



The British Pain Society

Guidelines for Pain Management Programmes for adults

An evidence-based review prepared on behalf of the British Pain Society

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Foreword

In 1997, the Pain Society (now the British Pain Society) published *Desirable Criteria for Pain Management Programmes*. This was a response to the perceived need for information and guidance for those involved in developing and running such biopsychosocial interventions. This third revision aims to provide updated guidance on what constitutes a pain management programme (PMP), its position within care pathways for people with chronic (non-cancer) pain and desirable content. A key evolution of the document is to apply current standards of evidence-based practice to the guidelines by applying a rigorous, explicit approach. The document complements other British Pain Society initiatives such as the *Map of Medicine* and *Pain Patients Pathway* which helps to define care pathways as a whole. Within these pathways, biopsychosocial interventions are a pivotal component.

The functions of this document are:

- To provide a set of standards of care and guidelines for provision of programmes of rehabilitation to improve health outcomes.
- To provide healthcare professionals (HCPs) of various disciplines with a synthesis of current best practice.
- To provide commissioners and provider organisations with an outline framework for effective and sustainable service provision.
- To update stakeholders on the scientific foundation of practice and quality issues relating to this treatment.

An accompanying document *Participant information for Pain Management Programmes* provides information specifically for people with chronic pain and carers.

The document begins with a general background as well as evidence for PMPs. It considers its target group in section 2, while addressing the more specific aims as well as methods, delivery and outcomes in section 3. Strategies to enable return to work and retention at work are considered in section 4. The challenge of selecting people appropriately while reaching as wider target group as possible is considered in section 5 and the resources required, including, staff, training and other essentials, in section 6.

Definitions and approach to evidence

The document uses the term *chronic pain* meaning persistent pain beyond the time that tissue healing would normally be expected taken as beyond 3 months. This is the most widely used and recognised term, although it is acknowledged that this is not the only term and there are sound arguments to justify the use of alternative terms such as long-term pain or persistent pain. For simplicity, the document refers to PMPs as a treatment. It avoids the term patient, instead using the term participant or equivalent which is consistent with the ethos of demedicalisation. In addition, it uses the term interdisciplinary instead of multidisciplinary team. This most accurately reflects the way separate disciplines work together within a common model using cognitive behavioural principles. It is accepted that definitions and use of these terms can vary.

Recognising that formerly this document was a consensus statement, a thorough evaluation of the best evidence has been undertaken consistent with the best approaches available. We have used the SIGN approach. The scheme for *Level of evidence* used (see below) is extracted from that document (see SIGN 50).

The search strategy involved the use of standard databases (e.g. Medline and Embase) as well as evidence-based resources. Each section was researched by a subgroup of the Working Group to provisionally agree evidence ratings. Evidence-based entries were then presented to the whole working group one by one. The entries were justified, debated and then, accepted, rejected or changed through this peer review. Final consistency checks were made and the document reviewed by the BPS Communications committee. It was agreed in advance that the Working Group would attempt to reach a consensus through discussion of each item. A decision was made to avoid resolving opinion differences by any artificial means. Where significant differences of opinion arose, it was agreed to capture the debate, difficulty or range of opinion rather than resolve it. The participant information was reviewed by the Liverpool Smile User Group. The

The production of the guidelines will be followed by an implementation strategy developed through the Pain Management Specialist Interest Group.

Level of evidence

- 1++** High-quality meta-analyses, systematic reviews of randomised controlled trials (RCTs) or RCTs with a very low risk of bias.
- 1+** Well-conducted meta-analyses, systematic reviews or RCTs with a low risk of bias.
- 1–** Meta-analyses, systematic reviews or RCTs with a high risk of bias.
- 2++** High-quality systematic reviews of case control or cohort studies. High-quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal.
- 2+** Well-conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal.
- 2–** Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal.
- 3** Non-analytic studies, e.g. case reports, case series.
- 4** Expert opinion.

Grades of recommendation

Note: The grade of recommendation relates to the strength of the evidence on which the recommendation is based. It does not reflect the clinical importance of the recommendation.

- A** At least one meta-analysis, systematic review or RCT rated as 1++, and directly applicable to the target population; or a body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results.
- B** A body of evidence including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results; or extrapolated evidence from studies rated as 1++ or 1+.
- C** A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results; or extrapolated evidence from studies rated as 2++.
- D** Evidence level 3 or 4; or extrapolated evidence from studies rated as 2+.

Good practice points

Recommended best practice based on the clinical experience of the guideline development group.

1. Executive summary

- 1.1** Many different healthcare professionals including doctors, nurses, psychologists, physiotherapists and occupational therapists play a part in effective pain management care. (1++)
- 1.2** PMPs, based on cognitive behavioural principles, are the treatment of choice for people with persistent pain which adversely affects their quality of life and where there is significant impact on physical, psychological and social function. (1++)
- 1.3** There is good evidence for the efficacy of cognitive behavioural PMPs as a package, compared with either no treatment or treatment as usual, in improving pain experience, mood, coping, negative outlook on pain and activity levels (Morley et al., 1999; Guzmán et al., 2001; European Guidelines, 2004; Koes et al., 2006; Hoffman et al., 2007; Williams et al., 2012). (1++)
- 1.4** PMPs are cost-effective. PMPs reduce health care consumption and enable more appropriate use of health care resources. Importantly, PMPs reduce presentation with pain-related issues to primary care and accident and emergency departments, reduce onward referrals to specialist services, and reduce medication use (Williams et al., 1996; Turk & Okifuji, 1998; Stack et al., 2013). (1++)
- 1.5** Rehabilitative and physical treatments (aimed at functional restoration) can be helpful, but, where problems associated with pain are more complex, the psychological components of pain are best addressed in a PMP (Koes et al., 2006). (1++)
- 1.6** PMPs consist of methods to promote behaviour change and promote well-being. They include education on pain physiology, pain psychology, general health and pain self-management. PMPs also contain guided practice on exercise and activity management, goal-setting, identifying and changing unhelpful beliefs and ways of thinking, relaxation and changing habits which contribute to disability. Participants practise these skills in their home and other environments to become expert in their application and in integrating them into their daily routines. Methods to enhance acceptance, mindfulness and psychological flexibility are also recommended. (A)
- 1.7** PMPs are delivered in a group format to normalise pain experience, to maximise the possibilities of learning from other group members and for economy. However, an important addition to this document is the recognition that the content of PMPs may in some circumstances be best provided on an individual basis. (B)
- 1.8** Evaluation of outcome should be standard practice. This should include assessing changes in function, psychological well-being, healthcare use, quality of life and work status where relevant. PMPs should demonstrate significant change in the specified domains. (A)
- 1.9** Return to work can be achieved. Consideration of the potential to return to work and addressing obstacles where possible is important. Interventions to facilitate return to work should be viewed as an essential component of the work of PMP teams and integrated with other treatment offered. (A)
- 1.10** Greater length and intensity of programme usually achieve greater change. Staff skills and participant needs at baseline are also important. It is not possible to specify a minimum number of hours as change results from the interaction of participant needs and staff skills during treatment. Economies of time, lack of staff skills or other resources risk reducing the effectiveness of the programme to a point where gains are insignificant. (A)

- 1.11** For commissioning purposes, it is recommended that a standard PMP should be the equivalent of twelve half day sessions (e.g. 12x3 = 36 hours) though as outlined in 1.10, needs may vary in practice and allowances made. Longer, more intensive programmes give greater and more enduring benefit but intensive programmes are not recommended as standard for all patients. (A)
- 1.12** Some very disabled and distressed patients will not benefit significantly from standard programmes but may benefit from more intensive programmes e.g. 15-20 full days. It is crucial for PMP clinical staff to assess participants comprehensively. Commissioners should make provision for those participants who require intensive programmes. Participant numbers in intensive programmes justifiably may show significant geographical variation due to demographic and social factors.
- 1.13** Individual psychology and physiotherapy may be required before, during or after PMPs. Specialist PMP teams require the financial and operational flexibility to enable this.
- 1.14** Suitability for a PMP is based on the impact of pain. There are no grounds for discrimination on the basis of age, literacy, litigation or judgement of motivation.
- 1.15** A PMP is delivered by an interdisciplinary team where some competencies are shared and some are unique to particular professions. All staff use cognitive behavioural principles to deliver their component(s) of the PMP.
- 1.16** PMPs may be delivered in a primary or a secondary care setting; the resources required will be the same.
- 1.17** Evidence is growing that some principles of PMPs may be applied early in care pathways targeted to risk to reduce future disability. (1++)
- 1.18** Therefore, PMP interventions can be classified broadly into three groups. Targeted early PMP interventions stratified to risk, Standard PMPs and Intensive PMPs. Only the latter two forms are considered in this document.
- 1.19** The effective delivery of standard and intensive PMPs for complex participants requires highly skilled staff, working as a team in adherence to the principles defined within this document. (1++)
- 1.20** More rapid access to all forms of PMP is viewed as desirable.

2. Background

Key Points

1. High-quality evidence supports the use of PMPs in people with chronic pain.
2. This document is designed to promote appropriate evidence-based provision of PMPs.
3. Evidence is growing that some principles of PMPs may be applied early in care pathways to attempt to reduce future disability. These interventions should not be confused with PMPs for complex participants.

- 2.1 Chronic pain is a common complex sensory, emotional, cognitive and behavioural long-term health condition which occurs when pain cannot be resolved by available medical or other treatments. (1++)
- 2.2 The Annual Report of the Chief Medical Officer of 2009 in the UK highlights the scale of the problem: 7.8 million people live with chronic pain, £584 million is spent on prescriptions for pain, 1.6 million adults per year suffer with chronic back pain, 25% of people with chronic pain lose their jobs and 16% feel their chronic pain is so bad that they sometimes want to die (Donaldson, 2009). (1++)
- 2.3 The principal aims of PMPs are to enable people with chronic pain to achieve as normal a life as possible by reducing physical disability and emotional distress, and improving the individual's ability to self-manage pain-associated disability and reduce reliance on healthcare resources. (1++)
- 2.4 Since 2005, the Department of Health approach for the management of long-term health conditions changed, increasing the emphasis on self-management skills and resources (for instance, the 2005 National Service Framework for long-term medical conditions. www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/fs/; Clinical Standards Advisory Group, 2000; Dr Foster, 2003). In the last 10 years, the status of PMPs has grown. There is a stronger evidence-base for the value of PMPs for improving healthcare outcomes. (1+)
- 2.5 There is high-quality evidence for effectiveness of PMPs (Morley et al, 1999; van Tulder et al., 2000; Guzmán et al., 2001; Hoffman et al., 2007; Williams et al., 2012). (1+)
- 2.6 Currently, UK programmes, aimed at helping participants manage their pain, vary and continue to refine their method and processes.
- 2.7 This document is designed to promote the appropriate provision of evidence-based treatment within PMPs and to maintain and improve the quality of group-based self-management training and support offered to participants.
- 2.8 Historically, PMPs are offered to people who have failed previous medical interventions. Recent research has suggested that a less intensive form of intervention may be both effective and cost-effective if delivered at an early stage (Linton, 2000, 2005; Pincus et al., 2001). It has been shown that non-specialist staff can be trained to deliver low-intensity or brief psychologically informed pain management interventions, focused primarily on improving physical functioning and self-management skills (Hill et al., 2011). (1++)
- 2.9 These early interventions should not be confused with late interventions by specialist staff for complex refractory participants.

- 2.10** The provision of services should include both early interventions and comprehensive pain management rehabilitation programmes based on biopsychosocial management to fully address the needs of individuals. This means much earlier access to pain management. This is a significant and important shift in provision in a care pathway. In the past PMP techniques have been reserved for people who have failed to derive benefit from a more traditional pain treatment approach. (1++)
- 2.11** There should be more cooperation between primary care, secondary care and Local Authorities to deliver effective, integrated services for people with chronic pain. This will include pain management and other treatments such as medicines or injections.
- 2.12** Other rehabilitation programmes, Expert Patient Programme or Condition Management Programmes may use the same nomenclature of pain management and some of the same terminology to describe content. However, these programmes do not use the full set of methods described in section 3, often serve a different population, and have produced less robust evidence for efficacy (European Guidelines, 2004).

3. PMPs: aims, methods, delivery and outcomes

Key Points

1. The general aim of PMPs is to improve participation in daily activities and enhance quality of life for those with persistent pain and disability.
2. A PMP consists of a variety of methods for directly and indirectly producing behaviour change, including methods based on cognitive and behavioural therapy.
3. Outcome evaluation should be standard practice so that pain management staff can describe to participants, referrers and commissioners the range of participants with whom they work and the range of improvements that a PMP brings about, in both the short and longer term.

Aims of treatment

- 3.1. PMPs aim to improve the physical, emotional and social dimensions of health and functioning for people with chronic pain. This is carried out using interdisciplinary team working according to broadly cognitive behavioural principles.
- 3.2. The general aim of PMPs is to improve participation in daily activities and enhance “quality of life” for those with persistent pain and disability. This may include focus on increasing mobility, self-care, work, leisure and social activities, and reducing reliance on medication or healthcare use. Specific goals should be identified by the individual participants, although these are likely to be more effective when these are shaped and clarified with the help of healthcare providers. (C)
- 3.3. Pain relief or reduction in other symptoms is typically not a primary aim of treatment, although improvements in pain are often reported (Morley et al., 1999; van Tulder et al., 2000; Guzmán et al., 2001; Hoffman et al., 2007). The primary focus is on daily functioning without assuming that a change in pain is necessary to improve that functioning. One of the primary strategies of PMPs is to shift participant behaviour from struggling ineffectively with pain and to focus their behaviour on more worthwhile individual goals. (C)

General methods

- 3.4. A PMP consists of a variety of methods for directly and indirectly producing behaviour change, including methods based on cognitive and behavioural therapy, learning and conditioning processes, skills training, physical exercise and education. The standard methods used in PMPs are well described in many previous chapters and books (e.g. Turk & Gatchel, 2002).

PMP rationale and consent

- 3.5** All treatment methods should commence with a description of treatment and be presented in a manner that the participants can understand and that allows them to ask questions. The description of treatment should include discussion of what the participant will experience during treatment, the responsibilities of the treatment team and participants, and expected outcomes. (D)
- 3.5** Optimal treatment results are likely to emerge from participants engaging willingly in treatment. Treatment undertaken primarily out of desperation or that is coerced in some way is probably not optimal and may create “resistance” and risk treatment failure (Miller & Rollnick, 2002). (D)

Specific cognitive and behavioural methods

- 3.6 Graded activation guided by participant goals.** This is a core method within PMPs and includes domains of general physical activity, self-care, work, social activities and physical exercise. This consists of goal-setting, identification and management of barriers to activity, and the practice of specific practical and psychological skills to produce integrated and sustainable patterns of healthy activity (Williams et al., 2012). (A)
- 3.7 Cognitive therapy methods.** These methods are used to identify, examine, and change the impact of distressing, misleading, or restricting thoughts and beliefs. (Williams et al., 2012; see also Longmore & Worrell, 2007). These methods are sometimes called “cognitive restructuring” and “self-statement analysis”. This includes what is referred to as “behavioural experiments”. (A)
- 3.8 Graded exposure.** Structuring a series of practice activities in ways that are specifically designed to reduce fear and avoidance is called “graded exposure”. This aims to reduce fear or to increase willingness to experience fear (Bailey et al., 2010) and to reduce avoidance. Either way increased activity is the goal. (A)
- 3.9 Methods to enhance acceptance, mindfulness and psychological flexibility.** There is a range of methods designed to enhance participant openness and willingness to experience undesirable feelings, and to loosen the influence of judgemental, evaluative and analytic thought content. The overall process that is the focus of these methods can be called “psychological flexibility” (Hayes et al., 1999, 2012; Veehof et al., 2011; Wicksell et al., 2008, 2012). (A)

3.10 Skills training and activity management

- Information alone is typically a weak way to change behaviour and improve daily functioning, but can help prepare the patient to make behavioural changes. Direct methods of behaviour change are preferred when possible (Hayes et al., 1999; see also Waller, 2009). (D)
- PMPs are an opportunity for direct practice in the use of skills for changing behaviour, pursuing goals and dealing with barriers to the achievement of these goals. Direct practice of skills within the PMP context enables participants to access help from staff. This helps participants shape, develop and integrate changes in their behaviour, starting from their current level of performance and increasing at an effective and practical rate (Main et al., 2008). (C)
- Typical skills taught in PMPs include the following:
 - Methods for altering the adverse impacts of thoughts and feelings on healthy behaviour, including relaxation, attention management methods, cognitive restructuring or other more contextually based methods (such as mindfulness, acceptance and awareness exercises).

- Methods for identifying, setting, planning and pursuing goals.
- Strategies for co-ordinating, scheduling and managing the rate and pattern of goal-directed activity. The word pacing is widely used which a recent conceptual analysis has usefully defined as:

“an active self-management strategy whereby individuals learn to balance time spent on activity and rest for the purpose of achieving increased function and participation in meaningful activities.” (Jaimeson-Lega et al., 2012).

This helps with misunderstanding of the term that some authors fear may lead to avoidance patterns rather than healthy engagement with activity (McCracken & Samuel, 2007; Gill & Brown, 2009).

- Skills for communication and social interaction with family, friends, employers, work colleague or healthcare providers, including skills such as reflective listening and assertive communication.
- Sleep management methods such as sleep diaries and “sleep compression” methods (Currie et al., 2002).
- Explicit methods for generalising and integrating new skills and behaviour change into daily life and maintaining these over the longer term. Participants are helped to set goals, make explicit plans and commitments, and then to practice these in their home and other environments, monitoring what they do. They should review progress with HCPs, incorporate setbacks or failures into continued progress, and adjust goals and methods as necessary.

[It is not possible to quantify the level of evidence for each individual component of a PMP. These treatment components have Level 1 evidence of effect in other areas of healthcare and are the components that contribute to the Level 1++ evidence of effect of the programme as a whole].

3.11 Physical exercise

- Physical exercise is helpful to increase movement, to enable increased goal-directed activity, and to eventually improve fitness and physical health. The long-term aim is to improve quality of life through changes in physical fitness, strength, endurance and flexibility. (A)
- The important short-term aim of physical exercise is in changing behaviour patterns around physical sensations, including pain, to increase willingness to engage the body in movements and to expand patterns of activity.
- The role of physical deconditioning, such as in chronic low back pain, is not clear and hence the role of physical reconditioning in treatment is also not clear (Smeets et al., 2006; Verbunt et al., 2010). (2)
- Increasing activity by the use of quotas is often helpful. This is simplest with repetitive exercise that can be counted or timed and increased at a steady rate. Once again, as with other processes of behaviour change, it is important to explicitly train generalization and integration of new patterns outside the treatment context so that they persist over time. (B)

3.12 Education

- Education should be considered as a relatively low-intensity method that can improve knowledge and understanding, and is a weak way to produce behaviour change or improve daily functioning (Linton et al., 2008). Hence, education often needs to be supplemented with other methods to create an impact. Education is frequently delivered because it can be done with relative ease and because it is often highly satisfying to PMP participants. Popularity should not be confused with effectiveness. (1++)
- As part of a PMP, education should be provided by all members of the interdisciplinary team, according to their expertise, using an interactive style to enable participants to raise and resolve difficulties in understanding material or in applying it to their particular situations or problems.
- Some of the information provided to PMP participants can include:
 - Pain mechanisms, associated pathologies and processes of healthy normal functioning.
 - Anatomy and physiology of pain and pain pathways; differences between acute and persistent pain.
 - Psychology and pain; fear and avoidance; stress, distress and depression.
 - Safety and risk in relation to increased activity.
 - Advantages and disadvantages of using aids, treatments and medication.
 - Self-management approaches to flare-ups and setbacks.
 - Lifestyle and lifestyle change issues such as diet, weight, alcohol use, smoking and exercise for improving or maintaining general health.

Delivery

3.13 The inclusion of additional components will depend on available resources and should always be properly evaluated. Sacrificing core components for other content for which evidence is poor or lacking is to be discouraged.

3.14 The dimensions of the programme should reflect an individual's health needs and may vary in intensity, structure, length, size of group, and the time available and competencies of the clinical staff. Providing a low-intensity programme to individuals with high complexity is less likely to be cost-effective and may be harmful. (D)

3.15 Intensity and range

- For commissioning purposes, a standard PMP should be the equivalent of twelve half day sessions (e.g. 12x3 = 36 hours) delivered as outpatient programmes but flexibility should be made allowed based on need. However, this can be scheduled variably in the form of one or more sessions per week, including sessions from one hour to a full day in duration, typically over a period of two to ten weeks.

- Standard outpatient programmes have produced evidence of efficacy, but more intensive programmes usually residential programmes achieve greater improvement (Williams et al., 1996, 1999; Guzmán et al., 2001). This advantage is seen to be maintained at one-year follow-up. (B) Some very disabled and distressed participants will not benefit significantly from standard programmes but may benefit from more intensive programmes. Intensive programmes are not recommended for all participants. (B)
- It is common for programmes to offer post-treatment refresher sessions, but historic evidence suggested that these might not improve long-term outcome (Nicholas, 1992).
- However, more research is required. (3)
- Several models are being explored to provide long-term support to avoid re-referral to secondary care pain clinics. Further research is required.

3.16 Group format

- PMPs are delivered to groups because this format can normalise the experience of pain, provide natural social situations for addressing behaviour change and rehearsal, and maximise opportunities to draw on the experiences of group members. It can be delivered at lower cost per case.
- Group size varies, but most groups aim to have 8 to 12 participants. Space considerations and demand can influence the size of planned groups. Aspects of potentially useful group influences can be weakened with smaller numbers. Likewise, the influence exerted by the treatment provider can be weakened with larger groups. (3)
- Programme content is tailored to meet the needs of individual participants as much as possible and as identified by participants in collaboration with treatment staff. Selecting treatment components based on participant choice alone may undermine outcome (Morley & Williams, 2002). (C)

3.17 Staff Skills

Staff training is addressed in section 6; there are no data specifically from PMPs on staff skills in relation to outcome, however, it has been shown that periods of high staff turnover are associated with poorer participant outcomes (Williams & Potts, 2010). (2+)

Outcome measurement

3.18 Commissioners, purchasers, referrers and participants expect providers to deliver an effective PMP. There is no single primary outcome, since multiple problems imply multiple outcomes, and goals are to a large extent determined by participants themselves. The following domains should be considered (e.g. Turk et al., 2008):

- Emotional wellbeing.
- Range and level of reported and directly assessed activity, including physical performance.
- Social activities and social role performance.
- Pain experience.

- Changes in healthcare use (e.g. medication, consultations and treatment visits) where possible.
- Changes in work status, where relevant
- Quality of life.

3.19 Outcome evaluation should be standard practice so that pain management staff can describe to participants, referrers and commissioners the range of participants with whom they work and the range of improvements that the PMP brings about, in both the short and longer term. PMPs should demonstrate significant change in the specified domains.

Evidence for effectiveness

3.20 There is good evidence for efficacy of both outpatient and residential programmes (www.thecochranelibrary.com; Williams et al., 1996, 1999; Morley et al., 1999; Guzmán et al., 2001; van Tulder et al., 2001). Greater gains are achieved with the more intensive programmes (Williams et al., 1996, 1999; Guzmán et al., 2001). Although the most recent systematic review suggests that while treatment trial design has improved, the quality of treatment has not. If anything, outcomes appear less favourable than in previous reviews (Williams et al., 2012). New approaches such as acceptance and commitment therapy (ACT) (Hayes et al., 1999; McCracken L.M., Jones R. 2012.) and mindfulness-based therapies (Kabat-Zinn, 1990) for chronic pain “can be good alternatives” to standard cognitive behavioural therapy (CBT) on the basis of a current growing evidence base (Veehof et al., 2011), most of which is not yet included in meta-analyses (e.g. Thorsell et al., 2011; Wicksell et al., 2008, 2012). (1++)

3.21 PMPs have generally been evaluated as complete packages (see Morley & Williams, 2002). A number of systematic reviews have shown that PMPs significantly reduce distress and disability, significantly enhance coping, and improve various measures of physical performance (Morley et al., 1999; van Tulder et al., 2000; Guzmán et al., 2001). Where vocational training has been included in the package, return to work is also significantly enhanced (Watson et al., 2004). There is also evidence for decreased use of healthcare resources in terms of numbers of consultations and reduction of medication (Williams et al., 1996; Turk & Okifuji, 1998; Stack et al., 2013 and see Morley et al., 1999). Cost effectiveness analysis have demonstrated positive effects in other healthcare systems (e.g. Turk, 2002; Gatchel & Okifuji, 2006). (1++)

3.22 Few of the components of a PMP have been evaluated individually. It has been concluded that there is too much heterogeneity in the content of treatment to establish its relation with outcomes (Williams et al., 2012). However, there are the following points to consider:

- The physiotherapy component is drawn from established practice, supported by RCTs and by a systematic review (Hayden et al., 2005). (1++)
- Each of the components in the behaviour change methods and skills training components is drawn from behavioural and/or cognitive therapy, with moderate-to-excellent evidence of efficacy in changing behaviour and improving emotional functioning in psychological disorders (Roth & Fonagy, 2004; Tolin, 2010) compared with no treatment or with most alternative treatments. Efficacy in psychological settings depends, in part, on the skills of the HCP(s) delivering treatment (Roth & Fonagy, 2004). (1+)

- Another way to consider treatment components is in terms of treatment process. For example, studies of CBT, in general, do not show clear evidence that disputing negative thoughts or irrational beliefs is necessary for change produced by CBT (Longmore & Worrell, 2007). Adherence to thought-challenging, pacing, stretching and exercise correlate variably with outcomes at follow-up (Curran et al., 2009; Nicholas et al., 2011). Other results show that beneficial outcomes from PMPs are more likely to be a result of changes in patterns of fear- and pain-related avoidance than in changes in physical capacity (McCracken et al., 2002), or from increases in psychological flexibility (McCracken & Guttierrez-Martinez, 2011; Vowles & McCracken, 2008, 2010; Wicksell et al., 2010). (1+)

4. Assisting retention and return to work in PMPs

Key Points

1. People who lose their jobs are more likely to suffer from significant physical and mental health problems.
2. Return to work can be achieved. Intervention should be viewed as an essential component of PMPs and integrated with other treatment offered.
3. Return to work is likely to be more successful if there is joint planning between the participant, the employer and the HCPs.

Introduction

- 4.1 Employment is a key part of normal life for most of us and good meaningful work has been identified to have a positive effect on physical and mental health. (1–)
- 4.2 Unemployment is associated with increased rates of mortality, suicide (1+) (Kposowa, 2001; Blakely et al., 2003), increased physical health complaints (1–) and poorer mental health and psychological well-being (1+) (Reine et al., 2004).
- 4.3 The longer a person with pain is absent from work, the less likely they are to ever work again. (2++)
- 4.4 The costs associated with prolonged work absence represent approx. 80–90% of the total costs attributed to painful conditions such as low back pain (Wasiak et al., 2006). (2++)
- 4.5 From a societal perspective, it is essential that people return to appropriate work in a timely manner. Interventions which aim to return the person with pain to work quickly lead to less disability and psychological distress in the long term. (1+)
- 4.6 People who lose their jobs are more likely to suffer from significant physical and mental health problems (Waddell & Burton, 2006). (1+)
- 4.7 Most people who are out of work due to chronic illness would like to resume working in some capacity (Stanley & Maxwell, 2004). (2+)

Return to Work and PMPs

- 4.8 With the increasing focus on return to work by the government and the changes in the benefits system to promote early return to work, it is important that return to work issues are, as far as possible, dealt with effectively within the work of the PMP team (Watson et al., 2010). (4)
- 4.9 There is no strong evidence to indicate that most work is injurious to a participant's physical health and, although symptoms may increase during or following work, there is no evidence that this represents a progression of an underlying condition in people with most non-specific chronic pain conditions (e.g. chronic low back pain, chronic arm and neck pain) (Klumb & Lampert, 2004; Waddell & Burton, 2006). (1+)

- 4.10** Re-employment is associated with improvements in self-esteem, self-rated health, physical health and financial concerns (Waddell & Burton, 2006). (1)
- 4.11** There is no evidence to support the notion that physical activity engaged in through normal working causes a progression of “degenerative” changes in conditions such as neck and back pain. (1+) There is good evidence that most people with musculoskeletal pain can, and do, work when symptomatic (Bowe-Morris et al., 2010). (1+)
- 4.12** There is good evidence that interdisciplinary pain programmes based on increasing physical activity can help people remain in work or reduce the time to return to work in those with chronic pain conditions who are employed (Karjalainen et al., 2001, 2003; Guzmán et al., 2001). (1+)

Screening and Managing Obstacles to Recovery

- 4.13** Screening should be used to identify the factors which are likely to present as obstacles to recovery. These are likely to be, for example: fears about being physically active with pain, the participant’s perceptions about the safety of their job and the attitude of the participant and the employer towards chronic pain and the workplace (Shaw et al., 2009; Nicholas et al., 2011). (2+)

These potential obstacles to return to work should be assessed early and addressed in the treatment process. The level of motivation to work should be routinely highlighted in the assessment process.

- 4.14** It is recommended that obstacles to recovery be assessed in three main domains (Watson et al., 2010): (4)
- Psychosocial factors (Yellow Flags), which include fear avoidance beliefs, catastrophizing, attitudes to work and working, psychological distress and pain coping strategies (Nicholas et al., 2011). (2++)
 - Perceptions about work (Blue Flags), which include physical job demands, ability to modify work, job stress, workplace social support or dysfunction and job satisfaction (Shaw et al., 2009). (2++)
 - Organisational factors (Black Flags), which include the sickness certification process, lack of alternative employment, lack of access to services to assist return to work and lack of interest in rehabilitation from employer (Krause et al., 1998; Young et al., 2005). (2++)

- 4.15** The programme team should adopt strategies to change the participant’s unhelpful beliefs about pain and working identified in the assessment (Yellow Flags). These are likely to be a perception that work is the cause of their pain, that time off work is part of the treatment process, worry that pain is a sign of further injury and that one must be totally pain-free before returning to work (2+) (Nicholas et al., 2011). The psychosocial barriers to return to work can be addressed within the PMP.

- 4.16** A return-to-work programme incorporating modified work through adjustment in work tasks and work hours can be effective at quickening return to work (Krause et al., 1998; Franche et al., 2005; van Oostrom et al., 2009). (1+)

- 4.17** Ergonomic approaches, including an evaluation of the participant’s working environment followed by specific adaptation, can be effective in shortening the time to return to work (Anema et al., 2004). (1–)

This should be offered where possible and conducted by a professional skilled in such assessments.

- 4.18** Discussion with the workplace may help to clarify the participant's perceptions of workplace barriers to return to work. This may include a workplace visit to assess the work environment and identify solutions to the Blue Flags (Carroll et al., 2010). (4)

This must be managed sensitively with awareness of the impact on workplace relationships.

- 4.19** Return to work is likely to be more successful if there is joint planning between the participant, the employer and the HCPs (1-) (van Oostrom et al., 2009). It is recommended that a written return to work plan be drawn up and agreed by all parties. It is recommended that this is developed as part of the participant's treatment plan in a PMP where return to work is a desired and valued outcome and reviewed periodically to assess progress.
- 4.20** Appointing a single person to co-ordinate the process of return to work can result in shorter absences and lower wage-replacement costs and production losses (van Oostrom et al., 2009). (1-)
- 4.21** The clinician should seek the participant's permission, and should consider using "confidentiality waivers", to allow them to contact participant's employer to discuss returning to work.
- 4.22** People who have been out of work for some time and those who are unemployed may need specific vocational counselling to help them identify transferrable skills and training needs to gain skills to assist them to return to work (Watson et al., 2010). (3)
- 4.23** A skills assessment can be performed as part of a PMP where participants are seeking re-employment. It is likely that the help of external agencies in gaining appropriate skills will be needed (Watson et al., 2010). (4)
- 4.24** All participants in receipt of social replacement benefits (employment support allowance, incapacity benefit and disability living allowances) *should* be encouraged to seek up-to-date information on the current incentives to return to work and the likely changes in benefits should they commence work. This should be considered when planning rehabilitation into work (Harrington, 2010). (4)
- 4.25** Participants may believe that returning to work is not possible alongside the other physical and psychological demands that are made on them by other, usually domestic, activities. (2+) PMPs can enable participants to achieve a more acceptable work/life balance (Main et al., 2008). (4)

5. Referral and selection

Key Points

1. Pain management strategies can be applied flexibly within care pathways.
2. Selection is important but great care must be taken to maximise access of people with chronic pain to PMPs. There are no grounds for discrimination on the basis of age, literacy, litigation or judgement of motivation.
3. Treatment should be directed at improving motivation and skills for behaviour change to achieve this.

- 5.1 Pain management treatment should be offered when indicated by persistent pain causing distress, disability and a negative impact on quality of life. Treatment is usually offered as a group treatment, but individual therapy is more appropriate for some people.
- 5.2 Treatment by serial medical and physical methods may result in delays and disappointments and result in an increase in disability. Pain management components may be offered alongside treatments intended to eliminate or reduce pain. Reviews show efficacy of combining pain management methods with disease management in osteoarthritis and rheumatoid arthritis (Dixon et al., 2007; Knittle et al., 2010), and trials in cancer are encouraging. (3) Sometimes, medical treatment and pain management treatment are difficult for the participant to reconcile. Even with necessary specialist involvement and education, it takes time for many people to accept that their pain cannot be cured and strategies to manage life-long pain are indicated.
- 5.3 The optimal timing of a PMP in relation to other treatment will vary between individual participants, but will always entail careful discussion between participant and HCPs.
- 5.4 Any chronic pain may be treatable by pain management methods. Although most people attending PMPs have musculoskeletal pain, a minority have visceral, neuropathic, phantom or central pain, and/or pain from identified disease such as osteoarthritis and rheumatoid arthritis. There is no evidence that these cannot be successfully addressed by pain management methods. In specialist centres, some participants with particular problems, such as urogenital or facial pain, may be treated successfully in groups specific to that pain, where these exist.
- 5.5 For headache, there is a better chance of identifying and reducing stressors which precipitate it, thus reducing pain incidence and severity. Therefore attention to these stressors is crucial and stress management forms a large part of headache management (Martin, 1993).
- 5.6 Participants are referred from primary care and secondary care specialists (orthopaedic surgeons and rheumatologists, in particular). In both cases, referral may be initiated at the request of the individuals. Most individuals will have received specialist care.

- 5.7** Assessment for inclusion in a PMP should include appropriate medical screening to exclude treatable disease, to discuss treatment options or the lack of them, and to introduce the concepts of persistent pain and pain management, if this has not already been done. This may be done in primary or specialist settings, according to expertise. Although GPs may be adequately trained in pain management, many more will seek advice and guidance from specialist services. Until GP training is reviewed and improved, issues of participant safety would indicate that specialist advice is recommended (CMO Report: Donaldson L. (2009),.
- 5.8** Assessment for a PMP is made by one or more members of the PMP clinical staff, in relation to inclusion and exclusion criteria. From this assessment, a clinical judgement is made about the extent to which the PMP can address the individual's needs and a treatment plan agreed with the individual.
- 5.9** It is helpful to give potential participants written information about the nature and scope of the proposed treatment.
- 5.10** Common inclusion criteria include:
- Presence of persistent pain causing significant disability and/or distress.
 - The participant is able to communicate in the language in which the PMP is conducted; a trained independent interpreter may facilitate successful participation.
 - The participant is willing to participate in a group.
- 5.11** Common exclusion criteria include:
- The participant has a limited life expectancy or rapidly deteriorating disease or condition.
 - Uncontrolled psychosis and moderate-to-severe cognitive impairment are contraindications.
- 5.12** Some conditions may require special consideration to ensure a group-based PMP is suitable:
- Psychological or psychiatric problems which require urgent attention, or which preclude the use of cognitive and behavioural methods.
 - Symptoms of post-traumatic stress such as flashbacks and intrusions (since these may require individual integration of treatment).
 - Severe disability such that the basic requirements of attending treatment exceed the participant's current capacity. This depends on the physical characteristics of the treatment setting and access to it.
 - Extreme fatigue.
 - Impaired concentration or cognition.
- 5.13** There are other issues which have been treated as obstacles but for which there is no evidence that alone they render treatment unsuitable:
- Older adults; there is evidence that older participants are able to benefit from PMPs (Cook, 1998). (1+)
 - Written and spoken English are poor.

- Ongoing litigation may place participants in a dilemma in that improved function will reduce their anticipated compensation payment. Participants receiving benefits which depend on poor function are often in a similar position. Evidence is mixed on whether this affects outcome.
- The individual is judged to be poorly motivated. Open discussion with the participant on the prospect of gains in quality of life entailing losses of compensation/welfare payments is helpful. Potential participants should receive an adequate explanation of the aims of the programme in relation to their pain-related problems. Many are simply cautious or have not been engaged in the right way.
- Clinical judgements of "motivation" are most likely to exclude already disadvantaged participants. Treatment should be directed at improving motivation and skills for behaviour change that will support improved quality of life.

6. Resources

Key Points

1. A PMP is delivered by an interdisciplinary team in which some competencies are shared and some are unique to particular professions. All staff use cognitive behavioural principles to deliver their component(s) of the PMP.
2. PMPs may be delivered in a primary or a secondary care setting; the resources required will be the same.
3. PMPs should be properly resourced with time, personnel and facilities.

- 6.1** PMPs should be properly resourced with time, personnel and facilities. Efficacy has been demonstrated for the entire package, rather than for specific components (Morley et al., 1999; Guzmán et al., 2001) (1+), therefore reduction of any of these may adversely affect outcome. Pressure to treat the maximum number of participants for minimum outlay is likely to result in an intervention of low-to-negligible efficacy. Behavioural interventions can be diluted until they are no longer effective. This can demoralise both participants and staff. Serious consideration needs to be given to the utility of poorly resourced PMPs and to honest evaluation of their results across the range of intended outcomes.

Time

- 6.2** The length and intensity of PMPs varies across the UK. Shortening a programme may reduce its efficacy or render it ineffective.
- 6.3** A crucial principle of PMPs is interdisciplinary teamwork between diverse professionals who together have the necessary skills and competencies to provide the assessment and programme content. In this context, the combined competencies of the team are as important as individual qualifications.
- 6.4** Competencies can be described as core and specific:
- Core competencies relate to the knowledge and skills required to be part of an interdisciplinary team and to use cognitive and behavioural principles in their intervention in a group environment. These are transferable, in that all members of the team should be able to provide these effectively.
 - Specific competencies are the knowledge base and specific skills with which profession-specific training equips the individual. These are not transferable.

Staff

6.5 Medical

A PMP requires input from a medically qualified person. This will usually be a specialist in Pain Medicine with FFPMRCA qualification. The role also can be filled by a staff or associate specialists or other medical specialists, such as a GP, neurologist or rheumatologist, with appropriate training. Standards of practice are defined by the Faculty of Pain Medicine including the publication: The Good Pain Medicine Specialist (Faculty of Medicine, 2012).

- Medical personnel are needed to exclude cases where definitive treatment is more appropriate and to ensure appropriate pain-relieving treatments have been considered. Optimal care pathways are detailed in the British Pain Society's Map of medicine (Map of Medicine, 2012).
- Specific competencies include their role in the assessment, management of medical needs of participants, and in participant and staff education and training.
- Medical personnel, who have an understanding of behavioural principles, help shift a patient's focus away from medical treatments and towards pain management/rehabilitation.
- Medical personnel ensure the safety and well-being of participants, especially if new medical problems emerge during the course of the PMP.

6.6 Psychologist

A chartered clinical psychologist, Health and Care Professions Council (HCPC)-registered practitioner psychologist or a British Association for Behavioural & Cognitive Psychotherapies (BABCP1)-registered cognitive behavioural therapist with appropriate training and supervision is required.

- Since the treatment model for PMPs is psychological, many clinical service directors are consultant psychologists.
- Cognitive and behavioural elements fundamental to the delivery of PMPs require high levels of competence in providing an effective service to participants and in training and supervising staff not formally trained in psychological methods.
- Specific competencies: they have a role in the assessment, implementation of psychological principles, the delivery of behavioural and cognitive therapies, and staff education, training and supervision.
- The lead psychologist must have adequate training in cognitive and behavioural techniques in psychological and physical health problems, and experience of group work.

6.7 Physiotherapist

A HCPC-registered physiotherapist with specialist experience in managing people with chronic pain is required.

- Pain management is a complex specialty and requires a broad background of experience in rehabilitation. The physiotherapist should also be skilled in the delivery of exercise within the psychological model used by the PMP and should link to content covered by other professionals.

- Physical conditioning and restoration of physical function is a key component of the rehabilitation process. The role of the physiotherapist may encompass a wide range of areas such as:
 - Working collaboratively with the participant to develop effective exercise programmes which will assist in the increase in physical function as a means of improving quality of life.
 - Exploring movements and physical activities which the participant perceives as challenging due to pain or associated factors.
 - Assisting the participant to build an awareness of their body and develop behavioural flexibility in the presence of their pain condition.
 - Provide ongoing assessment of musculoskeletal symptoms and signs experienced during the PMP and act upon these if required.
 - Physiotherapy standards of practice for work in pain management programmes are described by the Physiotherapy Pain Association www.ppa.csp.org.uk.co.uk

6.8 Occupational therapist

Occupational therapists should be HCPC-registered.

- The role of an occupational therapist is to promote function, quality of life and activity for remediating dysfunction, facilitating adaptation and recreating identity (COT 2009). They work with the patient with pain to restore occupational balance between work, rest and leisure through interventions including activity scheduling and activity management strategies to facilitate long-term change.
- Chronic pain affects the choice of and level of engagement in occupation (Aegler & Satnik, 2009) (2+). Occupational therapists are trained to manage functional difficulty in the workplace (COT 2009).
- Occupational therapists contribute to effective programmes (Turk et al., 2008; (1+); Stanos & Houle, 2006 (1+); Demoulin et al., 2010 (2+)). Pain management teams that currently involve occupational therapists strongly recommend their inclusion. They should have an appropriate level of experience and available supervision.

6.9 Nurse

- The nurse's role may include medication review, rationalisation and reduction, as well as providing information regarding general health needs and liaising with the participant's family and other agencies, such as primary care practitioner, pharmacist, etc.
- Specialist chronic pain nurses have been shown to effectively facilitate integrated CBT programmes, thereby improving participants' perceived ability to manage pain and improve function (Wells-Ferdman et al., 2002). (2-)

6.10 Pharmacist

Access to a pharmacist is desirable. Their role includes education and planning of medication adjustment working closely with medical team members.

6.11 Clinical support workers

These may include healthcare assistants, occupational therapists and physio-technicians and assistant psychologists. Assistant psychologists have an important role, often in data collection and analysis, and in working alongside specialist clinical staff in a supporting role.

It is crucial that the outcomes of PMPs are evaluated and that audits are carried out. This requires personnel for distribution and collection of assessment materials and data entry. Such skills are often provided by assistant psychologists.

6.12 Administration

A PMP requires secretarial and administrative support appropriate to its organisational needs. This will entail liaison activities, the organisation of assessments and sessions, collation and distribution of assessments and discharge summaries, and correspondence and assistance with the production of course materials. The administration team must have excellent communication skills, as they are often the first point of contact for participants who may be depressed, anxious, angry or confused.

6.13 PMP past-participant

A past participant of a PMP whose role includes participant education and serving as a role model for participants may be helpful.

Leadership

6.14 Leadership within local management structures and in the daily running of the team and programme is crucial. The discipline or title of the leader(s) is less important than the identification and recognition of these roles. Consideration should be given to professional and clinical support and supervision and necessary resources for the post-holder(s)

6.15 Most NHS staff are accustomed to management hierarchies within their discipline. True interdisciplinary teams require cross-discipline management structures.

Team working

6.16 The coexistence of staff with a shared purpose does not make a team. Working together as a team requires frequent and regular times to meet and arrive at shared understandings of participants' needs and staff provision. Team members also need to appreciate one another's areas of unique and shared expertise.

6.17 All staff can benefit from discussion with the clinical psychologist or equivalent on the application of cognitive and behavioural principles to their area of work.

Training

6.18 There is currently no recognised undergraduate pain management training in the UK or elsewhere directly relevant to PMP work. Staff bring generic and specific skills from professional training and learn from peers in the pain management field and from published accounts. Acquiring skills in pain management is an issue for all staff of PMPs. It is a mistake to think that generic single discipline training is sufficient for transfer to the needs of an effective cognitive behavioural intervention. There are several Masters level course across the UK which will equip clinicians with a broad framework of understanding of pain management.

Continuing professional development

6.19 There is an urgent need of quality theoretical and practical training courses in the application of cognitive behavioural therapies to persistent pain problems. Appropriate areas of knowledge and skill are set out in the IASP core curriculum (www.iasp-pain.org). All staff working as part of an interdisciplinary PMP should have adequate access to continue within-discipline education and development specific to the area of pain, as well as to their own broader areas of professional interest. This should entail attending relevant national meetings and special interest groups and networking with fellow professionals in PMPs outside their geographical area.

Start-up needs

6.20 When a PMP is established, several weeks of start-up time is required for the team to develop the programme content and procedures, to write participant materials, to develop links with referrers and to complete other tasks which will allow them to run an effective programme from the outset

6.21 Meetings for clinical training and education within the staff team should be held at least every 2 months. On occasion, these may involve other staff involved in the treatment of pain participants for mutual education and liaison.

Facilities

6.22 A PMP requires designated space suitable for its activities and where any necessary equipment can be accommodated, including:

- A disabled-friendly venue
- Access to public transport
- Adequate parking
- A room large enough for the group
- Adequate floor space for exercise and relaxation practice
- Availability of private area(s) for individual discussion
- Easily accessible toilet facilities
- Refreshment facilities

- Office space.

When applicable, suitable overnight accommodation should be identified for participants who require it.

Location

- 6.23** PMPs are often delivered within hospitals or health centres, but alternative venues such as gyms or community centres are also suitable. Access to accommodation is essential.

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