prospective observational cohort studies met quality inclusion criteria
- › 11 baseline factors associated with poor outcome for at least two different regional pain syndromes

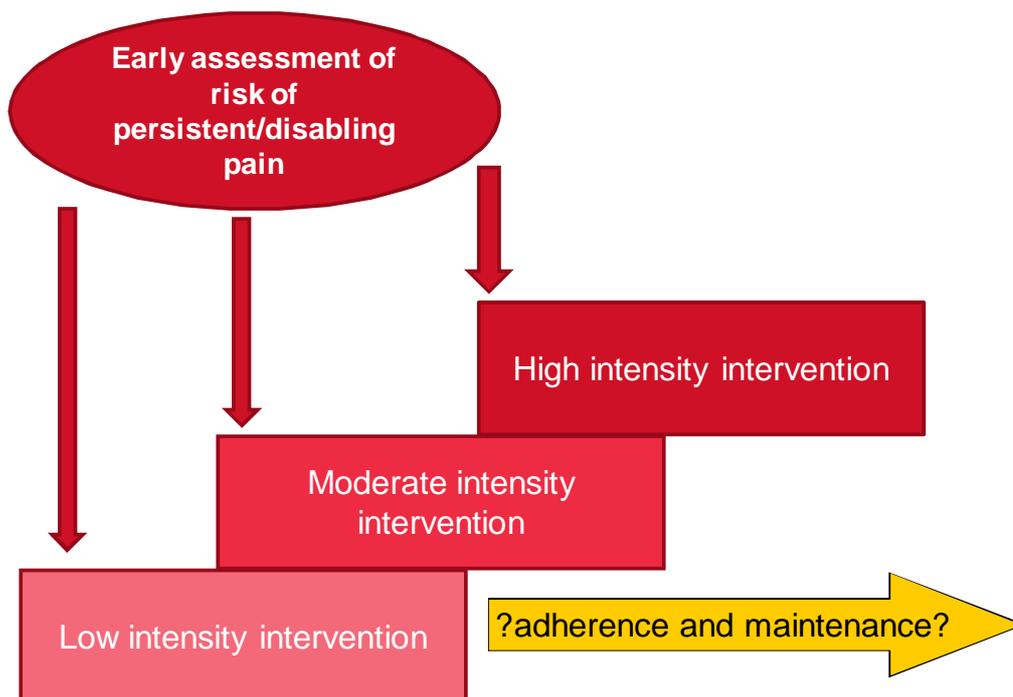


# Common prognostic factors

- › Pain severity
- › Anxiety and/or depression
- › Higher somatic perceptions/distress
- › Adverse coping strategies
- › Higher disability
- › Greater movement restriction
- › Longer duration pain
- › Multiple sites pain
- › Previous episodes pain
- › Low social support
- › Older age

Consistency across different regional pain syndromes

## A model for using self-management interventions in a prognostic framework





# NATIONAL PAIN SUMMIT

MARCH 11, 2010

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chronic pain  
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## Knowledgeable, empowered & supported consumers

- › Education: difference between Acute vs Chronic pain
- › Information: chronic pain implications for treatment
- › Self management programs for consumers
- › Community based support for people in pain

- › Self-management of pain is central to improving the lives of people with pain
  - › In community settings pain self-management interventions can be delivered in many different ways
  - › More effort and resources need to go into implementing and evaluating community-based interventions
  - › To be most effective in the fight against pain, we should also look at how we could use self-management earlier in the ‘pain journey’
- 

