it’s a pain
A summary of the ‘It’s a pain’ Public Engagement Lecture Series aimed at improving the understanding of persistent pain.

supporting family carers: the carers alert thermometer (CAT)
A short innovative screening instrument that aims to provide an alert to potential areas of burden that carers are experiencing.

explicating pain
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cochrane review summary
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loneliness among older adults
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There are many facets to the experience of pain as described in this issue of Innov-age. One of the strongest messages, however, is that everyone has a different experience of pain and the degree of severity is not necessarily linked to tissue trauma or damage. Indeed McCaffrey and Beebe, world leaders in the field of pain, describe pain as “whatever the experiencing person says it is, existing whenever the experiencing person says it does.”

I’m sure we have all experienced pain at sometimes in our lives but this issue also highlights that as we get older, the multi-faceted aspects of pain loom ever larger and a significant proportion of the elderly are living with disabling and debilitating pain. Furthermore, contributing factors can range from physical nerve and tissue trauma right the way through to psychological factors, for example previous pain experience and loneliness.

Many of us choose current drug therapies as a preferred route of choice for pain management but this issue also highlights that these themselves have limitations particularly in terms of efficacy and side effects. There appears to be some evidence, particularly from Cochrane Corner, that suggest that Cognitive Behavioural Therapy and other behavioural modification and psychological support therapies may have a role to play.

Having personally experienced six weeks of severe neuropathic pain following surgery last year I cannot begin to imagine the degree of collective suffering being endured in society today. Furthermore, the knock on effect on individual sufferers, carers and society cannot be underestimated.

So what of the future? It is apparent that whilst drug companies continue to develop new therapies, it is imperative that other further research into the causes and mechanism of pain, experience and treatment are pursued. Dr Lalkhen, in his article on explicating pain, provides an articulate view on how we can no longer ignore the multi-dimensional nature of pain and the pain experience. In the future we may need to focus on combined therapies and a multi-faceted approach to treatment if we are to truly tackle the challenges pain poses to individuals and society.

Jackie Oldham
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Almost 10 million people in the UK have their quality of life affected by pain (The British Pain Society). Pain is “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage (International Association for the Study of Pain)”. Persistent pain refers to pain lasting 12 weeks or more and includes conditions such as:

- Inflammatory e.g. arthritis
- Neuropathic e.g. diabetes, muscular sclerosis
- Chronic widespread pain e.g. fibromyalgia
- Visceral pain e.g. pancreatitis.

In the following article Joanna summarizes the ‘It’s a pain’ Public Engagement Lecture Series which aims to educate both patients and healthcare professionals about the current understanding of pain, treatments and services available. The online resources and summary discussed provide a useful source of information for chronic pain management.

‘It’s a pain’ Public Engagement Lecture Series

Joanna Quinlan (BSc, MA, FdA) organised the ‘it’s a pain’ public engagement lecture series along with Dr David Laird and Dr Paul Chazot. She is a Pain Management Worker and helps patients develop key pain management skills such as pacing, relaxation, sleep promotion, mindfulness, and positive thinking. Joanna is part of a large and well-established multi-disciplinary Pain Management Team in Durham.

Dr David Laird (FFPMRCA) is a Consultant in Pain Medicine in Durham. He was appointed as Consultant in Anaesthesia & Pain Management 1990 after training in Northern Ireland. David developed the Multidisciplinary Pain Management Service winning the 2005 NHS Regional Innovation award and established the Hospital Palliative care service 1993. He has had a long term commitment to Medical Education and was the 1999 Wyeth Travelling Fellow to the USA.

Dr Paul L Chazot is a Senior Lecturer in Neuropharmacology at the University of Durham, and a Fellow of the British Pharmacological Society. His research group has a long term interest in identifying and validating novel targets and therapeutic approaches for neurological diseases, including chronic Pain disorders. He is President of European Histamine research society and Parkinson’s UK North Durham Branch. He is currently exploring new methods for treating chronic pain and pruritus, based on new histamine-, plant- and light-based approaches.

The ‘It’s a pain’ lecture series was aimed at improving the understanding of persistent pain. This is the first step in ensuring good and effective pain management. Knowledge of current understanding of pain, treatments and services is important, both to the person sitting at home who has been in pain for months and is unaware of simple skills that they could utilise to make life easier (The Pain Toolkit, http://www.paintoolkit.org/); and to the health care professional caring for someone in pain.
The lecture series was a partnership between County Durham and Darlington NHS Foundation Trust Pain Management Team and Durham University. The key organisers included Joanna Quinlan, Dr David Laird and Dr Paul L Chazot. Local media channels such as radio, newspapers, and NHS Trust’s newsletter advertised the series. Workshops in local community settings such as a school, mental health charity, and gym ran alongside lectures (see Photo). All lectures were videoed and posted on YouTube (see Appendix 1). The lectures, community workshops and media coverage have together raised the awareness and profile of pain research, treatments and services.

The ‘It’s a pain’ public engagement lecture series was able to bring together health care professionals, academics, students, members of the public and patients to hear about new and exciting developments in pain research. It explored themed presentations and discussions dealing with current biological, psychological and social dimensions of this important topic.

Dr Michael Lee (Cambridge University) shared his research findings on the biological aspects of pain, in particular, how the brain processes incoming nerve signals from the body to create an experience of pain. He and other investigators have shown, using functional MRI scanning techniques, that the brain becomes very active as pain is experienced. It turns out that there is no one single brain area for pain akin to those for other physical senses for light or sound. Instead, a large number of different brain regions become active probably because pain is so much more than a physical sensation and is associated with strong emotive and cognitive experiences.

In most cases, the brain receives a nerve signal and produces a sensation of pain that is referred to the bodily origin of that signal. However, the brain is not a passive receiver of information from the nerves. The brain does not always produce a sensation of pain that is proportionate to the incoming nerve signal. It is able to amplify or dampen the transmission of nerve signals and hence control the amount of pain that is actually experienced. So, a low intensity physical stimulus can produce a high pain sensation and vice versa (see Table 1).

The brain can ‘put the brakes’ on pain by activating a part of the brainstem called the periaqueductal grey (PAG). The PAG reduces incoming nerve transmission and ultimately the sensation of pain. Pain relief from distraction relies on PAG activity. Increased PAG activity is associated with a greater capacity for distraction from pain. The result can be an experience of mild pain despite a highly intense physical stimulus (see Table 2).

Activity in other brainstem regions, for example, nuclei in the rostral ventral medulla play a role in the increased sensation of pain that happens during injury and inflammation. Such pain is protective and promotes healing and tissue repair. Persistent pain is thought to occur when incoming nerve signals continue to be up-regulated by the brainstem even after tissue healing. The reason for this remains unclear and is the subject of much research (Lee & Tracey, 2013).

Psychological factors as depression and anxiety can heighten the perception of pain, possibly by up-regulating nerve signal transmission at the level of the brainstem. As a result, a physical stimulus or injury can feel more painful than is usual, and contribute to a problematic persistent pain state (Table 1).

Table 1: Brain responses to pain

<table>
<thead>
<tr>
<th>Pain Condition</th>
<th>Stimulus</th>
<th>Response</th>
</tr>
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<tbody>
<tr>
<td>Normal</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Normal acute pain</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Pain modified with medication or distraction</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Problematic persistent pain state</td>
<td>Low</td>
<td>High</td>
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...continued on next page
Professor Stephen Morley (Leeds University) described normal psychological processes common to most people living with persistent pain. There are three interrelated stages including: interruption, interference and identity change. Pain has an “unrivalled capacity” to demand attention and interrupt on going cognitive and behavioural activity (Morley, 2008). For example, someone in pain might be sitting reading a newspaper and the pain suddenly grabs their attention and interrupts their train of thought. As pain persists, it can then start to act “as punisher, the effect of which is to suppress the behaviour” (Morley, 2008). Certain tasks or activities may be avoided because they cause too much pain. Others may observe pain behaviours e.g. facial expressions and give pain a social dimension. For example, a person in pain may have always walked at a fast pace, but since having pain has to walk slowly and with the aid of a stick and because they don’t like being seen with a stick they avoid walking outside and drive everywhere.

The continued persistence of pain starts to challenge a person’s sense of identity. These changes may be linked to persistent pain states whereas acute pain usually only interrupts and interferes for a temporary period of time. With persistent pain, there can be a perception of the body aging prematurely and feeling ‘old before your time’. A person might remark, ‘I am only 50, but have a body of a 90 year old’. Alternatively, there can be a sense of ‘suspended identity’ that the ‘real’ person is fixed in time prior to the onset of pain. Patients will make comments like ‘I want to rewind the clock so I can be me again’. Those parts of a person which are integral to how he or she sees herself can become entrapped by pain e.g the pianist now unable to play the piano.

The modification of pain via the use of appropriate and effective pain medication, Transcutaneous electrical nerve stimulation (TENS), or acupuncture reduces interruption. Physiotherapy and Occupational Therapy input can reduce avoidance and regain function lost as a result of interference. Psychological input such as Commitment and Acceptance Therapy (CAT) may help an individual with identity issues because of pain (see Table 2 adapted from Morley, 2008).

Two other lectures explored new physiotherapy approaches and drugs from plants. Dr Jonathan Hill (Keele University) shared his thoughts on the importance of stratified care management for back pain using prognostic screening and matched care pathways (Hill et al., 2011). Ross Menzies also explored the role medicinal plants could have in managing pain.

**Table 2: Interruption, Interference and Identity**

<table>
<thead>
<tr>
<th>Psychological Process</th>
<th>Definition</th>
<th>Treatment</th>
</tr>
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<tbody>
<tr>
<td>Interruption</td>
<td>“Grabs your attention”</td>
<td>Pain medication, TENS, acupuncture</td>
</tr>
<tr>
<td>Interference</td>
<td>“Stops you being able to do task at the standard you (and others) are used to”</td>
<td>Physiotherapy and Occupational Therapy input</td>
</tr>
<tr>
<td>Identity</td>
<td>“Who you are and who you hope to be”</td>
<td>Psychological input Commitment and Acceptance Therapy (CAT)</td>
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**Social aspects** of pain were addressed in the form of a debate with a panel of four chaired by Baroness Hilary Armstrong (Non-Executive Director of County Durham and Darlington NHS Foundation Trust).
modern world view argues that pain is something that should be eliminated but Professor Robert Song (Durham University) argued that “pain is not a brute, inert, unfairness but can be woven into a meaningful existence.” Pain management provision varies across the world, which is in part due to cultural differences. Dr Jo Dunn (Durham University) drew attention to a comparative study between palliative care of patients in Kenya and Scotland (Murray et al., 2003). In Scotland patients had access to good health care and pain relief but not always the family or Spiritual support needed which was in direct contrast to Kenya where the opposite applied. In Kenya, many patients had a strong Christian belief, were supported by their faith communities and received care at home by their families.

In terms of persistent pain services in the UK, Dr Kate Bidwell (former Chair North Durham Clinical Commissioning Group) highlighted the need for good

pain services, which are multi-disciplinary and care for the whole person, also that pain services should be easily assessable. Many pain patients are unable to work and depend on benefits for a living. Mr Ian Semmons (Chair of Action on Pain) spoke about the changes from Disability Living Allowance (DLA) to Personal Independence Payment (PIP) and the problems this has presented.

The ‘It’s a pain’ public lecture series generated local interest and has improved knowledge of persistent pain. This interest has continued with a follow up meeting earlier this year bringing together health care professionals, academics and patients in pain run in association with the Wolfson Research Institute for Health and Wellbeing (https://www.dur.ac.uk/wolfson.institute/events/?eventno=19734). There have been a number of publications including this one with other research ideas being proposed. The lectures continue to be viewed on YouTube.

Appendix 1: ‘It’s a pain’ lectures

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<tr>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>How the Brain is Wired for Pain</td>
<td>Dr Michael Lee</td>
<td><a href="http://www.youtube.com/watch?v=j9_j4nD7Tfc">http://www.youtube.com/watch?v=j9_j4nD7Tfc</a></td>
</tr>
<tr>
<td>Every Move you Make – The Normal Psychology of Pain</td>
<td>Professor Stephen Morley, University of Leeds</td>
<td><a href="http://www.youtube.com/watch?v=2kzsEjTraiY">http://www.youtube.com/watch?v=2kzsEjTraiY</a></td>
</tr>
<tr>
<td>Could Medicinal Plants Manage Pain?</td>
<td>Ross Menzies</td>
<td><a href="http://www.youtube.com/watch?v=2HtDMHKeEoo">http://www.youtube.com/watch?v=2HtDMHKeEoo</a></td>
</tr>
<tr>
<td>Pain Question Time</td>
<td>Baroness Hilary Armstrong, (chair), Dr Kate Bidwell, Dr Robert Song, Dr Jo Dunn, and Mr Ian Semmons</td>
<td><a href="http://www.youtube.com/watch?v=6JL26SIM0og">http://www.youtube.com/watch?v=6JL26SIM0og</a></td>
</tr>
<tr>
<td>Stratified Care for Back Pain</td>
<td>Dr Jonathan Hill</td>
<td><a href="http://www.youtube.com/watch?v=XfPvhcDwNow">http://www.youtube.com/watch?v=XfPvhcDwNow</a></td>
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A special thanks to: Nicola Massingham, Christopher Carter, Kevin Dewell, Dr Melanie Davis, Dr Jonathan Hill, Ross Menzies, Ian Semmons, Dr Kate Bidwell, Dr Jo Dunn, Professor Robert Song, Baroness Hilary Armstrong, Professor Stephen Morley, Dr Michael Lee, Andy Gargett, Michelle Allan, Dr Gillian Campling, Lucy Glasper, Paul Scott, Dr Nicolette Perry, Dr Frederique Tholozan and Professor Roy Quinlan.

References


The word explicate means to ‘unfold’ or ‘make clear’ the meaning of things so as to make the implicit explicit. The aim of this brief article is to summarise historical and current concepts in the psychobiology of pain and highlight how these frameworks impact on our clinical decision making, patient experiences and expectations.

Primitive humans attributed the pain of internal disease to the intrusion of evil spirits. Relieving pain therefore consisted of appeasing or frightening off these offending demons by wearing talismans or appealing to medicine men or conjurers. The concept of pain as punishment from the Gods dominated Babylonian thought and ancient Egyptians believed that vomit, urine and faeces were the routes by which intruding spirits could depart. The emotional component of the pain experience was emphasised in ancient India with the heart being the sense organ of pain. Ancient Chinese models identified disturbances in the flow of chi as causing pain through imbalances between ying and yang with acupuncture used to restore the flow of chi.

Plato believed that pleasure and pain were passions of the soul and Aristotle called the heart the sensorium commune from which all sensation arose. Hippocratic thought introduced the idea that imbalances in the four humours were the cause of disease. Despite the work of the Roman physician Galen who described the anatomy of nerves and identified the brain as the centre of sensibility, the Aristotelian concepts of sensation and pain prevailed for 23 centuries.

Pain therapies in ancient times were thus directly related to conceptual frameworks of pain which in turn reflected the available technology for investigating the phenomenon. Priests and priestesses doubled as physicians relying on prayers alongside natural remedies to restore humoural imbalances. The concept of pain as punishment was also prevalent in Judeo-Hebraic civilisation – the word pain is derived from the Latin word, poena, meaning punishment and its relief through prayer. During the Renaissance progress was made in moving away from the heart to the brain as the centre of sensation but this impacted little in terms of therapy.

In the 17th century Descartes introduced a precursor of the Specificity Theory (developed in 1859). Pain was experienced proportional to the degree of tissue damage conducted along a line-labelled hard-wired pathway from the periphery to the brain. This unidimensional, sensory-physiological model still dominates the thinking of many clinicians with reported pain expected to be proportional to the extent of physical pathology. Treating pain according to this model involves removing the source of pain or severing (either surgically or pharmacologically) the pathway between the periphery and brain.

The synthesis of morphine in 1806 and the syringe and needle in 1820 enabled better delivery of opioids. The introduction of ether for general anaesthesia in 1846 and Koller’s demonstration of local anaesthetic in 1884 facilitated the surgical management of painful conditions. Combining the Specificity Theory of pain with the availability of anaesthesia led to neurosurgical attempts at relieving chronic intractable pain by severing ‘pain pathways’.

The Gate Control Theory proposed by Melzack and Wall in 1965 argued that pain was instead a multidimensional experience and that nociceptive information could be modified at the level of the brain and spinal cord. The discovery of an endogenous opioid system lent further weight to the concept of modulation of nociceptive information.

Our current understanding of tissue injury and its relationship to pain encompass 4 processes: transduction, transmission, perception and modulation.

- Transduction refers to the conversion of a noxious thermal, chemical or mechanical stimulus into an electrical impulse via receptors on free nerve endings called nociceptors.
- Transmission is the delivery of these impulses to the spinal cord and brain.
• Perception refers to the appraisal of these impulses in the brain.
• Modulation refers to pro-nociceptive or anti-nociceptive output from the brain that influences nociceptive transmission at the level of the spinal cord. In animals and humans, the effectiveness of anti-nociceptive mechanisms, particularly their endogenous opioid component, appears to deteriorate with advancing age.

Nociception is therefore not the same as pain and the amount of pain experienced is not related to the degree of tissue damage sustained. The model proposed by Descartes has to be abandoned.

Since the mid-eighteenth century three areas of pain have occupied our attention: cancer pain, symptomatic treatment of acute pain and the management of chronic non-cancer pain (CNCP). CNCP includes conditions such as low back pain, osteoarthritis, neuropathic pain and generalised pain disorders (e.g. Fibromyalgia). Acute pain and cancer pain were and are relatively easily understood by clinicians who hold a unidimensional sensory-physiological viewpoint—CNCP with its relatively low levels of demonstrable pathology remains an enigma for both patients and clinicians. The pain from these conditions or when pain is considered disproportionate to identified levels of tissue pathology (in acute or cancer pain) often results in patients being labelled as having underlying psychopathology.

Flor and Turk (2011) describe pain as a complex integrated response consisting of sensory, emotional, cognitive and behavioural components that may be described on the verbal-subjective, motor-behavioural and physiological level. The development of chronic pain is characterised by peripheral (changes in the sensitivity of nociceptors) and central sensitisation (alteration in brain and spinal cord pathways modulating nociceptive transmission). The relationship between tissue damage and pain becomes weaker as pain persists. Emotional and cognitive factors and prior experiences have an impact on the development and maintenance of chronic pain and the individuals’ response to chronic pain. Chronic pain is a genuine physical sensation experienced by the patient. Disability is not predicted directly by pain, or other biomedical factors.

Pain related disability arises (and is maintained) by a complex interaction of biological, psychological and social factors:
• Biological factors e.g. pain sensations / symptoms,
• Psychological factors e.g. thoughts / beliefs, feelings / emotions (distress)
• Social factors e.g. environment/family response / professionals’ response.

In the management of chronic pain the biomedical model needs to be replaced with a broader model (multidimensional and psychobiological) recognising the influence of both the social context of pain and suffering and the adaptive function of pain behaviour. The aim of rehabilitative chronic pain management is to reduce the disability and distress caused by chronic pain by teaching sufferers physical, psychological and practical techniques to improve quality of life.

What are the implications of ignoring the multidimensional nature of the pain experience? The persistence of a biomedical approach for example in treating pain from osteoarthritis with drugs and surgery will not necessarily relieve pain or improve function. Interpreting chronic pain as dangerous will result in behaviour which engenders deconditioning and distress. When patients are told that an MRI scan of their spine shows degeneration or wear and tear – their interpretation is often that this spells danger and their pain is exacerbated. Rehabilitation therapies will continue to be side-lined in favour of biomedical treatments. Acute and cancer pain management will focus on drugs with psychological methods of managing pain taking a backseat.

Current clinical practice largely reflects a Cartesian view of pain and ignores the progress made in understanding pain in the last 20 years, with potentially disabling and disempowering consequences to our patients.

Bibliography


The Forgotten People: Drug Problems in Later Life

Older people with drug problems in the UK fail to get the same attention as young people. Drug prevention programmes targeted at older people have the potential to create substantial cost savings and reduce suffering.

In March 2014, the Big Lottery Fund commissioned the Substance Misuse and Ageing Research Team at the University of Bedfordshire to carry out a short scoping study to provide an overview of the scale, consequences and to understand drug misuse in older people across the UK providing guidance on what action is most needed.

The results show that there are more than 2,000 people aged 60 and over receiving treatment for a drug problem in the UK. Many more people in this age group are likely to be experiencing drug problems as only a minority will be in treatment. Evidence suggests that drug use, drug-related deaths and the number of older people in treatment for drug problems has increased in recent years.

The report notes that addiction to medicines is likely to be prevalent in older age groups – estimates suggest that 30-40% of older long-term users of benzodiazepines (primarily used for the treatment of sleep disorders and anxiety) or opioid analgesics (painkillers), become dependent on them. Risk factors for addiction to medication are likely to include being female, socially isolated, poor health and chronic illness, taking a number of medicines and a previous history of substance misuse or psychiatric illness. Poor prescribing practice can also contribute to medication addiction and some doctors have different rules and strategies for prescribing addictive medicines and are more tolerant of long-term use in older people.

Both illicit drug use and addiction to medicines can have devastating consequences for older people including premature death, physical and mental health problems, self-neglect. The ageing process means that older people are more likely to experience the harmful effects of drugs and drug use can exacerbate or accelerate the onset of conditions which are associated with ageing such as falls and confusion.

Older people respond well to treatment for drug problems. Evidence suggests that treatment outcomes can be improved further if treatment is delivered by a substance misuse service specifically for older people.

To find out more about this study please visit http://www.beds.ac.uk/goldbergcentre/research/current

Changes in Parkinson’s patients’ walk may predict dementia

Subtle changes in the walking pattern of Parkinson’s patients could predict their rate of cognitive decline, according to a study funded by the National Institute for Health Research and published in the Frontiers in Aging Neuroscience.

Led by Lynn Rochester, Professor of Human Movement Science at Newcastle University, the study compared the differences in gait and cognition between 121 adults diagnosed with Parkinson’s in the past four months and 184 healthy adults. The study found measures of both gait and cognition were poorer in people with Parkinson’s compared with healthy adults.

They then compared people with Parkinson’s who mainly had gait problems with those who mainly had tremor problems. Though there was no difference in cognitive abilities between the two groups, in those who mainly had gait problems there was a link between this and their cognitive function. That is, if a person had more problems with gait, they tended to have more cognitive problems.

This study will help further understand how gait may be associated with cognition in people with Parkinson’s. It suggests that progression in gait problems may be associated with cognitive decline.

To find out more please visit www.frontiersin.org/Aging_Neuroscience
Ageing Better Investment – £82m to reduce elderly isolation

Of the 10.8 million people aged 65 or over in the UK, 3.8 million live alone, and 1 million say they are always, or often feel, lonely. 17 per cent of older people have less than weekly contact with family, friends and neighbours.

The Big Lottery Fund has announced 15 areas in England sharing £82 million to reduce the social isolation of up to 200,000 older people and test new approaches to improve services for the future aiming to encourage changes and improvements so older people are happier, healthier and more active, contributing even more to their communities.

The consequences of social isolation include poor physical and mental health for individuals, less active citizens and a need for more costly services. The Fund wants to help tackle this and over six years the 15 areas will test what methods work and what don’t, so that evidence is available to influence services that help reduce isolation for older people in the future.

The Ageing Better Investment Partnerships made up of voluntary, statutory and private sector organisations will work with older people in rural, coastal and urban areas to ensure that local services are better planned, coordinated and delivered. Activities will include befriending services, training and awareness-raising for frontline staff, creating neighbourhood networks and volunteering with projects starting from summer 2015.

One of the partnerships being awarded funding is in Bristol, where Oscar-winning Aardman Animations, based in the city, will produce a Creature Comforts-style animation to help change public perceptions of social isolation to benefit 12,000 older people.

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To find out more about the 15 areas please visit www.biglotteryfund.org.uk

Upcoming Events...

Carer’s Rights Day 28th November 2014
Carers UK is raising awareness of Carer’s Rights Day events across the UK to help carers in their local community know their rights and find out how to get the help and support they are entitled to. http://www.carersuk.org/

Explain Pain 20th January – 21st January 2015
This National Centre of Rehabilitation Education (NCORE) training event at the Royal Derby Hospital course is based on David Butler and Lorimer Moseley’s book Explain Pain. Aimed at professionals working with patients in acute or chronic pain, with a CPD Certificate of attendance awarded at the end of the course. http://www.ncore.org.uk

This conference, hosted Royal College of General Practitioners, London, will provide attendees with an update on clinical, research, organisational and policy developments that are taking place in the field of dementia and a chance to look at progress in old age psychiatry, service provision and exchange views with faculty speakers. http://www.mahcalthcareevents.co.uk

Getting acute hospital care right for frail older people with complex co-morbidities 10th February 2015
One day workshop taking place at The King’s Fund, London. This workshop focuses on ensuring good acute hospital care for frail older people. It is ideal for those leading the delivery of acute hospital services for these individuals, whether clinicians or managers, as well as those in social care and charities, who work closely with acute hospitals. http://www.kingsfund.org.uk/events
Loneliness and its impact on health among older adults

Martin Malcolm is the Head of Public Health Intelligence and Research at NHS Western Isles and part-time PhD student at University of Stirling. While leading a busy team of NHS Public Health analysts he gained his Masters in Public Health from The University of Manchester with a distinction award in 2010. Since then he began a PhD with University of Stirling in 2012 focusing on the effects and pathways of loneliness upon ill-health among older people. As part of his research he is conducting a systematic review of evidence in this field to date before undertaking quantitative analyses using secondary datasets and data linkage techniques.

Loneliness is a psychological affective state arising from perceived deficits in an individual’s relationships. These perceived deficits can be expressed either in terms of the quantity or the quality of one’s relationships and researchers have categorised this respectively into social and emotional loneliness (Weiss, 1973). Emotional loneliness is characterised by the absence of a close attachment figure (eg. a partner or best friend) while social loneliness arises from an absence of a social network comprising of wider family, neighbours, friends or workmates. Importantly the subjective experience of loneliness is quite distinct from the objective state of social isolation where it is possible for an individual to have few or no social contacts and yet not feel lonely, although the tendency is for a degree of correlation between social isolation and social forms of loneliness.

Loneliness has been recognised as a social problem especially among older adults. Studies among older adults in the UK have shown that up to 31% have experienced loneliness at any given time (Windle et al., 2011). Chronic loneliness, i.e. those experiencing loneliness always or often, has been consistently reported among older adults at between 5-16% in UK and even higher levels exist for the very old (Victor et al., 2005). Internationally, comparable levels are also found in US (7%, Steffick 2000), Australia (7%, Steed et al., 2007) and much of Europe (including Ireland, Denmark, Netherlands, Germany, Belgium, France, Ireland and Spain) with even higher levels of between 15% and 35% reported in some Southern European countries including Italy, Portugal and Greece (Walker and Maltby, 1997).

It is striking to observe that such levels of loneliness among older adults have been firmly entrenched for some time with levels reported among current older cohorts persisting over time despite growing recognition and attempts to tackle the issue. (Vctor et al., 2000). While the proportion of older adults experiencing loneliness has remained constant the actual numbers are increasing in response to the socio-demographic trends across many western countries including both ageing populations and rising numbers of single person households. Living alone is shown to be a strong risk factor for loneliness and latest estimates in the UK put a third of all older adults living alone, which equates to 3.8M people (Age UK, 2010).

Loneliness has increasingly been recognised not only as a persistent social issue but as a growing area of public health concern. Evidence has been found that the health impact of loneliness in terms of increased mortality risk is equivalent to that of smoking and greater than that of obesity which have hitherto been seen as two of the largest public health challenges facing many populations. (Holt-Lunstad, 2010). The consequences for both the individual and the population’s health are now being acknowledged by governments not least as the effects are most felt by older adults and typically across a range of chronic long term conditions thereby impacting upon healthcare services. This challenge led to the issue of loneliness featuring in the UK draft bill on Social Care reform in 2012 (DOH, 2012a) and the adoption of new commitments around loneliness and social isolation in the NHS Adult Social Care and Public Health Outcomes Frameworks in 2013/14 (DOH 2012b, 2013).

Understanding the association of loneliness with health is not a straightforward undertaking as there is a two way relationship of both cause and effect at play with ill-health as much a potential contributor to loneliness as it can be a consequence. However it is the impact that loneliness can have upon ill-health that has generated the greatest interest among healthcare researchers and policy makers in recent years in recognition of the potentially serious detrimental effects upon the public’s health and healthcare services.

Evidence of the association of loneliness with ill-health is now relatively strong particularly in relation to adverse outcomes in mental health including depression (eg Cacioppo et al., 2010), anxiety (Anderson & Harvey, 1988), schizophrenia (DeNiro, 1995), suicide (Heinrich, 2005), dementia and Alzheimer’s Disease (UK Alzheimer’s Society, 2013). Increasingly the links to physical diseases are also being made particularly in relation to an elevated risk among lonely persons of coronary heart disease and cardiovascular conditions (Sorkin et al., 2002). There has been much evidence too of a link between loneliness and cancer. However, this has tended to focus on the susceptibility to feelings of loneliness among cancer survivors (Rokach, 2000) than possible causal links although some evidence has emerged of increased risk among women diagnosed with breast cancer (Fox et al., 1994). The risk of infectious disease is a further potential consequence of loneliness (Pressman et al., 2005).

Although the evidence of an association between loneliness and various mental and physical health conditions is generally acknowledged, less well understood are the causal pathways to ill-health associated with loneliness. A common cited pathway
has been the link between loneliness and health behaviours that harm health particularly smoking, alcohol misuse, obesity and poor exercise, which often is explained as a consequence of deficient social support networks (Hawkley and Cacioppo, 2003).

Evidence has shown that lonely people lack the normative social support structures to adequately encourage self-regulation to social standards in various lifestyle choices whether in smoking, alcohol or dietary intake levels (Lauder et al., 2006). Similarly it is hypothesised that one of the key promoters of physical activity is group interaction and affiliation (Estabrooks & Carron, 2000) which mediates against lonely persons active participation. This indirect causal pathway to ill-health via predispositions among lonely persons to health risk behaviours can also manifest in lower medical compliance and the delayed seeking of healthcare advice and intervention.

Other pathways offered as explanations include the link between loneliness and biological stress whereby disproportionate exposure or reactivity to physiological stressors is posited among lonely persons (Cacioppo et al., 2002a). A further pathway to ill-health is identified as the negative effects of loneliness on physiological repair and maintenance processes (Hawkley et al., 2003) such as wound healing, natural immunogenicity levels within the body and the restorative function of sleep (Cacioppo et al., 2002b).

In response to such growing public health concerns about the impact of loneliness interventions have been introduced to foster fulfilling interpersonal relationships, to avert loneliness occurring all together or to avoid it evolving into more serious health conditions (Anderson et al., 2008). The design of such interventions ranges from technology based services such as internet or telephone networks to group interventions with either educative or targeted activities and / or befriending or volunteering schemes. There is also growing acknowledgement of the indirect role some activities can play in reducing loneliness such as pet ownership, improved public transport and more accessible social environments.

In summary, loneliness and in particular chronic loneliness is clearly an established feature of the lives of a significant proportion of older people extending beyond the social sphere into mental and physical ill-health. Policy makers in UK and other countries have begun to recognise the growing challenge this presents encouraging practitioners in their efforts to develop a range of interventions. It becomes ever more important that as the responses to this challenge develop that the research community further explores the gaps in our knowledge to ensure these responses will be effective. This will include exploration of methods of measurement and identification that are practicable among the practitioner community as well as those for research purposes, systematic evaluation of effectiveness of interventions as these develop, further understanding the complex relationship between loneliness and ill-health and the possible interactions in this from a range of socio-demographic and economic factors. Key in all of this will be strong links between policy-makers, practitioners, researchers and older persons themselves particularly those with direct experience of loneliness.

References

Age UK (2010) http://www.ageuk.org.uk/london/about-age-uk-london/media-centre/key-stats/


Within the UK, the term ‘carer’ covers broad definitions ranging from a paid carer acting in an employed capacity, supporting a person in their own home, to an ‘informal’ or ‘family’ carer. Family carer usually refers to someone identified, by the person being cared for, as important to them and covers spouses, partners, family members and friends who provide care.

It is estimated that in the United Kingdom there are over 6.5 million family carers, of which approximately 500,000 are caring for someone in the last year of life (NCPC, 2012). However this is a conservative figure as many carers are hidden to health and social care services, partly as they do not regard themselves as carers.

Societal changes to family composition, including rising divorce rates and geographical mobility, can cause increased pressures on family carers. Furthermore, with more women working, the recent emergence of the ‘sandwich generation’ of carers, plus the rise in retirement age, all impact on the availability of family carers. This leads to an increasing dependence on older and potentially frail people to be the main carer for their spouse/partner, siblings and friends. Indeed it has become apparent that the body of older ‘family’ carers over-65 years of age now accounts for 17% of the total carer population, and there is an increasing number of ‘older old’ carers aged 85-plus (ONS, 2013). The Princess Royal Trust for Carers reported the specific concerns in relation to this trend towards older carers, including long term physical and mental health problems and their fears regarding the future needs of the person they care for.

This pressure on family carers, which is often cumulative and can result in a small issue leading to breaking point, plays a pivotal role in potentially avoidable end-of-life hospital admission. Earlier work suggests that the issues facing carers at this time could have been addressed with supportive interventions being introduced in a timely manner.

Choosing the right time to introduce relevant support requires careful assessment of the situation. Although there are a plethora of carer assessment tools, including lengthy research instruments as well as locally developed tools, what is missing is a brief one for use with carers providing end-of-life care in the home. Furthermore, when considering any type of tool development it is important to be aware of who will undertake the assessment, and any educational and resource implications. These factors were embraced to ensure development of a screening instrument that could be easily used in everyday practice.

The CAT research team includes: Dr Katherine Knighting, Dr Mary O’Brien, Professor Brenda Roe from Edge Hill University and colleagues: Professor Mike Nolan (University of Sheffield), Professor Mari Lloyd-Williams (University of Liverpool), Dr Rob Gandy (Independent consultant) and Kirsty Pine (Liverpool CCG).

Supporting Family Carers: the development of the Carers Alert Thermometer (CAT)

Professor Barbara Jack is Head of Research and Director of the Evidence-based Research Centre Edge Hill University Ormskirk Lancashire. She is also the chair of the Palliative Care Research Society and Visiting Professor Hospice Africa.
Adopting the concept of the modified early warning systems (MEWS) used in hospitals to detect early signs of patients requiring higher medical care, a mixed-method, multi-phased, consensus study was undertaken. Over 245 people (117 carers and 128 professionals) across a range of health and social care settings, mostly from the North West of England (2011-2014), were involved in the development of the CAT. The CAT is for use in daily practice in the home, by non-specialist staff, to identify carers who are at risk and in need of a formal needs assessment.

The CAT is a short screening instrument that aims to provide an alert to potential areas of burden that carers are experiencing. It comprises 10 questions that fall into two domains concerning the current caring situation including: exploring the needs of the carers in their caring role and the carer’s own health and well being. It uses a traffic light system to score the alerts and a visual representation of a thermometer to identify the extent of the carer’s needs indicated when the number and type of alerts are added up. Alerts can be rated as low (green), medium (amber) or high (red), with the recommendation that alerts scored as red, i.e. high alert, are given a priority for action. A ‘next steps’ section can be tailored and signposted to local services and an ‘action plan’ used to trigger intervention as appropriate. Initial feedback received from family carers and health and social care professionals suggests that the CAT is quick and easy to use and will be an important instrument to help identify carer needs.

The increasing number of older family carers will bring with it a need for additional support to enable them to continue caring, particularly as these carers frequently have their own health issues, which they often ignore. The previous reliance on the extended family is now not always a viable option and one that society needs to be aware of. Therefore, using the CAT may help to provide signposting to appropriate interventions to support the older carer in their caring role and, importantly, reduce inappropriate hospital admissions.

The CAT was launched in September 2014 and is available free of charge for non profit use. To access the CAT please register at the web site: www.edgehill.ac.uk/carers

This study is funded by the National Institute for Health Research Research for Patient Benefit (NIHR RfPB) Programme (Grant Reference Number PB-PG-0909-20188).

The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.

References
Cochrane Reviewss are internationally recognised as the highest standard in evidence-based health care. This article summarises a selection of Cochrane Reviews assessing **chronic pain management**.

Many people have pain that lasts for a long time and frequently drugs, surgery or physical therapy does not relieve this pain. The search for a diagnosis and for pain relief is often long, discouraging and even damaging. For some people, the pain leads to disability, depression, anxiety and social isolation. Some people describe their life as ruined by pain and as a catastrophe that is impossible to control. These major life changes are not inevitable and are thought to be at least partly reversible using a treatment which aims to reduce disability and distress despite continuing pain.

**Psychological treatment** is based on robust psychological principles that have developed over 40 years of clinical use. The two main types of psychological treatment are called cognitive behavioural therapy (CBT) and behaviour therapy. Both focus on helping people to change behaviour that maintains or worsens pain, disability, distress and catastrophic thinking.

The effects of psychological treatment was investigated by a Cochrane review including 42 studies and almost 5000 people with chronic pain—excluding headache, or pain associated with a malignant disease. Small to moderate benefits, more for disability, mood and catastrophic thinking than for pain, were found for those receiving CBT compared with no treatment and some benefits were still positive six months later. CBT also directly addresses the thoughts and feelings that are a problem for people with persistent pain. However, behaviour therapy showed few and only brief benefits. Although the overall effect is positive, there is not enough known about exactly which type of treatment is best for which person.

**Behavioural interventions** including cognitive behavioural therapy (CBT), biofeedback and posture regulation for chronic pain in the face, mouth or jaw appear to improve long-term pain intensity, pain interference with daily life activities and depression. However, the quality of these studies was poor.

For people with fibromyalgia, a long term problem with widespread pain, the results of 23 studies with over 2000 people showed that those receiving CBT were likely to report slight reductions in pain, negative mood and disability at the end of, and six months after, the end of treatment compared to those not receiving treatment.

For people with chronic fatigue syndrome, also associated with widespread pain, results from 15 studies, with over 1000 people showed that people receiving CBT were more likely to have reduced fatigue symptoms, physical functioning, depression, anxiety and psychological distress symptoms at the end of CBT than people who received usual care, were on a waiting list for therapy or attending for other psychological therapies such as relaxation techniques, counselling and support/education. Indeed, 40% of people in the CBT group showed clinical improvement, in contrast with 26% in usual care. Also people who had completed their course of CBT continued to have lower fatigue levels 1-7 months after treatment ended.

Psychological therapies are currently delivered via hospital outpatient consultation (face-to-face) but more recently they are also delivered through the Internet.

In a review of psychological therapies delivered by the Internet of 15 studies involving over 2000 people with headache pain, people reported improved pain symptoms and disability scores immediately following the end of treatment. People with non-headache pain reported improvements in pain, disability, depression, and anxiety immediately after the end of treatment. Disability was also
improved at follow-up but it does not appear that quality of life improved after receiving the therapy.

Self-management education programmes led by lay leaders (rather than health professionals such as doctors or nurses) are becoming common as a way of trying to promote self-care for people with chronic conditions. The results from seventeen studies that involved over 7000 people with chronic conditions including arthritis, diabetes, hypertension and chronic pain found that these programmes may lead to modest, short-term improvements in patients' confidence to manage their condition and perceptions of their own health. They also increased how often people took aerobic exercise. Whilst there were small improvements in pain, disability, fatigue and depression, the improvements were not clinically important. The programmes did not improve quality of life, alter the number of times patients visited their doctor or reduce the amount of time spent in hospital.


Chronic Pain in Older Adults: Towards a model of Self-Management

Professor Pat Schofield is the director of the Centre for Positive Ageing, which is a University of Greenwich cross faculty multi-disciplinary team research group, and joint editor of Journal of Pain Management. Chair of the British Pain Society – Pain in Older Adults, Special Interest Group (SIG) and Chair of IASP Subcommittee on Education (Pain in Older Adults SIG) she is currently involved in three major programmes of research around pain in older adults. The first is a cross council programme of research under the Lifelong Health & Well Being banner which is Engaging with Older Adults in Designing and Developing Strategies for the Self-Management of Chronic Pain (EO PIC), the second is New technologies to support older people at home: maximising personal and social interaction funded by dot.rural. The third project is an EU funded programme Pain Assessment in Patients with Impaired Cognition, especially Dementia.

Aging Population

We are aware within our society that the population is ageing and we are facing a huge increase in adults age 65 or older, over the next two decades. This is something that is happening across the World, not just in the UK. The younger population is set to decrease, so we are likely to have fewer informal carers in the future. 10 million people in the UK are already over 65 years old. The latest projections are for this to have increased by 5½ million over the next 20 years and the number will have nearly doubled to around 19 million by 2050. There are currently three million people aged more than 80 years and this is projected to almost double by 2030 and reach eight million by 2050. The pensioner population is expected to rise despite the increase in the working age population highlight difficulties associated with prescribing drugs which are often associated with high incidences of side effects. Alongside the fears of prescribing challenges associated with pre-existing co-morbidities, this makes pain management difficult to manage. The safest most effective drug recommended to use with the older population is Paracetamol although, other drugs such as non-steroidal analgesics and opioids can be used. Invasive management of chronic pain is also practiced but many of the injection therapies used to treat pain, for example facet joint or epidural injections have a limited evidence base for use with the older population (Abdulla, 2013).

Chronic Pain in Older Adults

In terms of chronic pain, we are aware that currently; 50% of community dwelling older adults have chronic pain and this number increases significantly to 80% within nursing home populations. The most common sites of pain are knees, hips, back and joints (Elliott, 2013). But the attitudes and beliefs that pervade society, health care and the older adults themselves is that pain should be expected as a natural part of the ageing process. Recent studies that have looked at management of pain in the older population highlight difficulties associated with prescribing drugs which are often associated with high incidences of side effects. Alongside the fears of prescribing challenges associated with pre-existing co-morbidities, this makes pain management difficult to manage. The safest most effective drug recommended to use with the older population is Paracetamol although, other drugs such as non-steroidal analgesics and opioids can be used. Invasive management of chronic pain is also practiced but many of the injection therapies used to treat pain, for example facet joint or epidural injections have a limited evidence base for use with the older population (Abdulla, 2013).

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A lack of evidence restricts other choices in the arsenal of pain management. Psychological approaches such as relaxation, biofeedback and cognitive-behavioural therapy do have some weak evidence of effectiveness. However, any level of cognitive impairment can prevent adoption of such approaches. Similarly, complementary approaches such as TENS, reflexology or massage which do have a place in the usual pain clinic setting have limited evidence to support their use with older adults (Schofield et al., 2013).

Assistive devices have a use with the older population to prevent falls, promote safety and assist in the management of pain which. Such devices can enhance performance in undertaking personal activities associated with daily living. It is evident that older adults tend to be the biggest users of assistive devices and the research does suggest that such devices can support community living, reduce functional decline, reduce care costs and reduce pain intensity. Reliance upon devices should however, be supported with a supervised and supported activity programme. Such activity programmes increase activity that in turn improves flexibility, strength, endurance and balance which are important to prevent serious incidents such as falls. Furthermore, exercise and activity should be customised to the individuals’ capacity, any barriers should be discussed / addressed and supervision / facilitation are essential.

Self-Management

A recent study Engaging with Older People and their Carers to Develop and Deliver Interventions for the Self-Management of Chronic Pain (EOPIC) funded by the MRC provided a definition of self-management which was acceptable to health professionals and older adults. The definition stated that self-management is;

'A single approach or combination of approaches that can be initially taught by any health professional or learned by an individual to enable them to minimise the impact their chronic pain can have on everyday life.'

Stewart et al., 2013

This concept covers a range of techniques including relaxation, coping strategies, exercise, adaptations to activities and education about pain.

By definition, the individual takes the lead role in carrying out the intervention, independently or with varying levels of support from health professionals. There have been some barriers to self-management that have been identified which includes; conflicting demands of dealing with co-morbidities, inadequate access to information and resources, time, cost, lack of confidence in ability, motivation and unhelpful attitudes of others.

A range of self-management programmes have been developed across the World including the Expert Patient Programme and the Arthritis Self-Management Programme. But the claims of success are considered to be rather bold and unsupported.

The EOPIC study worked with older adults over a four year period and resulted in production of a self-management of pain leaflet and “how to find literature” leaflet. Interestingly, the leaflet format was the preferred method of delivery as opposed to for example web based materials.

The leaflets, “Living with Persistent Pain in Later Life: answers to your questions” and “Living with Persistent Pain in Later Life...and what you can do to help yourself”, can be downloaded from the EOPIC web site http://eopic.dundee.ac.uk/self-management-tools

These leaflets have been made available to pain clinics across the UK as part of a national evaluation with health care professionals and older adults. The leaflets have been evaluated on a small scale, and a larger application to evaluate them along with best mode of delivery is being developed.

References:
What is your current position and what was your career path that took you there?

Head of Research and Director  
Evidence-Based Practice Research  
Centre Edge Hill University Ormskirk

Following my undergraduate studies at Swansea University, I trained as nurse eventually becoming a ward sister in general medicine. I knew very early on, that the way to make a difference was through education and I was fortunate to gain a place on the PGDE at the University of Manchester. It was during this placement that I began to realise that developing an evidence base would make the biggest contribution to improving health care.

What challenges do you face in your current position and which has been the greatest one?

Challenge is time and now increasing financial targets to meet.

Juggling all the demands upon a Professor’s role and remaining research active.

In your opinion, what are the top 3 issues affecting the care of older people?

- Many older people are having to act as family carers and often with little support, yet they themselves may have their own health issues. We find that they are often very proud and do not want to ask for help.
- Loneliness is a growing issue especially for the bereaved, not helped by the closure of libraries and post office which provided social interaction.
- Financial issues are very prevalent and many older people struggle with risings bills. This is something that I am increasingly aware of and have seen several older people having to take items out of their food shopping as they do not have enough money to pay for all the items.

What changes in elderly care do you anticipate in the next few years?

The emergence of telehealth can be seen to be a positive move as well as more local health resources, such as the virtual ward projects. Also the introduction of a named person to help direct the elderly to ensure they access all the available resources.

If you hadn’t become a University Professor, what might you have done?

I think I would have remained clinically based and worked in a Hospice.

What experience has influenced your career the most?

Two key inspirational people who I have met. Firstly, Professor Jackie Oldham, my University teaching practice mentor, who encouraged me to undertake research and pursue a PhD. She ended up as my supervisor and encouraged me to have faith in my abilities. Secondly, Dr Anne Merriman, Founder of Hospice Africa and Nobel peace prize nominee. An incredible woman who is now 79 and still travelling the world to spread the ethos of Hospice Africa, whose mantra is; “We never say there is nothing we can do”. She taught me to drive through the pot holes in life.

What advice would you give to someone contemplating following in your footsteps?

To remain true to what you believe in, to maximise opportunities to meet people, and importantly, take time to listen.

What do you enjoy doing when you are not working?

Walking my Jack Russell terrier Keri, on the sand hills and beach, watching Downton Abbey and spa days with friends.

What do you do in a typical working day?

Have a to do list that often gets abandoned.

If you were stranded on a desert island what would be your one luxury?

That is easy – my Jack Russell, Keri.
In our next quarterly issue of Innov-age we will be focusing on long term conditions. Examples include asthma, arthritis, dementia, depression, diabetes, chronic obstructive pulmonary disease, stroke, and heart disease. The Innov-age team will be summarising the research behind managing such conditions with as well as sharing their knowledge and experiences on other important eldercare issues...

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