ACI NSW Agency for Clinical Innovation

Pain Management Programs – Which Patient for Which Program?

A guide for NSW Tier 3 and Tier 2 public health facilities providing pain programs

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ACRONYMS LIST

CALD	Culturally and Lingusitically Diverse
CBT	Cognitive Behaviour Therapy
DASS	Depression Anxiety and Stress Scale
GP	General Pracitioner
EPPOC	Electronic Persistent Pain Outcomes Collaboration
NSAIDs	Non steroidal anti-inflamatory drugs
PCS	Pain Catastrophising Scale
PSEQ	Pain Self Efficacy Questionaire
RCT	Randomised Controlled Trial
RMDQ	Roland Morris Disability Questionnaire
STEPS	Self-Training Educative Pain Sessions

CONTENTS

BACKGROUND

The available evidence indicates that patients with chronic pain should be selected for pain management programs according to their particular characteristics, rather than a 'one size fits all' approach.

A good example of program selection based on patient characteristics was provided by Haldorsen et al. (2002) from Norway. These researchers characterised chronic pain patients attending their service as belonging to one of three groups, based on specified prognostic criteria. The prognostic groups were determined by scores on measures rather than clinical judgment, as predictions by clinicians are not usually very accurate. Patients assessed as belonging to one of three prognostic groups (good, medium and poor) were randomly assigned to one of three levels of pain management program: 'standard care' (support, medication, and advice from their General Pracitioner (GP)); 'light multidisciplinary program' (some pain education, advice to upgrade activities, and up to 12 sessions of physiotherapy-supervised exercise); and 'extensive multidisciplinary program' (a 4 week Cognitive Behaviour Therapy (CBT) inpatient program, 6 hours per day, conducted by a multidisciplinary team). The results indicated that patients assessed to have a good prognosis of return to work, achieved good outcomes regardless of the level of intervention they received, so it is most cost-effective to assign these patients to the lighter level of interventions. Those with medium prognostic profiles benefited more from the light and extensive multidisciplinary programs, but not from 'standard or ordinary' care. However, those assessed to have a poor prognosis, responded best to the extensive multidisciplinary treatment, with significantly better return to work rates up to 14 months post-treatment than a light mobilisation program (55 versus 37%).

Other evidence consistent with this idea of matching characteristics of patients to the level of pain program can be gleaned from a series of studies. Nicholas et al. (1992) reported the results of a brief CBT program (combined input by a clinical psychologist and physiotherapist) for patients with chronic back pain at Westmead Hospital. The program comprised 5 one hour sessions with the clinical psychologist over 5 weeks, and 10 two hour physiotherapy exercise sessions over the same 5 weeks (a total of 15 hours). The results indicated the combined intervention had some effect on disability, pain beliefs, and pain coping strategies, but not on depression severity.

When similar methods were applied to similar chronic pain patients (with moderate-high levels of disability and depression) in a more comprehensive 4 week inpatient (multidisciplinary) program in London (Williams et al., 1996), the effects were much stronger across all domains (pain, depression, pain beliefs, medication use, and disability). Significantly, the intensive 4 week program was more effective than a mini-version of the same program (3 hours a week for 8 weeks) conducted by the same team. Importantly, these differences were still present 1 year later (Williams et al., 1999).

Marhold et al. (2001) found that a 6 session (2 hours per session) CBT program for patients with mildly and moderately disabled back pain patients, achieved significant improvements only in the mildly disabled patients, suggesting the intervention was not sufficiently powerful for the more disabled cases.

Finally, a systematic review (Guzman et al., 2001) of randomised controlled trial (RCT) studies of psychosocial treatments for patients with chronic, moderate to severe back pain, found that only the more intensive (over 100 hours) programs achieved significant improvements in disability and return to work.

Taken as a whole, this evidence indicates that the more severely depressed and disabled chronic pain patients will do best in a more intensive program (around 100+ hours over 3-5 weeks). However, less depressed and less disabled patients will do just as well in less intensive programs (possibly, between 25-50 hours over 4-8 weeks). In other words, the form and length of a program depends on patient selection and resources.

It is therefore generally recommended that, depending on local resources, Tier 2 programs should be pitched in the range of 25-50 hours over 4-8 weeks for mildly to moderately disabled chronic pain patients. In a proportion of cases, individual, rather than group interventions, should also be considered as they may be more practical and sufficient in selected cases.

In *Chronic Pain Management Programs (PMP)- A consensus view* (see Appendix 1), the use of programs for single patients is also described. There is a literature supporting this option from both case series and n of 1 trials. Typically, these have been individuals with specific characteristics. For example, exposure-based interventions conducted in n of 1 trials have been repeatedly found to be effective with patients assessed as having high degrees of fear-avoidance (e.g. de Jong et al., 2005; 2008; 2012; Linton et al., 2008). The application of specific techniques, like relaxation training or desensitizing, is also readily applicable to single patient interventions (e.g. Flink et al., 2009). The same applies to a combined education and exercise intervention by physiotherapists. These have been supported in a number of RCTs with sub-acute low back pain (e.g. Pengel et al., 2007). Recently, home-based interventions by nurses with individual patients have been trialed successfully as well (e.g. Dorresteijn et al., 2013). Of course, most web-based interventions are necessarily conducted with individual patients rather than groups and there is an accumulating evidence base for the value of this delivery modality, at least for patients who are not overwhelmed by their distress and disability (e.g. Buhrman et al., 2013; Dear et al., in press).

With individual patient programs (which can be as structured and time-limited as group programs, and also use a manual), the treatment may be, 5 -10 sessions on a weekly or second-weekly basis. These are often conducted jointly by a physiotherapist and a clinical psychologist, who work in a coordinated way, often in tandem with a pain specialist who manages the patient's medication regimen. The selection of these cases is based on a mix of their individual situation (e.g. inability to attend a group program due to distance from the clinic or family responsibilities), severity of mood (severe depression and possible suicide risk), and dependence on high doses of medication. Some of those patients may also go on to attend a group program once they are deemed suitable. At the other end of the spectrum, some of these patients selected for an individual program may also be managing quite well already (and 'too good' for a high intensive program), but it is thought they could benefit from some 'fine tuning' to become more self-sufficient (e.g. learning to pace their activities more consistently).

Another approach being tested by some pain services in this country has involved patients attending a series of group programs within one service facilitated by designated case coordinators (e.g. Hayes and Hodson, 2011). This is an interesting development but does have organizational and resource implications that would need to be thoroughly planned before commencement. At this stage it is too early to know if patient outcomes are improved or not, but the statewide Electronic Persistent Pain Outcomes Collaboration (ePPOC) benchmarking may help to clarify optimal service design for particular subgroups of patients.

For an international perspective it would be worth reading the paper from the British Pain Society (*Recommended Guidelines for Pain Management Programmes for Adults, 2007*). This fits in well with the points made here and additional documents on principles and key features (see next paragraph).

In 2011, the (ACI Pain Network) Chronic Pain Programs Working Group considered these issues and developed a supporting document: *Chronic Pain Management Programs (PMPs)- A consensus view.* (See Appendix 1)

This document should be read in conjunction with the Table presented below. The Table outlines a proposed guide on which patient characteristics should be suitable for which type of pain management program. Note, the measurement score ranges provided are a guide and an individual patient may be suitable for a particular program based on one or more of these measures (i.e. all measures should not be required to be within the range provided).

It should be emphasized that no patient should be admitted to one of these programs without prior multidisciplinary assessment and also, admission to a program should be preceded by a structured preparation process (e.g. meeting with one or more team members to obtain an explanation of the program, an idea of realistic expectations or goals for the program, clarification of their motivation for attending, as well as to understand their roles and responsibilities expected by the treatment team).

PRE-ASSESSMENT EDUCATION

When a person is referred to a pain service, it is likely that s/he will be unfamiliar with current concepts of pain and its management and also with what pain services offer. There is a risk that many of those referred to a pain service may be inappropriate or not interested in what they have to offer. These cases would therefore swell the waiting list for any pain service as well as potentially waste the efforts of the service when they get there. In order to avoid these outcomes, a number of pain services have developed a pre-assessment pain education forum to enable those referred to a pain service to gain an accurate appreciation of the service and the opportunity to decide if it could meet their needs. This approach was pioneered by Dr Stephanie Davies and her colleagues at the Freemantle and Sir Charles Gairdner Hospitals in Perth.

Dr Davies and colleagues found that their two day eight hour group education course (STEPS: Self-Training Educative Pain Sessions) delivered by members of their multidisciplinary pain team to prospective pain service patients was followed by a substantial reduction in waiting times for those wishing to still attend their pain service as well as good satisfaction ratings by participants at the educational sessions (Davies et al., 2010). Since then, they have extended this initiative to a Medicare Local group in northern Perth (www.pnml.com.au) and report similar levels of satisfaction by participants. Many, in fact, find they gain enough ideas on pain self-management at these sessions not to need more help by the pain service. However, Davies and colleagues have been careful to emphasise that this level of intervention is unlikely to be enough for the more disabled and depressed patients, especially those who have become reliant on medication to cope. Those patients, who have to make major lifestyle changes in order to live with their chronic pain, will still need the help of the sorts of programs outlined in this document. So the STEPS approach can provide a useful introduction to a pain service and promote more efficient use of these scarce resources.

The actual time required for educational programs of this nature is, of course, a matter for empirical trial and will depend on available resources and time.

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TABLE 1
GUIDE FOR SELECTION OF PATIENTS FOR DIFFERENT PAIN PROGRAMS

PAIN MANAGEMENT PROGRAM FORMAT	STAFF/RESOURCES	SUITABLE PATIENTS
INDIVIDUAL PATIENT		
• **Format**: 1-10 sessions, 30-60 minuntes each, 1-3 weeks apart • **Total Time**: 30 minutes - 6 hours	• **One or more staff** Practitioners with appropriate skills, working in coordinated way (eg. clinical psychologist + physiotherapist + GP/ Specialist) • **Consult room**	*__Disability__: low <10 on Roland Morris Disability Questionnaire (RMDQ) **Depression**: low <13 on Depression scale of Depression Anxiety and Stress Scale (DASS) (or very high >30; see below) **Pain Self-efficacy**: >30 on Pain Self Efficacy Questionaire (PSEQ) **Catastrophising**: < 20 on Pain Catastrophising Scale (PCS) **Reliance on medication**: low – simple analgesics, non steroidal anti-inflamatory drugs (NSAIDs), antidepressants, anxiolytics, low level anticonvulsants, sleeping tablets **Specific problem area**: (e.g. sleep disturbance, anger, low acceptance, poor activity pacing) which can be targeted effectively in limited number of individual sessions **ALSO**: **When group is unsuitable**, or person unwilling or unable to participate in a group program (e.g. Culturally and Lingusitically Diverse (CALD), and/ or Aboriginal and Torres Strait Islander, low literacy, aged, co-morbidity, Mental health) **Patients needing work up to high intensity program**: e.g. undergoing supervised withdrawal from medications; extreme low level of activity, excessive bed rest; severe depression

*The indicative numbers relating to scales or medication dosage are presented as a guide only, but have been derived from normative data, clinical experience and the literature, and interpreted for the clinicians designing pain programmes. It is hoped that ongoing collection of data as part of the collaborative electronic Persistent Pain Outcomes (ePPOC) project will allow refinement of this guide over time.

PAIN MANAGEMENT PROGRAM FORMAT	STAFF/RESOURCES	SUITABLE PATIENTS
LOW INTENSITY GROUP		
• **Format**: 2-6 sessions (1-3 hours a session) over 2-4 weeks • **Time**: 6-24 hours	• **Two or more staff** (may include psychologist, physiotherapist, occupational therapist, nurse) Coordinated with medical management • **Group room** (exercise area, white boards, chairs)	**Disability**: low-moderate (8-12 on RMDQ) **Depression**: low-moderate (9-15 on DASS) **Pain Self-efficacy**: moderately high (35-50+ on PSEQ) **Catastrophising**: (<25 on PCS) **Reliance on medication**: low – simple analgesics, NSAIDs, antidepressants, anxiolytics, low level anticonvulsants, sleeping tablets **Multiple problem areas** (e.g. sleep, mood, avoidance of multiple activities, interpersonal conflict at home/work, poor pain coping strategies) but at low levels. Still functional and reasonably active e.g. working or minding children **ALSO**: **Other responsibilities** (Need to maintain attendance at work, school or family duties) thus unable to attend more intensive program
MEDIUM INTENSITY GROUP		
• **Format**: 2 part days or 1 full day per week for 4-6 weeks • **Time**: approx. 24 hours, up to 60	• **Two or more staff** (may include psychologist, physiotherapist, occupational therapist, nurse) Coordinated with medical management • **Group room** (exercise area, white boards, chairs)	**Disability**: low-moderate (8-12 on RMDQ) **Depression**: low-moderate (12-20 on DASS) **Pain Self-efficacy**: low-moderate (20-35 on PSEQ) **Catastrophising**: low-moderate (15-25 on PCS) **Reliance on medication**: low-moderate. As above plus or minus low level of opiates eg 10-20 mg Oxycontin daily or 6-8 Panadeine Forte **Multiple problem areas** (e.g. sleep, mood, avoidance of multiple activities, interpersonal conflict at home/work, poor pain coping strategies) but still reasonably functional and reasonably active, e.g. working or minding children **ALSO**: **Other responsibilities** (Need to maintain attendance at work, school or family duties) thus unable to attend full time program

PAIN MANAGEMENT PROGRAM FORMAT	STAFF/RESOURCES	SUITABLE PATIENTS
HIGH INTENSITY GROUP		

• **Format**:
  • 3-5 days a week for 2-4 weeks), with planned follow-up, or;
  • 5 hours /day, 2x / week, with structured homework between sessions
• **Time**: 60-120 hours
	• **Three or more staff** (may include: psychologist, physiotherapist, occupational therapist, nurse, psychiatry in paediatrics), with specific medical input (for medication and education)
	• **Group/activity room** (exercise area, white boards, chairs) + refreshments)
		Disability: low-moderate (8-12 on RMDQ)
		Disability: moderate-high (>12 on RMDQ)
		Depression: moderate-high (>15 on DASS)
		Pain Self-efficacy: (<25 on PSEQ)
		Catastrophising: (>25 on PCS)
		Reliance on medication: moderate-high. As above plus or minus high level of opioid use, anticonvulsants, etc.
		Multiple problem areas (e.g. sleep, mood, avoidance of multiple activities, interpersonal conflict at home/work, poor pain coping strategies, generally limited physical function)

Note

The format of the medium program allows for staff working on a part time basis with one day or two days on the program, one day to assess new patients and write reports; one day to conduct follow-ups, arrange new groups, do previews and do individual sessions.

All decisions regarding suitability for various levels of intensity need to be flexible and assessed on a case by case basis, using the above criteria as a guide rather than as absolute specifications. The underlying principle is to match the patient's needs with the type of program.

APPENDIX 1
CHRONIC PAIN MANAGEMENT PROGRAMS (PMP)- A CONSENSUS VIEW

NB: This table applies to any type of pain program whether individual or group, high or low intensity once the person has been deemed suitable to participate

GUIDING PRINCIPLES
1. A person/family centred approach should determine timing of and suitability to participate in an appropriate pain programme
2. Structured, time-limited interventions, tailored to the individual are aimed at improving pain self-management
3. Admission to a PMP should follow appropriate multidisciplinary assessment to confirm suitability and identify relevant individual goals.
4. Inclusion and exclusion criteria for all types of pain programme should be specified with as little as possible reliance on personal opinion (e.g. making predictions).
5. Where relevant to participation in the programme and potential benefit, inclusion and consideration of the support network including family, carers and healthcare providers is essential
6. A PMP may be part of a series of interventions but these should be planned to ensure effective engagement of the person and the consistent support of his/her treatment providers.
7. A pain management programme is typically, conducted by multidisciplinary[1] team that works in an interdisciplinary[2] way.
8. Broad programme goals include reduced interference in daily activities due to pain (or return to normal lifestyle despite persisting pain); improved mood; improved personal relationships; and reduced use of health healthcare services. Specific, person-centred goals should also be identified prior to admission.
9. Some reduction in pain severity is possible, but is not the primary goal
10. Mechanisms for promoting the maintenance of gains over long-term are also important features of these programmes (this could include involvement of significant others, like families)
11. Evaluation of outcomes (in terms of achievement of specific goals and common functions, e.g. disability, mood, pain, health care utilisation) is essential (e.g. 1/12, 3/12, 6/12, 12/12 follow up)
12. PMP require staff with appropriate skills and training (so provision must be made to ensure this is the case for all staff).
13. To date, the most consistent evidence is that a background understanding and knowledge of cognitive behavioural management therapies, principles and methods is appropriate for all participating staff.
14. Recognition that co-morbid conditions (e.g. spinal cord injuries, diabetes, Post-Traumatic Stress Disorder, Major Depression, Personality Disorders) can complicate participation in a PMP and need to be addressed on an individual basis (e.g. with individual therapy in conjunction with PMP)

1. Multidisciplinary refers to more than one healthcare discipline

2: Interdisciplinary refers to multiple disciplines working in a coordinated and collaborative way

COMMON FEATURES OF A PAIN PROGRAM

1. Timetable and specified content for each session (ideally, with a patient manual)
2. Tailored education about pain (acute, chronic , contributing mechanisms and treatments)
3. Skills training in pain self-management (e.g. exercise, activity pacing, relaxation) facilitating generalisability to the usual environment
4. The use of interactive discussions
5. Application and practice of self management skills in patient's normal environment, and working towards functional goals
6. Preparation for participation in programme
7. Preparation for discharge/maintenance of gains

GOALS OF A PAIN PROGRAM

1. To improve patients understanding of chronic pain and its effects
2. To improve level of physical function and promote return to daily living tasks
3. To modify perceived level of pain, disability and suffering
4. To provide coping strategies for dealing with pain, disability and distress
5. To promote self management
6. To reduce or achieve appropriate future utilisation of healthcare services related to pain
7. Preparation for discharge/maintenance of gains