

Department of Social Protection

# Chronic Pain Disorders and Fibromyalgia

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# 1. Overview and Definition of Chronic Pain Disorders

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## 1.1 Overview

Pain is part of the body's defence system, which triggers mental and physical responses in order to cease whatever is causing the pain to occur. Pain is a common symptom suffered by individuals – statistics show that as many as 9 in 10 people experience some form of pain regularly (Gallup, 1999), with as many as 1 in 5 people experiencing moderate to severe pain on a regular basis (Brevivik et al., 2006).

Evidence shows that individuals who suffer from chronic pain visit their general practitioner up to five times more often than the general population (Elliott et al, 1999). However, only a small number of these individuals are referred on to a specialist in pain control, and almost half report that their pain is not well controlled (Addington-Hall and MacCarthy, 1995).

The Pain in Europe Study (Brevivik et al., 2006), which studied chronic non-malignant pain across 16 countries in Europe found:

- Average time period for experiencing chronic pain is 7 years
- 20% report experiencing chronic pain for 20 years or more
- 500 million days annually are lost to work across Europe due to chronic pain
- The economic cost of chronic pain is estimated to be €34 billion annually
- Over 40% of individuals with chronic pain report some form of functional impairment
- 13% of Irish population and 27% of Irish households are affected by chronic pain.

Occupationally, as many as 20% of individuals have reported losing their job because of their chronic pain. Those who are full time employed lose an average of 15 days annually because of their condition.

The 2006 National Disability Survey in Ireland (Central Statistics Office, 2008), also stated that pain was one of the most commonly reported disability types, with illness (particularly arthritic conditions) being the most common cause.

Although there is a wide range of conditions which can cause individuals to experience significant non-malignant pain, estimates by the World Health Organisation (2008) show a high level of disability associated with the most common chronic pain conditions - low back pain, arthritis and fibromyalgia.

## 1.2 Definition of Pain

The most accepted definition of pain is that of the International Association for the Study of Pain (2007), who define pain as:

“An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage”

This definition includes physical pain, but also includes pain which is experienced or described by the individual as pain, but cannot be directly linked to a physical source. This is described differently in a common nursing definition of pain which states that:

“Pain is whatever the experiencing person says it is, existing whenever the experiencing person says it does” (Pasero and McCaffery, 1999).

Pain can be subdivided into two categories, acute pain and chronic pain.

### 1.2.1 Acute Pain

Acute pain is defined as a protective response to damaged tissue associated with acute disease or injury (including surgery). This type of pain is of recent onset and limited duration. It reduces over time and can be brief, lasting a few seconds or minutes, or may persist over a longer period up to several months (British Pain Society & RCGP, 2004). Because this type of pain is a biological pain associated with tissue injury or disease, it has ‘expected’ characteristics, including a predictable onset and a duration which is also predictable to some extent.

This type of pain is usually nociceptive - signalled to the brain via normally functioning afferent neural pathways, and responds well to common analgesic, anti-inflammatory and opioid medication which act effectively to block these pathways.

### 1.2.2 Chronic Pain

Chronic pain is defined as pain that either persists beyond the point that healing would be expected to be complete (usually taken as 3-6 months) or that occurs in disease processes in which healing does not take place. The pain may be continuous or intermittent. Chronic pain can be experienced by those who do not have evidence of tissue damage or biological reason for pain (International Association for the Study of Pain, 2007). This ‘unknown cause’ factor often results in difficulty in reaching a diagnosis.

Another definition of chronic pain is pain is “pain without apparent biological value that has persisted beyond normal tissue healing time” (International Association for the Study of Pain, 2007).

This type of pain can be nociceptive, or can be neuropathic i.e. handled by dysfunctional nerve signalling. Individuals who suffer from chronic pain often report hyperalgesia (increased sensitivity to pain), allodynia (heightened pain response to usually non-painful stimuli) or dysaesthesia (unpleasant abnormal sensations) alongside the chronic pain. Chronic pain can also arise from other types of pain.

Many individuals find that they have a reduced response or tolerance to common analgesic, anti-inflammatory and opioid medication, which means that many pain medication therapies used to good effect in acute pain do not achieve pain control in individuals affected by chronic pain (UMHS, 2009).

## 1.3 Types of Pain

Pain can be classified in to a number of subdivisions or types. This can be either by type of pain, or by body region. Classification by pain types includes:

- Nociceptive pain: aching, boring, worse on movement, anatomically defined, fluctuates in severity.
- Neuropathic pain: burning, stabbing, tingling, shooting, associated with allodynia, hypersensitivity or other sensory changes.
- Mixed nociceptive and neuropathic pain: combination of symptoms.
- Visceral pain: dull, diffuse, ill-defined, may be colicky.
- Autonomic symptoms: colour and temperature changes, sweating, trophic changes should also be noted.

Although chronic pain is often neuropathic, it can arise from other types of pain also.

It is also possible to classify chronic pain by the underlying condition or body region which is causing the pain. For example:

- Myofascial pain
- Musculoskeletal (mechanical)
- Fibromyalgia
- Chronic headache syndromes

### 1.3.1 Nociceptive Pain

Nociceptive pain is the type of pain which results from injury or damage to body tissues. This may be due to a fracture, injury or burn, or following surgical treatment such as following an operation. Nociceptive pain is usually well localised (dependent on area of tissue damage) and is typically experienced as a sharp or stabbing type of pain, or as an ache. The pain can also be described as 'gripping' in nature.

The most common type of nociceptive pain is low back pain (NHS Quality Improvement in Scotland, 2006), although this type of pain also results from malignant tumours, and oncology therapies such as surgery and radiation therapies (Merck, 2009), and from degenerative musculoskeletal disease processes such as osteoarthritis and osteoporosis.



Nociceptive pain can last long after the factor (injury or damage) which caused the pain has ceased to have an effect. Psychological factors often play a part should nociceptive pain not resolve as quickly as expected (NHS Quality Improvement in Scotland, 2006).

### 1.3.2 Neuropathic Pain

Neuropathic pain is caused by damage to or dysfunction of the nerves, spinal cord, or brain. Typical effects are felt as a burning or tingling type of pain. This type of pain can often be spontaneous, and can be felt as sudden shocks. Neuropathic pain can also be felt as hypersensitivity to touch or cold.

This type of pain has several causes (Merck, 2009):

- **Nerve compression:** for example carpal tunnel syndrome
- **Nerve damage:** for example peripheral neuropathy resulting from diabetes mellitus or Guillain-Barré syndrome
- **Abnormal or disrupted processing of pain signals** by the brain and spinal cord: for example in 'phantom' pain following an amputation, post-herpetic neuralgia following shingles (herpes zoster) infection, and complex regional pain syndrome.

### 1.3.3 Psychogenic Pain

Psychogenic pain is physical pain that arises from psychological factors, and by itself, occurs far less commonly than nociceptive or neuropathic pain. Although any pain type can be complicated by psychological factors such as mental, emotional or behavioural factors, it is controversial that chronic physical pain arises from purely psychological factors alone.

Psychological factors and symptoms of psychogenic pain often complicate pain related disabilities – although the pain has a physical cause, the psychological factors exacerbate or enhance the pain to be more severe than found in most individuals with a similar physical cause of pain.

The cycle where psychological factors exaggerate physical pain in this way is sometimes described as chronic pain syndrome. An individual with chronic pain anticipates its reoccurrence, becoming more anxious about the pain which in turn makes them less able to deal with the pain. The pain is then perceived to be more severe, which then precipitates more anxiety - becoming almost a self-fulfilling prophecy.

Treatment plans for this type of pain should include a mental health component, but it should be recognised that although psychogenic pain has mental health inputs, the pain that is experienced by the individual is real and has profound physical effects.

## 1.4 The Effects of Chronic Pain

The effects of chronic pain on an individual vary widely, depending on the cause of the pain, the individual's ability to cope with the pain, and the wide ranging effects of personality, social, occupational and environmental factors. The differing responses that individuals experience in relation to pain can be seen in patients recovering from an operation, for example, where one individual may experience relatively little pain and recover quickly, another individual may experience the same procedure as severely painful. Another example of differing reactions to pain is that of time – a rugby player may not notice an injury sustained during a match, only realising it has occurred when pain is noticed once the stimulation and adrenaline of the game is no longer overwhelming the normal pain response mechanisms.

Pain can be chronically disabling, however, resulting in significant reduction in function and in quality of life (NHS Quality Improvement Scotland, 2006). The effects of pain can be widespread – affecting the individual's ability with respect to social function, family involvement, and employment, leading to comorbid psychiatric disorders such as anxiety and depression, lack of social and family involvement and employment issues such as short term absenteeism, job losses, unemployment and incapacity assessment/benefit.

Pizzi et al (2005) studied the economic effect of chronic pain in the workplace, in the United States. They found a high economic cost associated with chronic pain in terms of lost work days, short term disability and healthcare utilisation costs.

## 2. Epidemiology

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Figures from World Health Organisation data estimate the prevalence of significant, persistent pain to be approximately 23% (Gureje et al, 2001). This prevalence rate increases with age, affecting nearly one third of the older population.

The Pain in Europe survey (Breivik, 2006; Fricker, 2006) revealed that 13% of Irish population and 27% of Irish households are affected by chronic pain.

Pain was one of the most common disability types reported in the 2006 National Disability Survey in Ireland (Central Statistics Office, 2008). Almost 50% of individuals reporting pain as the main cause of their disability stated that the pain arose from injury or illness, and of those, arthritis was the most common cause of injury or illness (34%). Almost 20% stated the pain disability was caused by an accident or injury.

Other information regarding chronic pain (Irish Chronic Pain Association, 2005) includes:

- 21% of people with chronic pain report pain so severe they sometimes wish to die.
- The average age of individuals with chronic pain is 48
- The average duration of chronic pain is 4.9 years, although almost 20% of individuals with chronic pain have experienced it for >20 years.
- Almost 70% of individuals with chronic pain report pain on a daily basis
- 34% felt pain impacted on employment
- 15% of sufferers report losing a job due to their chronic pain
- 19% were diagnosed with depression as a result of chronic pain

The Pain in Europe Survey (Breivik, 2006; Fricker, 2006) also revealed:

- 50-66% of individuals with chronic pain reported reduced ability to exercise, sleep, perform household chores, attend social activities, drive a car, walk or have sexual relations
- 25% of individuals with chronic pain reported that relationships with family and friends were strained or broken
- 33% of individuals with chronic pain were less able or unable to maintain an independent lifestyle

The most common causes of Chronic Pain are:

- Arthritic Pain
- Back Pain

- Fibromyalgia
- Neuropathic Pain
- Headache

## 3. Aetiology

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The aetiology of chronic pain is often unclear, and often multi-factorial, which is one of the main challenges with the diagnosis and treatment of the disorder. There is a school of thought that considers chronic pain to *always* have originated from an acute pain (Katz et al., 2008), however other authorities recognise that chronic pain may occur for no identifiable reason and not following an episode of acute pain.

Chronic pain can be attributed to a wide range of identifiable causes – acute injury, arthritis, migraine, fibromyalgia for example. A general classification is detailed below.

- Musculoskeletal (mechanical) Causes of Chronic Pain
- Neurological Causes of Chronic Pain
- Headache/Migraine
- Psychological or Localised Disease Causes of Chronic Pain
- Medical or Generalised Disease process

### 3.1.1 Musculoskeletal (Mechanical) Causes of Chronic Pain

- Osteoarthritis
- Rheumatoid arthritis
- Osteomyelitis
- Osteoporosis
- Ankylosing spondylitis,
- Myofascial diseases
- Polymyalgia rheumatica
- Polymyositis
- Fractures
- Chronic or repetitive overuse
- Carpel Tunnel Syndrome
- Muscular strains
- Faulty posture
- Mechanical low back pain.

### 3.1.2 Neurological Causes of Chronic Pain

- Diabetic sensorimotor polyneuropathy (up to 25% of diabetics)
- Spinal stenosis
- Brachial plexus traction injury
- Thoracic outlet syndrome
- Post-herpetic neuralgia
- Multiple Sclerosis
- Alcoholism
- Thyroid disease
- Pernicious anaemia
- Infections (e.g., HIV)
- Polyneuropathies
- Polyradiculopathies
- Post-herpetic neuralgia: pain persisting for more than 1 month after the onset of herpes zoster (occurs in about 30% of patients following acute zoster, and lasts 1 year in about 10% (Scott et al, 2003)
- Complex regional pain syndrome: typically a continuous, intense pain which develops following an identified injury but which is out of proportion to the injury and becomes more severe over time. There are two categories - Type I, occurring in the absence of nerve damage (previously known as reflex sympathetic dystrophy) and type II, occurring with nerve damage (previously known as causalgia).

### 3.1.3 Causes of Chronic Pain due to Headache and/or Migraine

- Cluster Headaches – a neurological condition which results in an extremely severe unilateral orbital, supraorbital and/or temporal pain lasting from 15 minutes to 3 hours. This type of headache can be considered to be the most disabling form of pain resulting from headache or migraine, and can occur with a frequency of up to 16 attacks in a 48 hour period. Differentiation from migraine is important to ensure effective treatment. This form of headache has been termed ‘suicide headache’ due to the increased number of suicides related to cluster headaches and through to result from the intensity of pain that an attack brings
- Migraine

- Trigeminal neuralgia
- Giant cell (temporal) arteritis
- Glaucoma
- Smoking
- Alcohol
- Temporo-mandibular joint dysfunction
- Drug or Substance overuse or misuse

### 3.1.4 Psychological causes of Chronic Pain

- Depression,
- Anxiety,
- Personality disorders
- Sleep disturbances.

### 3.1.5 Chronic Pain Resulting From Medical or Generalised Disease processes

Chronic Pain may arise from general medical or disease conditions and/or conditions which affect a particular region or site. Regional pain includes:

- Abdominal (e.g. peptic ulcer, irritable bowel syndrome, pancreatitis, hernias, diverticular disease)
- Gynaecological (e.g. endometriosis)
- Obstetric (e.g. symphysis pubis dysfunction)
- Urological (e.g. interstitial cystitis)
- Cardiovascular (e.g. ischaemic heart disease, coronary heart disease, angina, peripheral vascular disease, etc)

Chronic Pain which results from disease processes includes:

- **Rheumatological** - conditions such as rheumatoid arthritis, osteoarthritis or fibromyalgia
- **Endocrine** - conditions such as Hypothyroidism (joint pain), diabetes.
- **Infectious** - diseases such as hepatitis C, Post-herpetic neuralgia
- **Malignancy** – cancer pain and pain from treatment (e.g. radiation, chemotherapy or surgery)

[Source: Warrell et al (2004); BMJ Best Practice (2009)]



## 4. Diagnosis

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### 4.1 Clinical Features

The evaluation of chronic pain certainly needs to address the physical symptoms in some detail, but, both for pain management and disability assessment, it is also important to seek information about the impact of the condition on the individual's activity level, sleep pattern, mood and social functioning.

History of the pain should be documented including:

- predisposing factors (trauma, illness, acute pains, occupation)
- pain type (nociceptive, neuropathic, mixed, visceral, etc)
- duration (more than 3 months in chronic pain syndromes)
- initial site and any radiation of the pain
- severity, pattern and clinical course (including diurnal variation)
- tender points (number and distribution)
- history of other aggravating factors
- analgesic use and response to treatment
- history of any alleviating or relieving factors
- associated symptoms e.g. nausea, visceral symptoms
- history of any sleep disturbance
- history of previous treatments – what has the individual already tried to relieve their pain, why did they discontinue any previous treatment?

Associated somatic symptoms such as bowel spasm, genitourinary disturbances and diffuse sensory changes are commonly seen in all chronic pain syndromes, particularly fibromyalgia.

#### **Interference with Activities of Daily Living**

The impact of the reported pain on the individual's ability to perform normal activities of daily living should be assessed. These include:

- The ability to sit from standing and vice versa
- The ability to dress and undress unaided

- The ability to walk with ease
- Any change in the individuals usual weight e.g. gain/loss
- Any impact on the individual's social functioning and interpersonal relationships

(NHS Quality Improvement Scotland, 2006)

Pain assessment tools may be valuable in assessing an individual's experience of pain. The Brief Pain Inventory (first published by Cleeland in 1994 – see **Appendix E**) assesses location, intensity and pattern of the pain, and provides information on medication, pain relief, patient beliefs, and affect on functional ability (ICSI, 2008).

## 4.2 Other History

### Functional and occupational history

Patients who report significant pain-related disability for activities of daily living or work duties are more likely to have persistent chronic pain (Grotle et al, 2005).

Job dissatisfaction is highly correlated with the development of chronic pain, particularly chronic low back pain (Marcus, 2005).

Myofascial pain due to repetitive overuse or musculoskeletal pain precipitated by physical activity may require activity modification advice from an occupational health service.

### Psychological history

Any history of anxiety or depression, psychological, physical or sexual abuse, and alcohol or drug abuse should be noted. Nearly half of all patients with a pain disorder have associated psychological or psychiatric co-morbidity including depression, anxiety and personality disorder.

Other relevant psychosocial considerations include cultural factors and influences, the effect of the individual's pain on their interpersonal relationships, and factors which may affect their pain thresholds (NHS Quality Improvement Scotland, 2006)

## 4.3 Physical Examination

Physical examination of the patient has a limited usefulness in the overall assessment of chronic pain, which mainly requires a holistic evaluation of a purely subjective phenomenon.

Signs of active disease accompanying the reported pain (joint swelling, inflammation, crepitus, muscle spasm) should be noted since the biological mechanism of the pain will affect the types of drug therapy available to treat it.

Observation of pain-related behaviours (wincing, grimacing, painful cries and restlessness, for example) can provide informal clues.

Any asymmetry of the musculoskeletal system should be noted but does not usually correlate well with the degree of pain. Atrophy of limb or trunk musculature would be expected if the history suggests a relative lack of use.

Elicitation of tenderness (increased level of pain in response to pressure) should be used judiciously and sensitively.

Physiological measures might provide supporting evidence but need to be recorded sensitively when the patient is complaining of pain.

## 4.4 Investigations

Appropriate investigations may be required to confirm the presence and severity of any underlying conditions.

Specific investigations will help to exclude the more serious differential diagnoses discussed in chapter 5.

There is no consistent, objective test to confirm the presence, site, character or severity of reported pain.

Pain assessment scales can be a useful subjective method of monitoring the progress of symptoms for an individual pain sufferer.

## 5. Differential Diagnosis and Comorbidity

Chronic pain embraces a wider spectrum of comorbidity than almost any other problem.

The comorbid conditions, usually regarded as additional health related problems that may have a modifying effect on, or provide an alternative explanation for, the clinical presentation, are often an essential part of the problem of chronic pain.

A diagnosis of chronic pain syndrome should not be made until more serious and potentially life-threatening and treatable conditions have been considered and excluded.

### 5.1 Differential Diagnosis

Some conditions that have been mistaken for chronic pain syndrome (and the tests required to exclude them) include:

Diagnosis	Screening Investigations
Paraneoplastic syndrome	Cancer screening tests appropriate to age and symptoms
Hypothyroidism	Thyroid function tests
Polymyalgia rheumatica	ESR and C-reactive protein
Giant cell arteritis	ESR and C-reactive protein, biopsy confirmation
Polymyositis	Raised CK, positive ANA, abnormal EMG, muscle biopsy
Depression	No specific test; please see the Depression Protocol for diagnostic criteria

### 5.2 Psychiatric Comorbidity

It is important that an assessment of an individual presenting with features of Chronic Pain Disorders includes screening for comorbid psychological conditions such as distress, depression and anxiety. Evidence indicates that psychiatric comorbidity significantly affects the course and prognosis of chronic pain, but such disorders are often missed in individuals suffering from Chronic Pain, or receive inadequate treatment (Benjamin and Morris, 2009).

There is also evidence which suggests that the existence of a chronic pain disorder results in a significantly increased risk of developing a psychiatric comorbidity such as depression. This also applies in reverse, with the existence of a psychiatric

disorder such as depression resulting in a significantly increased risk of developing a chronic pain syndrome (Tunks et al, 2008). The rates of depression in individuals with Chronic Pain can be as high as 50% or more with major depressive syndrome present in a third of these cases. For individuals with Chronic Pain which is not explained by a medical cause, the rates of comorbid depression are higher still (UMHS, 2009). It should be noted that although pain is a common symptom in depressive disorders, in individuals with Chronic Pain the depression usually commonly presents after the onset of pain symptoms – sometimes a significant period of time after the individual first develops Chronic Pain (UMHS, 2009). In these cases, resolution or management of the individual's pain will usually result in a subsidence of the depression symptoms. There are exceptions to this, for example in individuals with fibromyalgia.

Anxiety disorders are also a common comorbid psychiatric condition in individuals with Chronic Pain. Anxiety disorders are more likely to exist in individuals with Chronic Pain who also are also suffering from depression.

Individuals with personality disorders have a poor prognosis for Chronic Pain. This is influenced by a number of factors, including the personality disorder itself, non-compliance with treatment, and difficulties in communication with health care professionals.

Any psychological conditions identified during evaluation of an individual with chronic pain should be reflected in the treatment plan to ensure that the degree of impairment for the individual is correctly assessed and addressed.

## 6. Treatment

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The Pain in Europe survey reports that many individuals do not receive satisfactory care with respect to their pain, with 40% of individuals not achieving adequate pain control (Fricker, 2006). Access to specialist pain services is not available in many areas. In addition, a significant number of individuals are not referred on to specialist services where they are available, even though their condition may indicate such a referral is appropriate (WHO, 2009).

### 6.1 Under Treatment for Chronic Pain

There is a sizable evidence base to suggest that pain in general – not just chronic pain – can be underestimated, and undertreated (NPA and JHACO, 2001; World Health Organisation, 2008). This is a known issue within the acute setting, as a number of studies undertaken in the 1990s (for example by the American College of Anaesthesiologists) revealed an issue with undertreatment of post operative pain. However, evidence indicates that pain control is not well achieved for individuals with chronic pain either, with the World Health Organisation recognising that many issues, including the availability of analgesic medication, means that severe undertreatment for chronic pain is common in most countries across the world (WHO, 2009). Two thirds of individuals with chronic pain in the UK report that their pain is inadequately controlled, with only a small proportion having been assessed by a pain specialist (British Pain Society and RCGP, 2004).

In addition to care barriers in effective pain control, there are barriers which are placed by the individual themselves. Individuals with chronic pain often do not seek help with pain – or will underplay the severity of symptoms in discussions with clinical carers (World Health Organisation, 2008). This occurs for a variety of reasons including religion, fear, finance, culture and a feeling that health care professionals may feel the individual's pain is 'imaginary'.

The most common groups at risk of undertreatment for pain are:

- Elderly
- Female
- Neonate/Infant
- Individuals with emotional or cognitive dysfunction
- Individuals who do not speak English as a first language

There are a number of other barriers which may prevent effective pain management:

- Individuals from ethnic minorities
- Low socio-economic status
- Difficulty in accessing care (for example the severely disabled who may have

difficulty accessing resources such as pain management centres)

- Reluctance (or prevention) of prescribers to use opioid medication

### **6.1.1 The Effects of Under Treatment for Chronic Pain**

There are a number of adverse effects which can arise if chronic pain is not effectively managed. Firstly, just as in acute pain, physiological shock (although not acute in this case) plays a part in hampering recovery and can exacerbate an underlying condition which is responsible for the pain. There is a wide evidence base that shows an outcome can be poorer should an individual's pain not be well controlled in the acute setting, and that this effect is higher in the especially younger or older individual, or those who are frail. For example, research showed that paediatric cardiac surgery showed a higher mortality rate in patients who had light anaesthesia than those who had deep anaesthesia and good post operative pain control (NPA and JHACO, 2001). This evidence base is also relevant for individuals with chronic pain.

There are social effects of under treatment for chronic pain. Individuals who do not receive good pain management have been shown to have higher rates of depression, family breakdown, suicidal feelings and feelings of isolation (British Pain Society and RCGP, 2004; Clinical Services Advisory Group, 2000).

Occupationally, poorly managed chronic pain accounts for 208 million days off work equating to £18 billion within the UK (Arthritis Research Council, 2000). Of those on incapacity benefit, a significant proportion (24% in the UK) are unable to work due to musculoskeletal problems such as back or neck pain. In Ireland, the cost of disability benefit due to low back pain is around €350 million annually (Irish Times, 2009).

### **6.1.2 Professional Barriers to the Effective Treatment of Chronic Pain**

There is a wide evidence base indicating that there is often a disparity between a clinician's assessment of an individual's chronic pain, and the individual's perception of the severity and intensity of the pain he or she experiences (NPA and JHACO, 2001; WHO, 2009). Professional concerns which may negatively impact effective pain management also include concerns regarding regulatory scrutiny, prescribing of analgesics which may have a 'street' value, the potential for iatrogenic addiction, and potential difficulty in prescribing opioid therapies to non-cancer sufferers (WHO, 2009).

### **6.1.3 Individual and Family Barriers to the Effective Treatment of Chronic Pain**

Individuals may themselves present barriers which negatively affect their ability to reach effective control of chronic pain. Communication difficulties are common, with many individuals not describing their pain effectively. This can be due to a number of reasons including language and communication skills, the fear that professionals may assume their pain is psychological, fear of addiction to prescribed medication or non-compliance to taking medication. For example, a patient who is not depressed may be reluctant to take anti-depressant medication even though the medication is being used for an analgesic effect.



There is evidence to suggest that many individuals with chronic pain do not seek medical attention. Surveys suggest that although individuals may continue to suffer with pain, as many as 40% are not actively receiving treatment for their pain (NPA and JHACO, 2001).

## 6.2 Treatment Options for Chronic Pain Disorders

The availability of high-quality evidence to recommend treatment strategies for Chronic Pain Disorders is limited (World Health Organisation, 2008). Therefore, treatment should be focussed on the best option for the individual using clinical judgement.

### 6.2.1 Treatment or Management Plan

Following assessment and evaluation of an individual's chronic pain, a treatment or management plan should be formed in conjunction with the individual. This should include all information necessary to help the individual gain effective control of their pain. For example, the treatment plan may state that a particular analgesic should be used at exact, timed intervals ("by the clock") regardless of the severity of the individual's pain at that particular time.

The treatment plan should focus on interventions and goals that will enable the individual to maintain or improve their functional ability, not focus only on analgesic relief (UMHS, 2009).

## 6.3 Pharmacological Therapies

Several different types of pain medication have been shown to be effective in controlling Chronic Pain. These include simple analgesics such as paracetamol and Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), as well as stronger analgesics such as opiates, and adjuvant medications such as antidepressants and anticonvulsant medications.

The medication an individual is already taking, both over the counter and prescribed by other practitioners (e.g. an outpatient clinic for an existing condition), should be reviewed to avoid duplication of analgesic therapy and accidental overdose.

### 6.3.1 Paracetamol

Paracetamol is one of the most well known analgesics, and is effective at relieving pain, although its method of action is not clear. It can be taken over long periods of time without side effects when used at the correct dosage; however, an overdose of paracetamol can have serious consequences. Its use should be carefully monitored in the elderly or those with hepatic compromise.

Individuals with chronic pain may find that the best control of their pain is achieved by taking paracetamol regularly (every 6 hours).

Paracetamol is especially effective in chronic pain resulting from mild to moderate



musculoskeletal disease (e.g. osteoarthritis).

### 6.3.2 Non-Steroidal Anti-Inflammatory Drugs

Although NSAIDs are widely used to treat mild to moderate acute pain, they may also benefit some individuals with chronic long term pain, especially those with musculoskeletal pain. However, they can have significant side effects, such as gastrointestinal bleeding, when used over longer periods of time. There are a number of groups of patients who should either not use NSAID analgesia, or use this class of drugs only with careful management. These include the elderly, asthmatics, those with congestive cardiac failure, etc.

### 6.3.3 Opioid Analgesics

There are a number of issues (see below) which should be considered with respect to the use of opioid analgesia for Chronic Pain. However, the use of opioid medication is beneficial in some individuals with chronic non-malignant pain, and with such individuals regaining functional ability and pain control without developing issues of tolerance or dependence. The World Health Organisation (WHO, 2009) considers that there is a serious issue in most developed countries with respect to the under-prescribing of opioid analgesia to treat chronic pain. This arises from concerns regarding abuse and addiction (see below), statutory regulation of the availability of opioid medication, and the treatment of individuals with chronic pain who use or misuse other sedative substances such as alcohol, or who have comorbid psychiatric conditions.

### 6.3.4 Specific Opioid Issues

Issues which should be noted when considering opioid therapy include:

- Opioid therapy should not be considered as a first line treatment (NHS Quality Improvement Scotland, 2006)
- Patient selection is crucial – individuals who have a history of substance or alcohol abuse, non-compliance with treatment or comorbid psychiatric conditions may not be suitable for this type of medication. Efforts should be made to detect people at risk of abuse and dependence on opioids prior to commencement of treatment. Screening tools may assist with this – for example the Opioid Risk Tool (see Webster LR, Webster RM. Predicting aberrant behaviours in opioid-treated patients: preliminary validation of the Opioid Risk Tool. *Pain Medicine* 2005(6)432-442)
- Sustained-release medications should be used routinely, with immediate release medications only used to manage break through pain (NHS Quality Improvement Scotland, 2006)
- Treatment should only be commenced once treatment plans, monitoring and clearly defined goals have been agreed with the individual, to reduce the risk of abuse or dependency. A trial of treatment should always be used. An agreement should be reached prior to commencing the trial as to what criteria will be used to assess the outcome. If a trial is successful,

maintenance therapy should not be long term – ideally 3-6 months maximum to avoid problems of tolerance and dependence.

- Opioid therapy should not be used as the single approach to achieving effective control of Chronic Pain.

It should be noted that evidence regarding the use of opioid therapy for Chronic Pain is limited (NHS Quality Improvement Scotland, 2006; Hunter Integrated Pain Services, 2009)

### 6.3.5 Opioids Used in Chronic Pain Management

The following long acting opioid medications are commonly used in chronic pain management:

- Sustained Release **Morphine**
- **Oxycodone**
- **Tramadol** (classed as a weak opioid)
- **Methadone** (which is long acting has it has a long half-life for elimination)
- Transdermal **Fentanyl**
- **Buprenorphine**.

In addition, **codeine** can be considered as a weak opioid. Paracetamol and codeine preparations are commonly used in primary care for persistent pain, though it should be noted that up to 10% of Caucasian individuals lack a required hepatic enzyme to allow this drug to have an analgesic effect.

### 6.3.6 Adjuvant Therapies

Adjuvant medications are a group of drugs which are not usually considered as analgesics but which are effective in treating chronic pain, especially that of neuropathic origin, but also effective in fibromyalgia and other pain syndromes. These include:

- **Tricyclic Antidepressants** such as amitriptyline
- **Anticonvulsants such as** gabapentin and carbamazepine (the latter being commonly prescribed for trigeminal neuralgia)

SSRIs such as Fluoxetine are not effective in treating peripheral neuropathic pain, and are not as effective as tricyclic antidepressants (Benjamin and Morris, 2009).

Medications used in this way are often effective at lower doses than usually used in therapeutic treatment (UMHS, 2009). However, individuals with chronic pain and depressive symptoms should be treated with the full therapeutic dose (Benjamin and Morris, 2009).

### 6.3.7 Triptan Agents (5HT<sub>1</sub> agonists)

This class of drugs became available in the 1990's and is effective as an abortive medication or treatment for migraine or cluster headaches. The method of action is through action on the 5HT (serotonin) 1B/1D receptors and they are therefore sometimes also referred to as 5HT<sub>1B/1D</sub>-receptor agonists. This class of drugs is the preferred treatment for migraine or cluster headaches in those who fail to respond to conventional analgesics.

Triptans include:

- Sumatriptan (Imitrex, Imigran)
- Rizatriptan
- Naratriptan
- Zolmitriptan
- Eletriptan
- Eletriptan
- Frovatriptan
- Avitriptan

Sumatriptan is considered to be especially effective in the treatment of cluster headaches.

## 6.4 Non-Pharmacological Therapies

### 6.4.1 Explanation

There is evidence to suggest that an individual's perception of pain reduces if they understand the cause of the pain – for example, the fear that pain may be caused by a malignant condition may result in pain being categorised as severe by an individual. Once an explanation is given that the cause of the pain is a musculoskeletal condition, the individual may perceive the pain as being less severe.

### 6.4.2 Physical Therapy

Physical therapy covers a number of different treatment modes, which can be beneficial for Chronic Pain, especially pain due to musculoskeletal disorders.

- Modalities – hot or cold (ice) pack treatment, ultrasound, peripheral nerve stimulation / transdermal electronic nerve stimulation (TENS), and traction (which can increase tissue extensibility and range of movement, thereby decreasing pain).

- Manual Therapy – also helps to increase tissue extensibility and range of movement, thereby decreasing pain. Manual therapy can also help with alignment and joint mechanics issues.
- Therapeutic Exercise – such as hydrotherapy can restore joint movement and flexibility and strengthen and condition muscles to help movement thereby reducing pain.
- Patient Education – can support physical therapy in a self-help or home-based manner.

### 6.4.3 Psychological Intervention for Chronic Pain

There are many psychological factors which influence an individual's perception and experience of Chronic Pain. These include emotional, socio-cultural attitudes, pain fears and beliefs, and the individual's attitude towards, and understanding of, why the pain is occurring (referred by some authorities as the 'spiritual' aspect of Chronic Pain). These factors contribute greatly to the development of functional disability in individuals with chronic pain (Linton, 2000).

As part of a comprehensive treatment plan, there should be focus on the psychosocial elements of an individual's Chronic Pain. This is usually addressed by dealing with behavioural factors (Cognitive Behavioural Therapy) which affect the individual's pain.

Cognitive Behaviour Therapy for Chronic Pain aims to empower individuals to manage their pain and reduce disability (Nicholas, 2003). Therapy focuses on a number of areas (Hunter Integrated Pain Services (2005:

- Acknowledging the pain – identifying that the pain is real, not all in the mind, that it is not the individual's fault, and that the pain may not necessarily result from ongoing disease processes.
- Identification of Goals – whilst the goals may not realistically include the obliteration of all pain, there are goals which may be achievable including resuming of activities limited by pain, return to appropriate work, and management of break through pain
- Identification of Negative Factors – e.g. unhelpful beliefs, behaviour patterns such as repeatedly undertaking an activity which exacerbates pain; occupational or marital issues.
- Support – relaxation therapies, problem solving strategies, challenging unhelpful beliefs.

Although pain control treatment plans are usually multidisciplinary in approach, for some individuals, referral for individual behavioural and psychological intervention may result in adequate pain control (UHMS, 2009).

## 6.5 Interventional Procedures

There are a number of interventional procedures which may be effective in Chronic Pain management. It is possible these will only be available in the context of a specialist pain management service.

These include:

- **Localised intramuscular injection** – local anaesthetic with or without steroid, or Botulinum toxin. Used to treat muscle pain or painful trigger points
- **Scar Infiltration** – local anaesthetic used to treat postoperative or post trauma pain
- **Peripheral nerve blocks** - local anaesthetic with or without steroid can be used in many sites such as intercostal nerve block for chest wall pain.
- **Joint injections** - local anaesthetic with or without steroid, with or without opioid for joint pain, osteoarthritis, back pain (facet joints)
- **Regional blocks** - local anaesthetic with or without steroid for radicular referred pain (usually leg pain)
- **Sympathetic blocks** - local anaesthetic with or without steroid, with or without guanethidine for complex regional pain syndrome.

These therapies are usually used as part of a multidisciplinary approach. For further information on such therapies a useful source of information can be found at: <http://www.acc.co.nz/for-providers/clinical-best-practice/interventional-pain-management/index.htm> (accessed October, 2009).

(NHS Quality Improvement Scotland, 2006)

## 7. Prognosis (Main Prognostic Factors)

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Individuals with Chronic Pain often experience symptoms lasting several months to several years (Mantyselka et al., 2001). However, due to the wide variety of reasons that chronic pain can arise, prognosis is inherently varied. There is limited evidence as to the prognosis for chronic pain where an underlying cause has not been identified, although the prognosis for full recovery is thought to be poor.

For the large number of medical conditions which result in Chronic Pain, the prognosis is dependent on the underlying condition. For the most common of these conditions, details on prognosis can be found in the overview sections contained within the appendices to this document.

## 8. Information Gathering at the In Person Assessment

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### 8.1 Assessing the Claimant

Individuals presenting with disability due to fibromyalgia and other chronic pain syndromes can be amongst the most challenging to assess.

The examining doctor should consider the information on file, informal observations, medical and psychiatric history, medication and other treatments, typical day, physical examination and mental state examination.

### 8.2 Physical examination

The physical examination should follow traditional lines, focusing on evidence of functional restriction in the musculoskeletal system, evidence of muscle wasting and general deconditioning and any signs suggesting a comorbid condition or alternative diagnosis.

Whilst the diagnosis of fibromyalgia can be confirmed by the presence of tenderness to controlled pressure in at least 11 out of 18 recognised trigger points, **this is not an appropriate test to be carried out in a disability assessment setting.**

### 8.3 Mental Health Assessment

It is important to complete an appropriate mental health assessment in individuals presenting with fibromyalgia or other chronic pain syndromes. A detailed mental health history should be taken to include diagnosis, treatment, periods of hospitalisation etc.

Any reluctance to undergo a mental health assessment should be answered with an explanation that, in fairness to the claimant, it has to be demonstrated in the report that all possible conditions have been addressed. In addition, you should point out that the mental health assessment undertaken in disability analysis seeks to test cognitive function as well as the effects of defined mental health disorders; therefore it is also useful in the assessment of symptoms such as fatigue and lack of concentration.

#### 8.3.1 Assessment of Ability/Disability

***The key areas to address in ability/disability assessment medicine relate mainly to functional ability in relation to day to day and workplace activities.***

The recommended approach to assessing an individual's functional ability is to ask them to describe their average day. Taking a history of a claimant's average day, from the moment they awake to how they sleep, will allow an evaluation of the

nature and severity of their disability in relation to simple tasks in terms of comprehension, learning, concentration, memory and motivation. It will also provide an indication of any need for guidance, prompting or supervision. This information along with the other evidence obtained or provided will facilitate an overall assessment of disability in relation to the criteria for various scheme benefits. This analysis stage is covered further in chapter 9 of the protocol.

A number of areas are suggested under the four key headings below that should be explored during the assessment, where relevant, through open questioning and observation.

### **Completion of tasks**

- Answering the phone
- Setting an alarm clock
- Operating domestic appliances
- Reading a magazine or watching TV
- Driving a car
- Hobbies and Interests
- Accidents in the home – hazard awareness.

### **Daily living**

- Rising, washing, dressing
- Care over appearance/Self-Neglect
- Frequent mood fluctuation causing distress or panic
- Need for alcohol early in the day
- Sleep pattern.

### **Coping with Pressure and Change**

- History of Work related stress
- Concerns that work may aggravate illness
- Symptoms of fear and panic
- Avoidance of stressful activities – going out, driving a car
- Effect of changes in routine
- Fatigue/Apathy or Disinterest – effect on activities.

### **Interaction with People**

- Capability for self care
- Irritability/Disruption/Aggression
- Communicating with people
- Fear of going out alone
- Avoidance of the company of other people.





## 9. Analysis of Effect on Functional Ability

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Eligibility to the Department of Social and Family Affairs various Illness-related schemes and the Activation Programme, is determined primarily by the degree of Ability/Disability and its expected duration.

The degree of Ability/Disability assessed, using the Indicators in 9.1, can be depicted on the Ability/Disability Profile illustrated in 9.2. Since the majority of individuals affected by chronic pain are likely to be presenting with symptoms for which there may be no objective clinical findings, the disability analyst will have to formulate their opinion on the basis of consistency of the assembled medical evidence with the characteristics of fibromyalgia or other allied syndromes. The following advice may be found useful in this situation.

- Confirm whether the results of the assessment support the diagnosis,
- Describe and comment upon any disparity between the clinical findings and the claims made by the individual,
- Provide an accurate, objective account of the nature and severity of any abnormal clinical findings,
- Describe and comment upon any disparity between the assembled medical evidence and the characteristics of recognised chronic pain syndromes,
- Identify and comment upon any tendency of the claimant to deliberately exaggerate their symptoms or over-state their difficulties,
- Give a pragmatic account of the intrinsic nature of the condition as it relates to this particular claimant and, where possible, provide a prognosis.

### 9.1 Indicators of Ability/Disability

#### Normal

- Fully mobile outdoors and around the home
- Continues to be involved in activities and interests
- Able to carry out shopping and routine household tasks
- Sleeping well at night and not during the day
- Requires little or no medication for pain relief
- Not regularly attending GP

#### Mild

- Mobile indoors and outdoors with appropriate pain relief
- Maintains a degree of involvement in activities when pain allows

- Continuing to perform some light household tasks with occasional difficulty
- Sleep sometimes disturbed by pain
- Using simple analgesics or NSAIDs frequently or regularly
- Under the care of GP for chronic disease management

### **Moderate**

- Pain causes reduced mobility except for short distances
- Loss of interest in most activities and hobbies
- Some restriction in performing all activities of daily living
- Variability will still cause peaks and troughs in pain level
- Frequently tired during the day due to disturbed sleep at night
- Taking weak opioids in combination with regular analgesics
- Referred to a pain clinic or multidisciplinary chronic pain team
- Uses or has tried some non-pharmacological therapies

### **Severe**

- Significant problems with mobility even moving around indoors
- Impaired concentration affects ability to perform simple tasks
- Only able to carry out minimal self-caring tasks (wash face, clean teeth)
- Sleep always disturbed by breakthrough pain, day and night
- Taking strong opioids in combination with regular analgesics
- Under regular follow up by multidisciplinary chronic pain team
- Uses or has tried most non-pharmacological therapies

### **Profound**

- Only mobile in a wheelchair
- Spend most of their time in bed
- Inactivity has resulted in muscle wasting
- Requires high-dose strong opioid analgesia
- Frequent inpatient care for pain management

## 9.2 Ability/Disability Profile

Indicate the degree to which the Claimant's condition has affected their ability in ALL of the following areas.					
	Normal	Mild	Moderate	Severe	Profound
Mental health/Behaviour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning/Intelligence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consciousness/Seizures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Balance/Co-ordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speech	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manual dexterity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifting/Carrying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bending/Kneeling/Squatting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sitting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Standing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climbing stairs/Ladders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 10. Summary of Scheme Criteria

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Scheme eligibility criteria are maintained on the DSP website and are accessible from the following links:

- **Carer's Allowance**  
[http://www.welfare.ie/EN/OperationalGuidelines/Pages/carers\\_all.aspx](http://www.welfare.ie/EN/OperationalGuidelines/Pages/carers_all.aspx)
- **Carer's Benefit**  
[http://www.welfare.ie/EN/OperationalGuidelines/Pages/carers\\_ben.aspx](http://www.welfare.ie/EN/OperationalGuidelines/Pages/carers_ben.aspx)
- **Disability Allowance**  
<http://www.welfare.ie/EN/OperationalGuidelines/Pages/disall.aspx>
- **Disablement Benefit**  
[http://www.welfare.ie/EN/OperationalGuidelines/Pages/oib\\_disableb.aspx](http://www.welfare.ie/EN/OperationalGuidelines/Pages/oib_disableb.aspx)
- **Domiciliary Care Allowance**  
<http://www.welfare.ie/EN/Schemes/IllnessDisabilityAndCaring/Carers/DomiciliaryCareAllowance/Pages/DomiciliaryCareAllowance.aspx>
- **Illness Benefit**  
<http://www.welfare.ie/EN/OperationalGuidelines/Pages/illben.aspx>
- **Injury Benefit**  
[http://www.welfare.ie/EN/OperationalGuidelines/Pages/oib\\_injuryb.aspx](http://www.welfare.ie/EN/OperationalGuidelines/Pages/oib_injuryb.aspx)
- **Invalidity Pension**  
<http://www.welfare.ie/EN/OperationalGuidelines/Pages/invalidity.aspx>
- **Respite Care Grant**  
<http://www.welfare.ie/EN/OperationalGuidelines/Pages/respitegrant.aspx>

## Appendix A - Fibromyalgia

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### A.1 Overview

Fibromyalgia syndrome (FMS) is a chronic condition which presents as chronic generalised musculoskeletal pain, fatigue and wide variety of other symptoms. Little is known about what causes the disease. Some authorities consider the disorder to be a form of non-articular rheumatism (White and Harth 2001); others consider the condition to arise as a result of nerve dysfunction due to augmented processing of pain and sensory information (UMHS, 2009). Existence of this condition was previously contentious; the disorder was only formally recognised and included within the World Health Organisation International Classification of Diseases in 1992.

Fibromyalgia can occur following infection or trauma – this is known as reactive fibromyalgia. Individuals with this form of fibromyalgia have more perceived disability, self-reported pain and affective distress than those with idiopathic onset of the disorder.

Patients with FMS report problems with the activities of daily living (ADLs) that are as severe as those described by patients with rheumatoid arthritis (RA) and greater than individuals with osteoarthritis (OA). In addition they have rated their quality of life inferior to patients with either of these diseases, insulin dependent diabetes, COPD and colostomy. In a large survey of patients with RA, OA, systemic lupus erythematosus (SLE), scleroderma and FMS the latter reported the poorest global self-assessment of functional status, the highest visual analogue pain scale and the lowest global assessment of health status.

#### A.1.1 Diagnostic Classification

##### American College of Rheumatologists

The most commonly accepted diagnostic classification for Fibromyalgia is the American College of Rheumatologists definition, published in 1990 (Wolfe et al, 1990).

This states that a diagnosis of fibromyalgia can be confirmed if the following criteria are met:

A: Pain is considered widespread when all of the following are present:

- Pain in the left side of the body,
- Pain in the right side of the body,
- Pain above the waist, and
- Pain below the waist.

In addition, axial skeleton pain (cervical spine or anterior chest or thoracic spine or low back) must be present. In this definition, shoulder and buttock pain is considered as pain for each involved side. Low back pain is considered lower segment pain.

B. Pain, on digital palpation, must be present in at least 11 of the following 18 tender point sites:

- Occiput: bilateral, at the suboccipital muscle insertions.
- Low cervical: bilateral, at the anterior aspects of the intertransverse spaces at C1-C7
- Trapezius: bilateral, at the midpoint of the upper border
- Supraspinatus: bilateral, at its origins, above the scapular spine near the medial border
- Second rib: bilateral, at the second costochondral junctions, just lateral to the junctions on upper surfaces.
- Lateral epicondyle: bilateral, 2cm distal to the epicondyles.
- Gluteal: bilateral, in upper outer quadrants of buttock in anterior fold of muscle.
- Greater trochanter: bilateral, posterior to the trochanteric prominence.
- Knee: bilateral, at the medial fat pad proximal to the joint line

The American College of Rheumatologists Classification states that for a tender point to be considered as 'positive' the subject must report this as painful, when a force of approximately 4kg is applied. (Please note it is not appropriate to apply this force in a disability analysis setting. Common practice is the type of pressure that would be applied to make an individual's nail bed blanche is appropriate).

### **International Classification of Diseases; 10th Edition (ICD-10) Classification**

The International Classification of Diseases published by the World Health Authority (2007) classifies fibromyalgia as a musculoskeletal and connective tissue problem - a disorder of soft tissue under classification code **M79.7**.

## **A.2 Epidemiology**

- Prevalence rate is between 0.5 – 5% (White and Harth, 2001). In the US, the condition is thought to have a prevalence of 2% (Wolfe, 1993)
- Some authorities state Fibromyalgia to be most common in the Caucasian population, others state no ethnic variation.
- Fibromyalgia is more common in women – up to 7-10 times more likely to occur in females
- Average age of diagnosis is 35 – age range is commonly between 20-50 although children and older people can also develop the condition

- It takes an average of five years before an individual is accurately diagnosed.

## A.3 Aetiology

The cause of fibromyalgia is not known; however individuals suffering with this condition may report a precipitating event such as a severe traumatic injury or infectious illness. A genetic component may be involved but the evidence to support this is limited; however, it would appear that the risk of developing fibromyalgia is raised if another family member has the condition.

## A.4 Diagnosis

### A.4.1 Clinical Features

Fibromyalgia may result in the following signs and symptoms:

- Chronic, widespread pain all over the body
- Tenderness, soreness and flu-like aches
- Fatigue, difficulties with sleeping, restless sleep
- Headaches, migraine, rhinitis
- Morning stiffness
- Impaired memory and concentration
- Difficulty performing daily functions

### A.4.2 Other History

Other relevant history includes:

- Family history of fibromyalgia – studies have suggested the prevalence rate of fibromyalgia in relatives of individuals with the condition could be as high as 41% (Buskila et al, 2006)
- Comorbid autoimmune rheumatological disorders – fibromyalgia is more common in individuals who have autoimmune disorders such as SLE, although fibromyalgia is not an autoimmune disorder
- Age between 20 and 65
- Female Sex



### A.4.3 Physical Examination

Other than identifying tenderness in 11 out of 18 tender points as described in section A.1.1, physical examination is likely to be normal.

### A.4.4 Tests and Investigations

There are no tests or investigations which confirm the diagnosis of fibromyalgia. The disorder is diagnosed on clinical symptoms alone. However, other medical conditions often exist alongside fibromyalgia, and should these be suspected appropriate investigations may be required.

## A.5 Differential Diagnosis and Comorbidity

### A.5.1 Differential Diagnosis

The following diagnoses should be considered as differential diagnoses for Fibromyalgia:

- Chronic fatigue syndrome
- Rheumatoid arthritis – coexistence with fibromyalgia is common complicating diagnosis of both conditions
- Ankylosing spondylitis
- Other arthritic conditions
- Diffuse connective tissue diseases (e.g. SLE)
- Diabetes mellitus and thyroid disorders may present in this way
- Metabolic bone disease (other than osteoporosis).
- Soft-tissue rheumatic disorders
- Myofascial pain syndrome (considered by some experts to be a localised form of fibromyalgia. In this syndrome pain in trigger points does not just cause tenderness but causes radiation and reproduction of pain)
- Low Vitamin D levels
- Hypothyroidism (muscular aches and generalised fatigue)

### A.5.2 Comorbidity

The following conditions are often found in individuals with Fibromyalgia:

- Depression, major depressive disorder

- Headache, migraine
- Irritable Bowel Syndrome
- Chronic Fatigue Syndrome
- Atypical Facial Pain

It has been suggested by some authors that major depressive disorder and fibromyalgia share a common underlying abnormality (Hudson et al, 1996)

### A.5.3 Chronic Pain and Chronic Fatigue Syndrome – Overlapping Conditions

Although chronic fatigue syndrome can be considered to be both a factor as a differential diagnosis and a comorbidity to chronic pain syndromes, it is also thought that the two conditions overlap to a considerable degree; having similar clinical and neuroendocrine features and potential pathogenic mechanisms.

There is therefore some thought that they may both be conditions which arise from the same spectrum of a disease.

## A.6 Treatment

Treatment is aimed at improving functional ability, and reducing pain. Addressing comorbid conditions can often result in an improvement in the individual's condition as improved sleep, ability to deal with pain and improved mood can result in an improvement in the individual's symptoms of fibromyalgia.

There are no interventions or pharmaceutical therapies which have been shown to be effective in treating fibromyalgia specifically. However, individuals with Fibromyalgia may find tricyclic antidepressants helpful in addressing sleep disorders and protracted pain. Analgesics are often not significantly effective for fibromyalgia, but Tramadol has been shown in studies to be beneficial for this condition (Senay, et al, 2003).

First line treatments focus on graded exercise therapy and pacing activities (see the **Chronic Fatigue Protocol** for further details of these therapies); these may be supported by cognitive behavioural therapies as described in section 6.4.3 of this document.

There is also evidence to indicate that aerobic fitness training, either alone or supplemented with CBT is beneficial to individuals with fibromyalgia (Goldenberg, 2004). This is often introduced as a further step to graded exercise therapy and pacing activities, building up to 30 minute sessions of aerobic activity.

## A.7 Prognosis

Fibromyalgia is a chronic condition. Although symptoms may vary in intensity, the condition is unlikely to completely resolve.



## Appendix B - Arthritis Pain

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There are a wide variety of arthritic conditions which can result in an individual experiencing arthritis pain, osteoarthritis and rheumatoid arthritis being the most common of these.

The National Disability Survey in Ireland found that arthritis was the most commonly reported cause of disability due to pain (Central Statistics Office, 2008)

For more information please refer to the protocols which cover **Osteoarthritis** and **Rheumatoid Arthritis**.

### B.1 Osteoarthritis

Osteoarthritis a disorder of synovial joints, characterised by:

- Focal areas of damage to the articular cartilage
- Remodelling of underlying bone and the formation of osteophytes — new bone at joint margins.
- Mild synovitis

The condition usually affects weight bearing joints such as knees and hips, or frequently used joints such as the small bones of the hands. Affected individuals often experience a reduced range of motion, experience deep, aching type pain and stiffness, but presentation is extremely variable. Radiological examination may show severe structural changes present without significant symptoms; conversely an individual may experience significant pain resulting from only minor structural changes.

#### B.1.1 Epidemiology

Osteoarthritis is the most common arthritic condition – studies have shown the condition to exist in 80% of individuals over the age of 55 (Brion and Kalunian, 2004).

The prevalence of osteoarthritis increases with age.

The prevalence is higher in women than men. This is especially notable after 50 years of age, and in the hand and knee joints (NCCCC, 2008)

#### B.1.2 Aetiology

The causes of osteoarthritis are not fully known. The condition appears to result from a disorder in the normal process of repair which is undertaken by all joints. This may be that traumatic processes (for example extreme load) mean that the normal processes of repair are insufficient resulting in damage and the emergence of painful symptoms. Genetic factors are thought to play a part.

Other risk factors include joint injury, recreational and occupational stresses on joints and obesity.

### B.1.3 Diagnosis

Radiological investigations are not always required, and are not always sensitive in detecting early disease. The National Institute for Clinical Excellence suggest that a working diagnosis of osteoarthritis can be reached in individuals who:

- Are aged > 45 years of age or more presenting with symptoms clearly suggesting osteoarthritis
- Have joints which cause pain when used. The individual may also have restricted movement, pain at rest or crepitus
- Reported that joints become stiff after resting.
- No obvious signs of inflammation, such as severe and prolonged morning stiffness, a large effusion, or a hot joint
- Have had other differential diagnoses excluded

[NCCCC, 2008]

### B.1.4 Differential Diagnosis

- Fibromyalgia
- Inflammatory Arthritis
- Septic Arthritis
- Fracture
- Bursitis
- Malignant Conditions

### B.1.5 Treatment

The most effective treatment is a combination of non-pharmacological and pharmacological therapies. Non pharmacological interventions include education, weight management, physical therapy and occupational interventions. Low impact exercise has been shown to be beneficial.

Pharmacological therapies include analgesics in individuals with mild to moderate pain such as paracetamol (taken regularly if required) and NSAIDs. Topical medication includes NSAIDs and capsaicin, which can be useful in hand or knee osteoarthritis. Stronger pain relief such as codeine can also be used. Recent recommendations indicate this should be prescribed separately to paracetamol (rather than in combined preparations such as co-codamol) in order to titrate to the

most effective combination (NCCCC, 2008).

### **B.1.6 Prognosis**

Osteoarthritis is not necessarily a progressive disease leading to increasing functional impairment and pain. Prognosis is variable dependent on the site of the osteoarthritis, and the presence of other comorbid conditions such as diabetes.

## **B.2 Rheumatoid Arthritis**

Rheumatoid arthritis is the most common form of inflammatory arthritis; a chronic condition which can result in major functional impairment without effective treatment. Sufferers often report aching or burning joint pain, accompanied by other symptoms of tiredness, fatigue, weight loss and low grade fever.

Rheumatoid arthritis is associated with a number of complications and comorbidities such as an increased risk of cardiovascular disease, osteoporosis, anaemia, and infection.

### **B.2.1 Epidemiology**

- Prevalence is around 1% of the population
- Incidence is low – around 12,000 new cases per year in the UK
- Incidence rises with age, peaking in the 40-60 year age group
- Rheumatoid arthritis is two to four times more common in women than men
- Approximately one third of people stop work because of RA within 2 years of its onset (NICE, 2009)

### **B.2.2 Aetiology**

The aetiology of rheumatoid arthritis is unknown. There is a suggestion that a combination of genetic and infective factors is involved.

### **B.2.3 Diagnosis**

Individuals with rheumatoid arthritis may present with the following symptoms:

- Average age of patients is 55 years
- Patients usually present with a history of bilateral, symmetric pain and swelling of the small joints of the hands and feet that has lasted for more than 6 weeks. Pain is worse at rest
- Morning stiffness lasting over an hour

- Extra-articular features, such as rheumatoid nodules over the extensor surfaces of tendons, or vasculitic skin involvement may be seen but are less common.
- Possible family history of rheumatoid arthritis
- Possible systemic features of malaise, fatigue, fever, sweats, and weight loss

#### **B.2.4 Differential Diagnosis**

- Other forms of arthritis
- Gout
- SLE

#### **B.2.5 Treatment**

Pain from rheumatoid arthritis is usually controlled using a combination of paracetamol and codeine. Recent recommendations indicate codeine should be prescribed separately to paracetamol (rather than in combined preparations such as co-codamol) in order to titrate to the most effective combination (NCCCC, 2008).

Individuals with mild-moderate presentations of rheumatoid arthritis are usually commenced on a DMARD - disease-modifying anti-rheumatic drugs such as Methotrexate. A single drug is tried as a trial of therapy, with a second DMARD added after a three month period if the disease activity is not controlled. More severe presentations of the disease may be treated with the addition of a tumour necrosis factor (TNF)-alpha inhibitor in conjunction with a DMARD.

There is controversy regarding the use of corticosteroids in rheumatoid arthritis treatment.

#### **B.2.6 Prognosis**

The best prognosis is achieved when individuals receive early treatment, with most gaining reasonable functional ability. Delay in treatment, or if the disease is untreated will mean many individuals become functionally disabled within 10 years.

[Sources: NICE, 2009; BMJ Best Practice, 2009, NHS Institution for Innovation and Improvement, 2009]

## Appendix C - Low Back Pain

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### C.1 Overview

Low back pain is one of the most common causes of chronic pain and disability.

With respect to pain management, it is recommended that referral to a pain specialist is undertaken, as a multidisciplinary approach involving a pain specialist, physical therapy, occupational therapy, psychology, social work, exercise physiology, interventional therapy, and medication management has been shown to be beneficial in treating low back pain and reducing ongoing disability.

Although disability from this condition is not widespread, the reasons an individual may become functionally incapacitated by the condition are complex. Recent thought is that one of the substantial contributors to why an individual may become disabled by the condition is the beliefs and values the individuals hold (Main and Waddell, 2004).

#### C.1.1 Epidemiology

Low back pain is the second most common reason for individuals to consult a physician in the US (Deyo, 1987). Incidence rates vary widely dependent on the criteria used, but lifetime incidence is around 60-90%, with an annual incidence of approximately 5% (MD Guidelines, 2009), and a lifetime prevalence of 50% (Burton et al, 2006).

This condition is more common in individuals aged 30-40 years.

#### C.1.2 Aetiology

There are a number of reasons why low back pain can occur:

- Load – obesity, manual labour, carrying heavy weights such as loaded backpacks, pregnancy
- Poor posture
- Abnormal curvature
- Degenerative disease
- Inflammatory Disease

#### C.1.3 Diagnosis

There are several types of low back pain (Waddell, 2004), however, many episodes of low back pain occur for no apparent cause.

- **Non-specific (simple or uncomplicated) low back pain:** Pain which



cannot be attributed to any specific cause. This category includes sprains and sprains.

- **Inflammatory low back pain and stiffness:** Typical of rheumatological conditions, this type of back pain is exacerbated by rest or sleep and can lead to sleep disturbance. It is relieved by activity and simple analgesia.
- **Mechanical low back pain:** Both exacerbated and relieved by posture or movement, e.g. pain is aggravated by sitting and relieved by standing. Can be caused by trauma, e.g. spinal fracture

#### C.1.4 Differential Diagnosis

- Ankylosing spondylitis
- Aortic aneurysm
- Benign and malignant tumours
- Discitis
- Endometriosis
- Fibromyalgia
- Kidney disease
- Osteomyelitis
- Osteoporosis
- Pancreatic disease
- Pelvic disease
- Rheumatoid arthritis

#### C.1.5 Treatment

Treatment is usually conservative with rest, recuperation and simple analgesia and NSAIDS. Physical therapy may help. Surgery is not usually required.

#### C.1.6 Prognosis

Acute episodes of low back pain (caused by strain or trauma) usually resolve quickly with no effect on long term functional ability. However, more chronic episodes of lower back pain often follow a course of varying pain and disability in a pattern of remissions and relapses.

Risk factors for a poorer prognosis include accompanying leg pain, repeated episodes of back pain, poor underlying health or accompanying comorbidities,

undertaking manual work, in individuals from lower socioeconomic backgrounds, and in individuals who have extended periods of absence from work, or have outstanding compensation claims.

### C.1.6.1 Low Back Pain and Psychological Beliefs as Obstacles to Recovery

There are a number of commonly held misconceptions about low back pain, which affect the behaviour of the individual concerned, and their perception of the nature of the problem, the pain they experience, their likelihood of recovery and ultimately their functional ability (Waddell et al, 2003). For example, research suggests 25% of individuals feel that low back pain is disabling, and that the best method of recovery is to rest until the symptoms subside (Burton et al, 2006). Where individual's perceptions or beliefs are inaccurate, these can have a detrimental or sometimes extremely harmful effect on the individual's ability to recover from the condition. To extend the example above, an individual may feel rest is the best method of treatment, but research supports the fact that activity contributes to earlier recovery and less disability (Waddell, 2004).

The management of back pain should therefore include an element which addresses the factors in terms of beliefs, which act as obstacles to recovery (Burton and Main, 2000, Marhold et al, 2002).

Obstacles can fall into one of three categories:

- Biological – including treatment, treatment waiting times, features of the clinical condition etc.
- Psychological - a person's beliefs about the condition and perception of their recovery
- Environmental and Social Factors – with respect to working disability this includes organisational policies, the ability of the organisation to adapt to facilitate an early return to work, and the provision of inappropriate advice regarding an employees medical capacity to return to work.

There is a complex interaction between these categories, and often obstacles have bio-psycho-social factors.

These factors are often encompassed in the 'flag system' in order to facilitate assessment. More detail on the flag system can be found in Appendix E. The presence of multiple flags (psycho-social or otherwise) indicates a poorer prognosis from recovery to back pain.

Early intervention to address these beliefs or obstacles can have profound effects on an individual's ability to return to work, and duration of their absence. Evidence suggests that where such early intervention is provided, there is a significant reduction in disability both in the short term, and in 12 month follow up studies.

Studies include the provision of 'The Back Book' by the Royal College of General Practitioners (1996) which provided patient information to challenge beliefs and

perceptions held by the patient; studies in the UK which used lay teaching principles (Von Korff et al, 1996); and studies in Ireland looking at early intervention for incapacity claimants (Leech, 2004) which concluded that early assessment and intervention resulted in 64% of claimants being assessed at fit for work, compared to 20% who had a more traditional approach to care.

See **Appendix E** for further information regarding Yellow psychosocial flags indicating a poorer prognosis for recovery from low back pain.

## Appendix D - Neuropathic Pain

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### D.1 Overview

There are a number of causes of neuropathic pain, which are too varied to discuss in detail in the context of this protocol. Such causes include peripheral neuropathy (e.g. resulting from diabetic disease) or post herpetic neuralgia.

#### D.1.1 Control of Chronic Neuropathic Pain

Neuropathic pain responds well to tricyclic antidepressants (TCAs), anticonvulsants and tramadol, with carbamazepine thought to be particularly effective for trigeminal neuralgia.

It should be noted there is often an accompanying underlying musculoskeletal element to this type of pain which may respond to physical therapy, occupational therapy or other forms of exercise.

Transcutaneous electrical nerve stimulation devices (TENS) may also be may be an effective treatment option.

## Appendix E - The 'Flag' System for Predicting Outcome in Chronic Pain

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### A1: Overview

The 'Red' and 'Yellow flag' system is a concept originally introduced in New Zealand as part of a series of early intervention measures for low back pain. The system was developed by a number of pain management specialists in conjunction with the New Zealand Accident Compensation Corporation to help to reduce a spiralling cost issue with treatment for low back pain in New Zealand. Although originally developed for low back pain, these flags are increasingly being used as predictors in the wider field of chronic pain management.

Red Flags can be considered as indicators that a potentially more serious medical condition could be the cause of an individual's pain.

Yellow Flags can be considered as indicators of factors which may result in an increased progression in, or present obstacles to recovery from, persistent pain, functional impairment and disability. It should be noted that the presence of these flags does not mean that the pain experienced by the individual is any less real, or any less severe. Appropriate symptom control for the pain experienced by the individual is still required.

Blue Flags can be considered as socio-economic and work *perceptions* which may contribute to delayed recovery. These can be reduced by helping the individual in areas such as coping and problem management skills.

Black flags differ from blue flags in that they are occupational and societal *characteristics* which may predispose an individual to developing a pain problem originally, and for this problem to progress to become chronic disability. Black flags include:

- 'Organisational' black flags reflecting the characteristics of work and work place settings and the effect these have with respect to the individual suffering from chronic pain
- 'System' black flags which affect all workers equally such as absence policies, entitlement to benefit, etc.

Orange Flags are mental health related factors that can influence perception of pain.

For further details please see: Kendall, N A S, Linton, S J & Main, C J (2004). Guide to Assessing Psycho-social Yellow Flags in Acute Low Back Pain: Risk Factors for Long-Term Disability and Work Loss. Accident Compensation Corporation and the New Zealand Guidelines Group, Wellington, New Zealand which can be accessed at <http://www.acc.co.nz/about-acc/research-sponsorship-and-projects/research-and-development/evidence-based-healthcare-reports/index.htm> under the 'clinical guideline' section.

Another good source of information on the flag system is the following presentation:

Main, C. (2008) 'Flying the Flag: Prognostic Factors' power point presentation from Trent Occupational Medicine Symposium accessed at <http://www.tom-cme.org.uk/presentations/flying-the-flag.ppt>

## A2: Red Flags

- Possible Fracture
  - Major Trauma
  - Minor trauma in elderly or individual with degenerative bone disease such as osteoporosis
- Age <20 or >50
- History of cancer
- Weight loss
- Recent bacterial infection
- Previous use of IV drugs or steroids
- Immunosuppression
- Severe worsening pain, especially at night or when lying supine
- Severe or progressive sensory alteration or weakness
- Bladder or bowel dysfunction
- Evidence of neurological deficit on physical examination

## A3: Yellow Flags

- Belief that pain and activity are harmful
- Expectation that only passive treatments will help; reluctance to be involved in active participation
- Severe pain intensity
- Duration of symptoms, duration of daily pattern
- Anxiety
- Adopting 'sickness' type behaviours – such as taking extended rests
- Mood disruption, avoidance of social contact
- Requesting treatment that does not fit best practice or is against clinical judgement

- Outstanding problems with legal claims and/or compensation
- History of back pain, history of extended sick leave or other absence
- Problems at work, poor job satisfaction
- Heavy work, unsociable hours
- Overprotective family or lack of support

The type of questions which may allow yellow flags to be identified include:

- How much absence has the individual previously had?
- What does the individual understand to be the cause of the pain?
- Who is the individual expecting to provide help to resolve the cause of the pain?
- How are the individual's employer, co-workers and family responding to the pain experienced by the individual?
- What is the individual doing to help manage their pain?
- Does the individual feel they will return to work? If so, when might they expect to do so?

#### **A4: Blue Flags**

- Unemployment, lack of work opportunity
- Fear of unemployment
- Dissatisfaction with job, monotony at work
- Perceived time pressures, feeling that individual is 'unable to do their job properly' due to organisational factors
- Poor relationship with other employees and management staff, workplace conflict
- Unsupportive management style
- Change of job or duties which the individual is not happy with
- Perceived work capacity
- Perception as to who is 'responsible' for the injury
- Disciplinary or productivity issues present before the injury

## A5: Black Flags

- Low Income
- Low social class
- Stringent or poor absence policy
- Ongoing disability claim, compensation claim
- Unemployment
- Type of compensation or insurance system available
- Lack of rehabilitation policy from employer, difficulties in phased re-introduction to work
- Lack of support from employer towards possible modifications to facilitate early return to work
- Duration of absence

## A6: Orange Flags

- Presence of existing psychiatric illness
  - Active psychiatric disorder
  - Major personality disorder
  - Post traumatic stress disorder
  - Abnormally high levels of distress
  - Clinical depression
- Illicit substance abuse is also listed in this category by some authors.

[Sources: Hunter Integrated Pain Service, 2005; Kendall et al (2005); NHS Quality Improvement Scotland, 2006; Boos and Aebi, 2008; Main, 2008; UMHS, 2009]



## Appendix F - Pain Assessment Scales

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There are a number of pain assessment scales which are in common use. The Brief Pain Inventory developed by Cleeland (1994) appears to be one of the most commonly used. Please note that this assessment scale is subject to copyright, although many reproducible versions can be located on the internet.

Examples of this, and other pain assessment scales can be located within the following resources:

[http://www.britishpainsociety.org/pain\\_scales\\_eng.pdf](http://www.britishpainsociety.org/pain_scales_eng.pdf) (pain scales in languages other than English are also available)

<http://www.partnersagainstpain.com/professional-tools/pain-assessment-scales.aspx?id=3> (provides .pdf versions of a variety of pain assessment tools, including a multi-language version.

[http://painconsortium.nih.gov/pain\\_scales/](http://painconsortium.nih.gov/pain_scales/) (A further selection of tools from the National Institutes for Health in the United States)

'The NHS in Scotland' has produced a guideline (2006) with respect to best practice in Chronic Pain management. This contains a number of example pain assessment scales and can be downloaded at [http://www.nhshealthquality.org/nhsqis/files/BPSManage\\_chronic\\_pain%20adults%20\(Feb06\).pdf](http://www.nhshealthquality.org/nhsqis/files/BPSManage_chronic_pain%20adults%20(Feb06).pdf)

[The above links were accessed in October, 2009]

## 11. References and Bibliography

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Addington-Hall J, McCarthy M. Dying from cancer: results of a national population-based investigation: *Ann Oncol* 1995, 9: 295-305 as cited in British Pain Society and Royal College of General Practitioners (RCGP) (2004) 'A practical guide to the provision of Chronic Pain Services for adults in Primary Care' BPS; London

Benjamin, S. Morris, S. (2009) 'Pain Disorder' in Gelder, M. Andreasen, N. Lopez-Ibor, J. and Geddes, J. (Eds.) (2009) *The New Oxford Textbook of Psychiatry*, Oxford University Press: Oxford  
BMJ Best Practice (2009) 'Chronic Pain' accessed at <http://bestpractice.bmj.com/best-practice/monograph/694/basics/epidemiology.html> October 2009

BMJ Best Practice (2009) 'Osteoarthritis' accessed at <http://bestpractice.bmj.com/best-practice/monograph/192/highlights.html> October 2009

BMJ Best Practice (2009) 'Rheumatoid Arthritis' accessed at <http://bestpractice.bmj.com/best-practice/monograph/105/highlights.html> October 2009

Boos N, Aebi, M. (2008) 'Spinal Disorders: Fundamentals of Diagnosis and Treatment' Springer

Breivik H, Collett B, Ventafridda V, Cohen R, Gallacher D. (2006) 'Survey of chronic pain in Europe: prevalence, impact on daily life and treatment' *Eur J Pain* 2005; Aug 8 as cited by Fullen B. et al (

British Pain Society and Royal College of General Practitioners (RCGP) (2004) 'A practical guide to the provision of Chronic Pain Services for adults in Primary Care' BPS; London

Burton A. Main C. (2000) 'Obstacles to recovery from work related musculoskeletal disorders' in Karwowski, W. (Ed) 'International encyclopedia of ergonomics and human factors' Taylor and Francis: London as cited by Burton

Burton AK, Waddell G, Main CJ (2006) 'Beliefs and obstacles to recovery in low back pain' in: Halligan, P and Aylward, M. (2006) 'The Power of Belief: Psychosocial influences on illness, disability and medicine' Oxford University Press; Oxford (Chapter 10).

Buskila D, Sarzi-Puttini P. (2006) Biology and therapy of fibromyalgia: genetic aspects of fibromyalgia syndrome. *Arthritis Res Ther.* 2006;8:218-2

Central Statistics Office (Government of Ireland) (2008) 'National Disability Survey 2006: First Results' Stationary Office; Dublin

Cleeland CS, Ryan KM. Pain assessment: global use of the brief pain inventory. *Ann Acad Med* 1994;23:129-38. as cited in ICSI – Institute for Clinical Systems Improvement (2008) 'Health Care Guideline: Assessment and Management of Chronic Pain 3rd Edition' ICSI accessed at [www.isci.org](http://www.isci.org) October 2009

Standards Advisory Group (2000) Services for Patients with Pain. Department of Health, London

Deyo RA, Tsui-Wu YJ. Descriptive epidemiology of low-back pain and its related medical care in the United States. *Spine*. 1987;12:264-268 as cited in BMJ Best Practice (2009) 'Musculoskeletal Low Back Pain' accessed at <http://bestpractice.bmj.com/best-practice/monograph/778/basics/epidemiology.html> October 2009

Du Pen SL, Du Pen AR, Polissar N, et al. (1999) Implementing guidelines for cancer pain management: results of a randomized controlled clinical trial. *J Clin Oncol*. 1999;17(1):361-370 as cited by NPA - National Pharmaceutical Council and Joint Commission for the Accreditation of Healthcare Organisation (JCAHO) (2001) 'Pain: Current Understanding of Assessment, Management, and Treatments' NPC; Virginia USA and JCAHO; Illinois USA

Elliott AM, Smith BH, Penny KI, et al. The epidemiology of chronic pain in the community. *Lancet* 1999; 354: 1248 – 1252 as cited in British Pain Society and Royal College of General Practitioners (RCGP) (2004) 'A practical guide to the provision of Chronic Pain Services for adults in Primary Care' BPS; London

Fricker J. (2006) 'Pain in Europe: A Report' accessed at [http://www.paineurope.com/files/PainInEuropeSurvey\\_2.pdf](http://www.paineurope.com/files/PainInEuropeSurvey_2.pdf) September 2009

Fullen B, Hurley DA, Power C, Canavan D, O'Keeffe D. (2006) 'The need for a national strategy for chronic pain management in Ireland' *Irish Journal of Medical Science* Apr-Jun;175(2):68-73.

Gallup survey conducted by the Gallup Organization from May 21 to June 9, 1999. Supported by the Arthritis Foundation and Merck & Company, Inc as cited by National Pharmaceutical Council and Joint Commission for the Accreditation of Healthcare Organisation (JCAHO) (2001) 'Pain: Current Understanding of Assessment, Management, and Treatments' NPC; Virginia USA and JCAHO; Illinois USA

Goldenberg DL, Burckhardt C, Crofford L. (2004) Management of fibromyalgia syndrome. *JAMA*. 2004;292:2388-2395. <http://jama.ama-assn.org> (last accessed 20 November 2008) as cited by BMJ Best Practice (2009) 'Fibromyalgia' accessed at <http://bestpractice.bmj.com/best-practice/monograph/187/highlights.html> October 2009

Grotle M., Brox JI., Veierod MB., et al. (2005) 'Clinical course and prognostic factors in acute low back pain: patients consulting primary care for the first time' in *Spine*. 2005;30:976-982

Gureje O, Simon GE, Von Korff M. (2001) A cross-national study of the course of persistent pain in primary care. *Pain*. 2001;92:195-200 as cited by BMJ Best Practice (2009) 'Chronic Pain' accessed at <http://bestpractice.bmj.com/best-practice/monograph/694/basics/epidemiology.html> October 2009 Hudson JI, Pope HG. (1996) The relationship between fibromyalgia and major depressive disorder. *Rheumatic Diseases Clinics of North America* 22(2);1996:285-303

Hunter Integrated Pain Service (2005) 'Cognitive Behavioural Interventions for Persistent Pain in General Practice (Practice Guideline)' accessed at [http://www.hnehealth.nsw.gov.au/pain/health\\_professionals/medical\\_practice\\_guidelines](http://www.hnehealth.nsw.gov.au/pain/health_professionals/medical_practice_guidelines) October 2009

International Association for the Study of Pain (2007) 'IASP Pain Terminology' accessed at [http://www.iasp-pain.org/AM/Template.cfm?Section=Pain\\_Definitions&Template=/CM/HTMLDisplay.cfm&ContentID=1728#Pain](http://www.iasp-pain.org/AM/Template.cfm?Section=Pain_Definitions&Template=/CM/HTMLDisplay.cfm&ContentID=1728#Pain) September 2009

Irish Chronic Pain Association (2005) 'Consequences of Chronic Pain' accessed at <http://www.chronicpainireland.org/aboutpain.asp> September 2009

ICSI – Institute for Clinical Systems Improvement (2008) 'Health Care Guideline: Assessment and Management of Chronic Pain 3<sup>rd</sup> Edition' ICSI accessed at [www.isci.org](http://www.isci.org) October 2009

Irish Times (2009) 'Chronic pain strategy could stop thousands of lost work days' Irish Times; Dublin accessed at <http://www.irishtimes.com/newspaper/health/2009/0217/1224241277890.html> September 2009

Leech, C. (2004) 'Preventing Chronic Disability from Work: the Renaissance Project' The Stationary Office: Dublin

Main, C. Waddell, G. (2004) 'Beliefs about Back Pain' in Waddell, G Ed. (2004) 'The Back Pain Revolution' Churchill Livingstone: Edinburgh

Mantyselka et al., 2001) P, Kumpusalo E, Ahonen R, et al. (2001) Pain as a reason to visit the doctor: a study in Finnish primary health care. Pain. 2001;89:175-180 as cited by BMJ Best Practice (2009) 'Chronic Pain' accessed at <http://bestpractice.bmj.com/best-practice/monograph/694/basics/epidemiology.html> October 2009

MD Guidelines (2009) 'Low Back Pain' accessed at <http://www.mdguidelines.com/low-back-pain> October 2009

Katz J., McCartney, C., Rashid, S. (2008) 'Why does pain become chronic' in Rashid, S., Schopflocher, D., Taenzer (2008) 'Chronic Pain: A Health Policy Perspective' Wiley VCH; Germany accessed at Google Books [http://books.google.com/books?id=PYTQhHe7mvEC&dq=chronic+pain&lr=lang\\_en&as\\_drrb\\_is=b&as\\_minm\\_is=0&as\\_miny\\_is=2005&as\\_maxm\\_is=0&as\\_maxy\\_is=2009&as\\_brr=3&source=qbs\\_navlinks\\_s](http://books.google.com/books?id=PYTQhHe7mvEC&dq=chronic+pain&lr=lang_en&as_drrb_is=b&as_minm_is=0&as_miny_is=2005&as_maxm_is=0&as_maxy_is=2009&as_brr=3&source=qbs_navlinks_s) September 2009

Kendall, N A S, Linton, S J & Main, C J (2004). Guide to Assessing Psycho-social Yellow Flags in Acute Low Back Pain: Risk Factors for Long-Term Disability and Work Loss. Accident Compensation Corporation and the New Zealand Guidelines Group, Wellington, New Zealand accessed at <http://www.acc.co.nz/about-acc/research-sponsorship-and-projects/research-and-development/evidence-based-healthcare-reports/index.htm> October 2009

Linton SJ. (2005) A review of psychological risk factors in back and neck pain. Spine

2000; 25: 1148-1156 as cited in Hunter Integrated Pain Service (2005) 'Cognitive Behavioural Interventions for Persistent Pain in General Practice (Practice Guideline)' accessed at [http://www.hnehealth.nsw.gov.au/pain/health\\_professionals/medical\\_practice\\_guidelines](http://www.hnehealth.nsw.gov.au/pain/health_professionals/medical_practice_guidelines) October 2009

Main, C, Watson, P, Sullivan, M. (2000) 'Pain Management: Practical Applications of the Biopsychosocial Perspective in Clinical and Occupational Settings' Blackwell accessed via Google books at <http://books.google.co.uk/books?id=CNfuh6e7OZkC&printsec=frontcover&dq=Pain+Management:+Practical+Applications+of+the+Biopsychosocial+Perspective+in+Clinical+and+Occupational+Settings#v=onepage&q=&f=false>

Main, C. (2008) 'Flying the Flag: Prognostic Factors' power point presentation from Trent Occupational Medicine Symposium accessed at <http://www.tomcme.org.uk/presentations/flying-the-flag.ppt>

Marhold, C. Linton, S. Melin, L. (2002) 'Identification of obstacles for chronic pain patient's return to work: evaluation of a questionnaire' Journal of Occupational Rehabilitation 12:65-75 as cited by Burton

Marcus DA. (2005) 'Chronic pain: a primary care guide to practical management' Humana Press; Totowa, NJ: accessed through Google Books at [http://books.google.co.uk/books?id=zmu30hw1Sx0C&dq=marcus+chronic+pain+google+books&printsec=frontcover&source=bn&hl=en&ei=NILcSoLaN5P\\_4AaYndDKCA&sa=X&oi=book\\_result&ct=result&resnum=4&ved=0CBMQ6AEwAw#v=onepage&q=&f=false](http://books.google.co.uk/books?id=zmu30hw1Sx0C&dq=marcus+chronic+pain+google+books&printsec=frontcover&source=bn&hl=en&ei=NILcSoLaN5P_4AaYndDKCA&sa=X&oi=book_result&ct=result&resnum=4&ved=0CBMQ6AEwAw#v=onepage&q=&f=false)

Merck Manuals (2007) 'Pain Types' accessed at <http://www.merck.com/mmhe/sec06/ch078/ch078b.html>

NCCCC - National Collaborating Centre for Chronic Conditions (2008) Osteoarthritis: national clinical guideline for care and management in adults (full NICE guideline). National Institute for Health and Clinical Excellence. Accessed at [www.nice.org.uk](http://www.nice.org.uk) October 2009

NHS Institute for Innovation and Improvement (2009) 'CKS Knowledge Summary - Osteoarthritis' accessed at [http://www.cks.nhs.uk/osteoarthritis/making\\_a\\_diagnosis/diagnosis/key\\_clinical\\_points](http://www.cks.nhs.uk/osteoarthritis/making_a_diagnosis/diagnosis/key_clinical_points) October 2009

NHS Institute for Innovation and Improvement (2009) 'CKS Knowledge Summary – Rheumatoid Arthritis' accessed at [http://www.cks.nhs.uk/rheumatoid\\_arthritis/management/quick\\_answers/scenario\\_suspected\\_ra#-384600](http://www.cks.nhs.uk/rheumatoid_arthritis/management/quick_answers/scenario_suspected_ra#-384600) October 2009

NICE (2009) Rheumatoid arthritis: the management of rheumatoid arthritis (NICE guideline). National Institute for Health and Clinical Excellence. [www.nice.org.uk](http://www.nice.org.uk) [Accessed: 18/06/2009].

Nicholas MK, Molloy AR. (2003) Cognitive behavioural therapy for chronic pain patients. Medicine Today (supplement) 2003; Aug: 12-17. as cited in Hunter

Integrated Pain Service (2005) 'Cognitive Behavioural Interventions for Persistent Pain in General Practice (Practice Guideline)' accessed at [http://www.hnehealth.nsw.gov.au/pain/health\\_professionals/medical\\_practice\\_guidelines](http://www.hnehealth.nsw.gov.au/pain/health_professionals/medical_practice_guidelines) October 2009

NPA - National Pharmaceutical Council and Joint Commission for the Accreditation of Healthcare Organisation (JCAHO) (2001) 'Pain: Current Understanding of Assessment, Management, and Treatments' NPC; Virginia USA and JCAHO; Illinois USANHS Quality Improvement Scotland (2006) 'Management of chronic pain in adults: A Best Practice Statement' NHS Quality Improvement Scotland

Pasero, C. McCaffery, M. (1999) 'Pain: clinical manual' St. Louis: Mosby

Pizzi LT., carter CT., Howell JB., Vallow SM., Crawford AG., Frank ED. (2005) Work loss, healthcare utilisation, and costs among US employees with chronic pain Disease Management Health Outcomes. 13 (3) 201–208. Abstract accessed at <http://ideas.repec.org/a/wkh/dmhout/v13y2005i3p201-208.html> September 2009

Royal College of General Practitioners (1996) 'The Back Book: the Best Way to Deal with Back Pain; Get Back Active' Stationery Office Books: London

Scott FT, Leedham-Green ME, Barrett-Muir WY, et al. (2003) 'A study of shingles and the development of postherpetic neuralgia in East London' J Med Virol. 2003;70(suppl 1):S24-S30 as cited by BMJ Best Practice (2009) 'Chronic Pain' accessed at <http://bestpractice.bmj.com/best-practice/monograph/694/basics/epidemiology.html> October 2009

Senay EC, Adams EH, Geller A, et al. (2003) Physical dependence on Ultram (tramadol hydrochloride): both opioid-like and atypical withdrawal symptoms occur. Drug Alcohol Depend. 2003;69:233-241 in BMJ Best Practice (2009) 'Fibromyalgia' accessed at <http://bestpractice.bmj.com/best-practice/monograph/187/highlights.html> October 2009

Tunks E., Crook J., Wier, R. (2008) 'Epidemiology of Chronic Pain with Psychological Comorbidity: Prevalence, Risk, Course, and Prognosis' in The Canadian Journal of Psychiatry, Vol 53, No 4, April 2008

UMHS - University of Michigan Health System (2009) 'UMHS Chronic Pain Management Guideline' University of Michigan, Michigan

Waddell, G. (2004) 'The back pain revolution: 2nd edn.' Churchill Livingstone: London

Waddell, G. Burton, A. Main C. (2003) 'screening to identify people at risk of long term incapacity for work' The Stationary Office: London as cited by Burton....

Waddell, G. Burton, A. (2004) Concepts of rehabilitation for the management of common health problems' Royal Society of Medicine Press: London as cited by Burton....

Warrell D., Cox T., Firth J., Benz E. (2004) 'Oxford Textbook of Medicine' OUP; Oxford



White KP, Harth M. (2001) 'Classification, epidemiology, and natural history of fibromyalgia' in . Curr Pain Headache Rep. 2001;5:320-329 as cited in BMJ Best Practice (2009) 'Fibromyalgia' accessed at <http://bestpractice.bmj.com/best-practice/monograph/187/basics/epidemiology.html> October 2009

Wolfe F, Smyth HA, Yunus MB et al. The American College of Rheumatology 1990 criteria for the classification of fibromyalgia: the Multicenter Criteria Committee. *Arthritis Rheum* 1990;33:160 accessed at [http://www.rheumatology.org/publications/classification/fibromyalgia/1990\\_Criteria\\_for\\_Classification\\_Fibro.pdf](http://www.rheumatology.org/publications/classification/fibromyalgia/1990_Criteria_for_Classification_Fibro.pdf) October 2009

Wolfe F. (1993) The epidemiology of fibromyalgia. In *Journal of Musculoskeletal Pain*;1:137 as cited in BMJ Best Practice (2009) 'Fibromyalgia' accessed at <http://bestpractice.bmj.com/best-practice/monograph/187/basics/epidemiology.html> October 2009  
World Health Organisation (2008) 'Scoping Document for WHO Treatment Guideline on Non-malignant Pain in Adults' WHO; Geneva

World Health Organisation (2007) 'International Classification of Diseases (ICD) 10th Edition' World Health Organisation: Geneva

World Health Organisation (2009) 'Access to Analgesics and to Other Controlled Medications' accessed at [http://www.who.int/medicines/areas/quality\\_safety/access\\_Contr\\_Med/en/index.html](http://www.who.int/medicines/areas/quality_safety/access_Contr_Med/en/index.html) September 2009