

PAIN MANAGEMENT

We are living longer but we are living longer in pain. Advances in medical science are prolonging life, yet the provision of treatment for pain has failed to keep pace with other technological innovations.

Pain management exists in competition with other areas of medicine within the NHS in a resource-limited environment. Politically the NHS may remain relatively well insulated from the Coalition Government's swingeing public spending cuts but the hope of any expansion in the immediate future seems hopelessly optimistic.

Also, the new Government's plans to reconfigure the NHS, devolving commissioning to local GPs, threatens any impetus to deliver a national and co-ordinated pain management service.

Bad news, it seems, for pain sufferers, particularly in an ever-ageing population accompanied by a rise in painful degenerative diseases.

Professor Richard Langford, president of the British Pain Society (BPS), says: "We already have a silent epidemic of pain and there will be an increasing prevalence of pain as the population ages."

"Budgets are very tight and there may not be the opportunity for expansion but we need to make sure that pain management is seen as a priority."

"Also, it is worth realising that we can still do more to improve control of short-term acute pain for both immediate benefit and to prevent it becoming a long-term pain condition."

Organisations like the BPS and the EFIC, the European Federation of IASP (International Association for the Study of Pain) Chapters, are calling for an extension of clinical excellence in pain management.

Professor Giustino Varrassi, president of the EFIC, is backing a Change Pain campaign, which aims to increase the awareness of unmet medical needs in the management of severe chronic pain.

"It is extremely important to have a public campaign both at the

Critical diagnosis puts pain in funding frontline

OVERVIEW Chronic pain can destroy lives. It is a major clinical, social and economic problem but, above all, persistent pain is a human tragedy. While quality specialist pain management is available, it is in short supply. So why are so many people suffering needlessly? **Peter Archer** investigates

patient's and the doctor's level," he says. "There is a necessity for change and finally a different approach to treating chronic pain patients."

The challenge is how to overcome the discrepancy between quality and quantity in specialist pain services.

Specialists in pain management are well trained in the UK and provide a high-quality service, but provision is patchy. It is estimated that one in five of all consultations with a GP relate to pain in some form and yet only about one in six pain sufferers get to see a pain specialist.

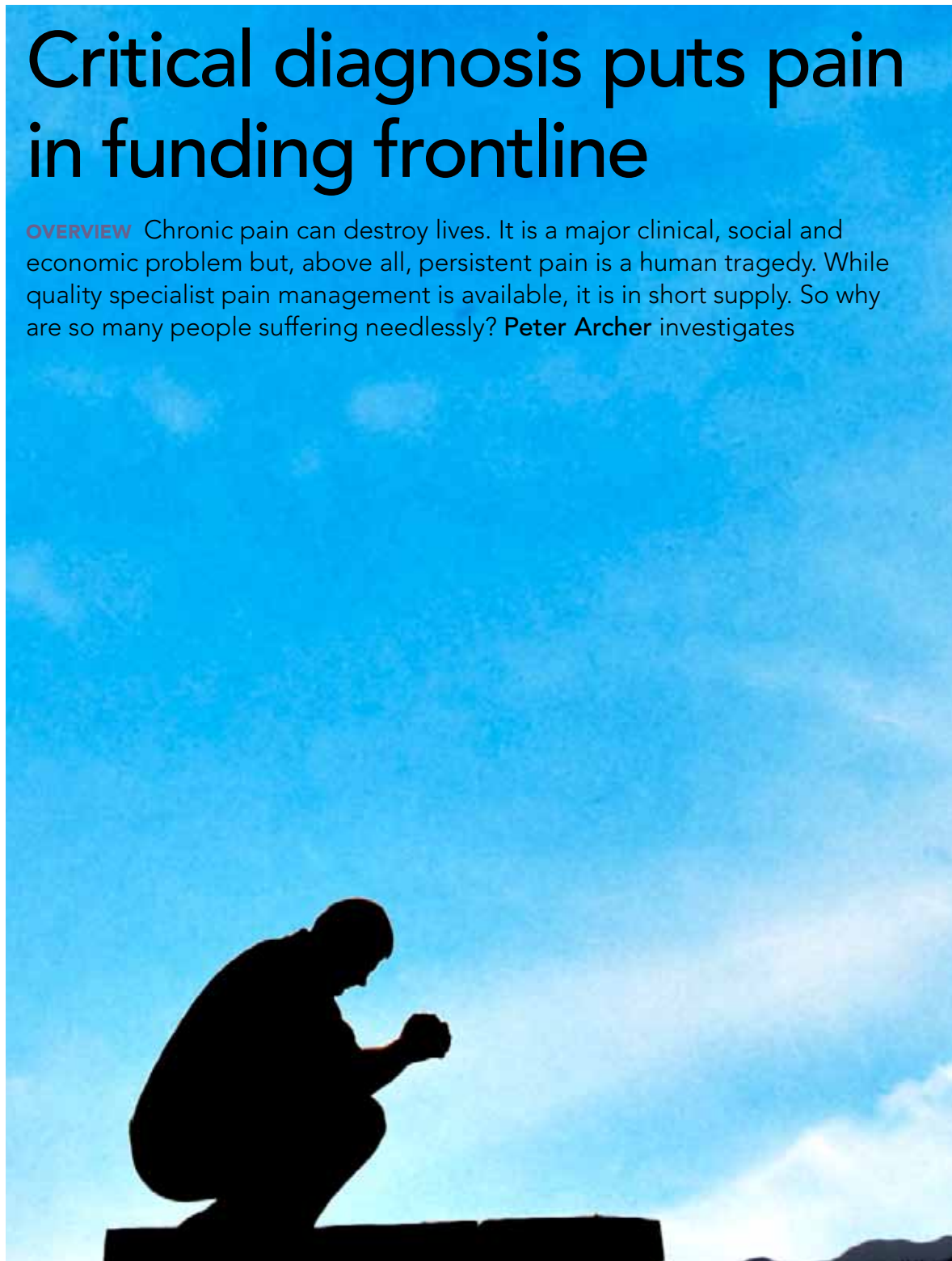
Either the patient does not realise help is available or, more importantly, the GP may fail to provide or facilitate an optimum level of pain treatment. The answer, therefore, must lie partly in better pain-management training for nurses and doctors. Currently only 1 per cent of relevant university syllabuses is devoted to pain.

But it is not simply about educating more healthcare professionals in the mechanisms and management of pain. The solution lies deeper in an awareness and understanding among the professionals of the ubiquitous impact of chronic pain on quality of life.

Once pain becomes a part of a sufferer's existence, it quickly becomes the only reality they know. Prolonged suffering is debilitating and may lead to depression, premature ageing, psychological dysfunction, prolonged disability, loss of livelihood and dependence on the state at the expense of taxpayers.

Specialist pain clinicians are trained in a biopsychosocial approach to pain, which is about treating the impact of pain at all these levels.

As Labour's Lord Tunncliffe told the House of Lords in July: "It is no longer acceptable in the modern world to tell people to grin and bear it when it comes to chronic pain. For many, medical and pharmaceutical advances mean remedies are available. Political will on the part of the Government and the management of the NHS is required to deliver effective solutions."



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Emergency action needed to ease chronic pain

IMPACT The social and economic costs of chronic pain in the UK are staggering. They not only include the burden on the state of prescription medicines, lost working days, incapacity benefits and GPs' time, but also the human toll of increasing isolation, depression, marriage break-up and even suicide. **Judy Hobson** reports

Around eight million people in the UK are in chronic or persistent pain. Those most affected are working people in their forties and fifties with families to support. Twenty-five per cent lose their jobs and 22 per cent become depressed when they are unable to fulfil obligations or realise their dreams.

According to figures from the Department of Work and Pensions, more than £27 million a week was paid out in incapacity and severe disablement benefits in February last year. At the time, 2,468,000 people were in receipt of these benefits with more than 40 per cent giving musculoskeletal pain as the main reason they could not work.

Back pain alone accounts for 119 million lost working days a year and in 2000 its total economic burden was estimated by researchers Maniadakis and Gray to be £12.3 billion, which was greater than the total costs associated with heart disease and diabetes.

Pain is the most common reason someone sees a doctor. Yet surprisingly doctors and nurses spend very little time – on average 13 hours – during training learning how to assess and manage it.

Every year, according to a study by Belsey in 2002, chronic pain takes up 4.6 million GP appointments, equivalent to 793 whole-time general practitioners, costing around £69 million annually. In 2007, on top of money spent by patients on prescription medicines, the NHS in England spent £584 million on 67 million prescriptions for analgesics and anti-inflammatory drugs.

RAPID-ACCESS CLINICS

Without doubt, money could be saved if intervention was earlier and treatment tailored to individual patient's needs. One way to do this would be to establish a national network of rapid-access pain clinics that would enable people to get help quickly and allow more of them to continue in employment.

Such a scheme was proposed in 2008 by then Chief Medical Officer Sir Liam Donaldson, but with the recent change of government this

strategy appears to have been put on the back burner.

The proposal is backed by the Chronic Pain Policy Coalition (CPPC) – a forum of patients, professionals and parliamentarians formed in 2006 to campaign for the improved treatment and management of chronic pain – and the All-Party Parliamentary Group on Chronic Pain.

‘We’re giving people sickness and incapacity benefits when what we should be doing is intervening earlier and giving them better treatment

And in July, in the House of Lords, Lord Luce pointed out that NHS provision of multi-disciplinary pain clinics would be a good investment for the country.

Dr Beverly Collett, chairwoman of the CPPC and a consultant in pain medicine at University Hospitals, Leicester, says: “Pain is a significant humanitarian problem with economic consequences for both individuals and the country.

“The money is there but we’re spending it too far down the line. We’re giving people sickness and incapacity benefits when what we should be doing is intervening earlier and giving them better treatment so they don’t have to give up their jobs and fall into depression.”

According to the Chief Medical Officer (CMO) in 2008, only 14 per cent of those in chronic pain ever get to see a pain specialist. The Department of Health cannot say how many pain clinics there are in the country because it does not keep such statistics. A government report in 2000 indicated there were around 270 in England and Wales but they can range from a single doctor providing nerve blocks to a clinic providing a range of treatments.

It will not be until the National Pain Audit reports early in 2012 that the extent of secondary care pain provision within the NHS will be known. The audit, conducted by the British Pain Society and the healthcare data provider known as Dr Foster, will help to establish why there

is better provision in some areas and not in others. This three-year project will look at pain treatment within each area of the UK and follow what happens to individual patients by means of regular questionnaires.

Currently there is something of a postcode lottery, as revealed in the 2008 CMO report which states: “Due to inadequate, uncoordinated and unevenly resourced infrastructure, there is a variable quality of services.”

Sir Liam Donaldson's proposal for a national network of pain clinics is already being rolled out in Scotland where a pain tsar was appointed in 2007 to co-ordinate services.

Dr Collett says: “The CPPC would welcome the appointment of a pain tsar in England because he (or she) could pull all the threads together.”

NATIONAL STRATEGY

But the appointment of a pain tsar and the provision of a national network of pain clinics look uncertain. When Lord Luce asked in the Lords what action the Coalition Government was taking, Parliamentary Under-Secretary of State for Health Earl Howe replied: “I am not persuaded at the moment that a tsar or a national strategy for chronic pain over and above our current policies for improving the quality of services is necessary.”

Lord Howe did, however, promise the new Government would provide “best-practice pathways” for chronic pain, with providers being rewarded for quality of care.

As part of government plans to put patients at the heart of the NHS and put treatment choices in their hands, a scheme of direct payments of personal health budgets is being road tested in eight primary care trusts (PCTs) over the next three years.

This allows PCTs to give money for a patient's care directly to them, allowing them to decide how, where and from whom they receive their healthcare. The money from existing PCT funding will be paid out monthly or as a lump sum for a one-off purchase and could be used by patients in chronic pain.

Sir Liam Donaldson, when Chief Medical Officer, called for a national network of pain clinics



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Vets get more pain training than doctors and nurses

TRAINING Pain is the most common reason for patients to visit their GP, yet less than 1 per cent of healthcare professionals' training is devoted to its treatment, writes Jennifer Taylor

Management of chronic pain should be included in the training of all UK healthcare professionals. This was the conclusion of then Chief Medical Officer, Sir Liam Donaldson, writing in his 2008 annual report.

However, a 2009 British Pain Society (BPS) survey of the undergraduate curriculums of eight healthcare professions showed that the pain management content in many courses at 19 UK universities was inadequate. Teaching was often delivered piecemeal as part of other topics and was given in narrow professional groups.

The identification, assessment and treatment of pain are largely ignored during medical training. On average, the pain content of courses surveyed was just 12 hours, with physiotherapy students receiving the highest input at 37.5 hours. Veterinary science came next with 27.4 hours, followed by occupational therapy (14 hours), medicine (13 hours), nursing (10.2 hours), dentistry (9.5 hours), pharmacy (eight hours) and midwifery (six hours).

In addition to the limited number of hours students spend on pain education, the method of delivery was seen as inadequate, with lecture-driven sessions focusing on knowledge recall.

INTER-PROFESSIONAL

"Pain management is very much about knowledge and competency and skill, and it's not something that you necessarily learn through a lecture," says Dr Emma Briggs, a lecturer in the Department of Acute Adult Nursing, Florence Nightingale School of Nursing and Midwifery, King's College London, who conducted the survey. "We're really pushing for education to reflect practice and to be inter-professional," she says.

The survey recommends that educational standards from professional regulators and Quality Assurance

Agency (QAA) subject benchmark statements should include pain-related knowledge and competencies to ensure that it is integrated into curriculums. However, only veterinary science referred to pain management in both regulatory and QAA documents, the study revealed.

Approaches to the regulators yielded responses from only the General Medical Council (GMC) and Nursing and Midwifery Council (NMC). The GMC said it was important to maintain its independence from the development of detailed curriculums, while the NMC said it expected pain to be addressed but did not prescribe the number of hours.

The BPS Education Special Interest Group now plans to engage the heads of medical schools and patient groups in a bid to further promote the pain management curriculum. "I've found the most effective way of getting the curriculum in is where you have a local champion," says Dr Briggs. "But identifying those local champions is very difficult."

Pain has been a hidden issue because it tends to be viewed as a symptom of other conditions

The International Association for the Study of Pain (IASP) has published core curriculums for many professional groups. But, while it has been thoroughly researched and referenced, the detail and depth has proved unwieldy for some universities to implement.

In the UK, a BPS working group led by Nick Allcock, associate professor at the School of Nursing,

Medical students should receive more training in managing pain

Midwifery and Physiotherapy, University of Nottingham, is developing an inter-professional curriculum for undergraduate courses.

Broadly speaking, students will need to understand the nature of pain, how to assess and manage pain in difficult groups. "The difficulty will be getting it into healthcare courses because all the different universities are responsible for their own curriculums," says Professor Allcock.

The BPS Education Special Interest Group is focusing on postgraduate education in a project led by Ann Taylor, reader in pain education and research at Cardiff University School of Medicine. A multi-disciplinary group will define core generic competencies for non-specialist, qualified health professionals and also health support workers who need a basic level of information in order to understand and manage pain appropriately in clinical practice.

Pain has been a hidden issue because it tends to be viewed as a symptom of other conditions. But Professor Allcock says: "Our understanding, especially in relation to chronic and persistent pain, is that it's becoming more recognised as a condition in its own right."

It means that training needs to be in place across the board, for generic healthcare professionals who can treat pain early and prevent it becoming chronic, and for pain specialists who

can treat pain as a chronic condition.

When people live with persistent pain it impacts daily on their social and emotional wellbeing, work and relationships. "A lot of people we see are resigned to the fact that there isn't a simple cure for their pain," says Dr Andy King, consultant in pain management at Ashford and St Peter's NHS Trust. "Often what people want is resolution of the impact of the pain on their quality of life."

BIOPSYCHOSOCIAL

So it is not just teaching about the mechanisms and the management of pain that matters, it is improving awareness among professionals of the impact of persistent pain on quality of life. All pain doctors are trained in this biopsychosocial approach to pain, which is about treating the impact of pain at every level.

As part of a multi-disciplinary team, Cardiff University's Mrs Taylor fought hard to prove to the Welsh Assembly that pain was not just a symptom but a condition in its own right. The lobbying was a success and the Welsh Government agreed to include a document about chronic pain in its chronic disease initiative. Service Development and Commissioning Directives: Chronic Non-Malignant Pain was published in 2008.

The document includes a number of directives that need to be achieved, including the development of e-

learning education in pain for all healthcare professionals and health support workers across Wales.

Mrs Taylor has developed the website www.paincommunitycentre.org which goes live on October 20, with a launch event in London. Hosted by Cardiff University, the website will provide pain education free for all people across the UK, including patients and relatives.

Professional education is split into three levels: novice, aimed at newly qualified undergraduates; intermediate, for people managing patients with pain on a day-to-day basis in a hospital ward or GP practice; and advanced, which targets higher-level practitioners such as GPs or surgeons who are not pain specialists.

Many of the resources for the website have been borrowed from Cardiff's Master of Science degree in pain management and the project has received sponsorship from the pharmaceutical industry. It is hoped that alumni from the MSc will support people who are relatively new to pain management or are just beginning their education on the website.

"The take-home message," concludes Mrs Taylor, "is that pain is a very complex biopsychosocial problem and it needs to be managed by a multi-disciplinary team who have a good, sound, evidence-based knowledge."



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Women in pain

GENDER The overwhelming majority of pain patients are women, though the precise reason why remains elusive. Researchers are trying to understand the gender pain gap, but answers only seem to pose more questions. **Lorrie Kelly** reports

Not only do women suffer from more pain conditions, but they also feel pain more intensely, have lower pain thresholds and process pain differently than men.

Beverly Collett, a consultant in pain management and anaesthesia, University Hospitals of Leicester, believes the gender divide in pain management will be a complex puzzle to solve.

"I don't think anyone really knows why men and women are so different," says Dr Collett. "Scientific research has shown that when you subject women to a pain stimulus – cold water, heat, an electrical stimulus – they feel pain at a lower stimulus than men."

One explanation has been hormones, such as testosterone, which may have protective qualities against pain. For example, men who suffer from angina experience symptom relief when given testosterone, and the incidence of childhood migraine in girls and boys is about the same until the onset of puberty when the number of female migraine sufferers becomes twice that of males.

In much the same way, studies have shown that circulating oestrogen appears to significantly affect cognitive function and the way

that pain is perceived by women. Oestrogen also affects serotonin which deals with pain processing and modulation. This discovery has led to the use of SSRI (selective serotonin reuptake inhibitor) antidepressants to aid in the treatment of conditions such as PMT (premenstrual tension) and fibromyalgia.

"The gender variance may also be due to differences in activation of neural pathways in the brain," says Dr Collett. "We know from the newer functional magnetic resonance imaging (fMRI) scans that women tend to activate a part of their brain called the limbic system. This is the emotional centre of the brain; so this is where we feel fear, anxiety and where the sleep cycle of our brain is controlled. If you compare fMRI scanning of men and women, women do appear to activate the limbic system more than men."

Research on the effects of analgesics in women is critical to pain-management strategies. The limited data available shows that men and women do not react in the same way to medications used to treat pain. For example, painkillers known as kappa agonists have been shown to be good analgesics in women, whereas they have little or

no effect in men. Also, established pain medications, like morphine, may be less effective in women and have unacceptable side effects.

Social attitudes to pain simply do not help the cause. Since chronic pain will not kill you, most people do not take it seriously enough, according to Dr Collett. "When we see people in clinic, a lot of them say they haven't been believed. They talked to the doctor about their pain and they had an MRI scan or a laparoscopy; you couldn't see a structural reason for the pain and therefore patients feel disbelieved."

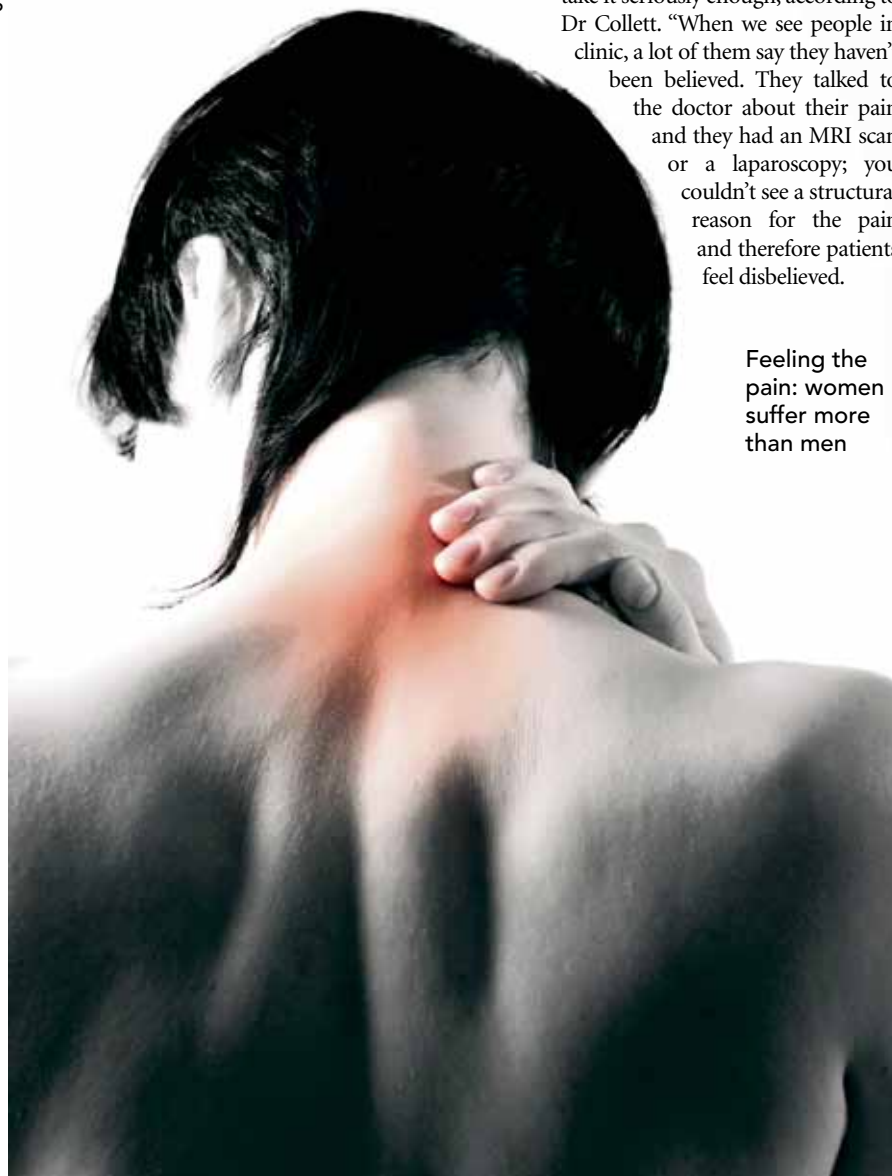
Feeling the pain: women suffer more than men

"I think disbelief occurs more in women because some of the conditions that they have are due to dysfunctions in the nervous system," says Dr Collett. "If you think about fibromyalgia or IBS (irritable bowel syndrome), for example, there isn't a structural reason for the pain. Usually if you have a pain, like sciatica, you go to an orthopaedic surgeon; they'll do an MRI scan and look for a disc prolapse."

"But many of the patients we see, both men and women, don't have a structural reason for the pain," she explains. "We now understand that the pain may be due to abnormal sensitivity of the nervous system or activation in the nerve pathways to the brain that normally don't fire in people without pain. So the pain is not due to a structural reason but is due to an abnormal firing or an abnormal network set-up in the nervous system and you can call this dysfunctional pain."

However, lack of an obvious structural reason for pain should not deter patients from seeking medical intervention. "There have been some recent interesting studies showing that fMRI-scanned brains of people who had a history of chronic pain look very different to brains of people without pain," says Dr Collett. "The grey matter in the brain started to disintegrate and degenerate in chronic pain sufferers. I think this is particularly important because it does show that the persistence of pain does cause central-nervous-system changes and brain degeneration. You obviously can't see that; you can only see that on functional MRI scanning. It means that we must take pain much more seriously than we do at the present time."

Even more revealing, there is some evidence to suggest that treating and effectively managing pain might reverse any cognitive damage that was caused by a chronic-pain condition.



SPONSORED FEATURE

Getting back on your feet...

Pain relief without medication or surgery is no longer an impossible dream for sufferers of knee osteoarthritis. Reality may be in the shape of a scientifically-proven brace which can reduce pain and enable an active life.

Mind-numbing painkillers that diminish quality of life and come with possible, wide-ranging side effects are not a long-term solution to pain for many. Surgery is invasive and does not come without risks and possible complications.

It may be that medication cannot ease the pain and surgery has failed to solve the problem. But do not despair, an innovative knee brace may be the answer.

It certainly was for keen sports-woman Malin Asplund who suffered mounting pain following knee surgery and, in her late-20s, was diagnosed with osteoarthritis.

"Just over a year ago I visited a knee specialist who showed me a



The Unloader Brace enables an active life despite knee osteoarthritis

new device, a brace, which I then decided to try out," she says. "The brace helped me a great deal and I did not suffer from any adverse side effects, unlike with the painkillers."

The Össur Unloader One brace is designed to reduce pain caused by osteoarthritis by minimising bone-on-bone contact within the knee joint. The brace's thigh and calf shells, along with uniquely designed straps, create a leverage system that literally unloads the pressure from the affected area, creating more space between the bones.

The brace means that Malin can enjoy long daily walks with her dogs again. On a recent holiday, she was even confident enough to attempt hiking in the mountains.

A new study from the US Steadman Philippon Research Foundation has evidenced the effectiveness of knee braces to reduce pain and improve physical function.

The study, "Use of an Unloader Brace for Medial or Lateral Compartment Osteoarthritis of the Knee", was presented in March at the 2010 American Academy of Orthopaedic

Surgeons Annual Meeting. It showed that patients who used bracing reported significant improvement of their symptoms, without resorting to surgery. The conclusions are backed by other research, including an ongoing study at the Department of Orthopaedics of Iceland's Akureyri Hospital.

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New tools 'to boldly go' into the future

TECHNOLOGY Pain management looks set for a voyage of discovery as technological advances are increasingly offering release from often debilitating suffering. **Peter Archer** looks at some of the latest developments

Treating pain with beams of light may seem like a flight of fancy or science fiction better suited to the sick bay of Star Trek than reputable hospitals and clinics.

But a technological innovation that uses lasers to combat chronic and acute pain is gaining credibility, not to mention widening popularity.

Low level laser therapy (LLLT) pain relief sounds like something from the Starship Enterprise. In fact, a leading exponent uses Star Trek as a sales pitch.

"Our laser treatment is not as instant as the lasers on TV, but the principles are the same: we make

patients better, quicker and cheaper with light," says James Carroll, chief executive of THOR Photomedicine.

And LLLT, a phenomenon first recognised in Hungary in 1967, is catching on in the UK, notably at centres in London and Manchester. It is used more widely in the United States and China.

Scientific evidence of its efficacy in pain management is mounting. Last December the general medical journal, *The Lancet*, reported a study showing that LLLT reduces pain immediately after treatment in acute neck pain and up to 22 weeks after completion of treatment in patients with chronic neck pain.

Similar scientific studies have concluded LLLT seems to be an effective method of reducing pain and functional disability in sufferers of acute or chronic low back pain. Other painful conditions, including cervical osteoarthritis and chronic Achilles tendinopathy, were also seen to benefit.

COLD LASERS

Dr Roberta Chow, who is working with the University of Sydney's Brain and Mind Research Institute, has been using LLLT, also known as cold lasers, for pain management and wound healing since 1988.

"The laser blocks pain," she says. "I do say this is my magic wand sometimes. I can make your pain much more bearable and if you're very lucky – may be 10 per cent of patients – it might go away completely. This is the beginning of a new branch of medicine."

So LLLT is changing people's lives for the better without surgery, nee-

dles or analgesics. But there are other, albeit more invasive, new technologies which promise to break through in the fight against pain.

Despite the challenges, implantable technology for pain management has increased in popularity. Targets for implantable neurostimulators include the spinal cord, peripheral nerves or the brain, while implantable pumps deliver analgesic drugs to spinal sites.

Simply put, so-called neuromodulatory technologies involve drug delivery to – or electrical stimulation of – neural pathways.

Such therapies are invasive and, like all surgery, risk complications. Surgical and aftercare clinicians and health professionals require a high level of expertise. However, the take-up has continued to rise, as does evidence for cost-effectiveness from the resulting reduced spending on conventional medical management.

To optimise outcomes, patients being considered for implants of this kind should undergo comprehensive biopsychosocial assessment, be fully informed of the risks and have realistic expectations.

Spinal pumps and spinal cord stimulators have revolutionised the treatment of severe, chronic back pain, and brought relief to sufferers who no longer have to endure extreme discomfort and the side effects of large daily doses of morphine.

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SPONSORED FEATURE

Spinal cord stimulation therapy for chronic pain sufferers who cannot get relief from other treatments

WHAT IS SPINAL CORD STIMULATION THERAPY?

Spinal Cord Stimulation (SCS) Therapy is an established treatment option for adults who continue to experience chronic pain following an injury or illness to the nerves, despite appropriate conventional medical management.

SCS Therapy consists of a small implantable device or stimulator, similar in size to a stopwatch, and two implantable wires that deliver electrical pulses to nerves in the spinal cord to treat pain.

The device is usually implanted in the abdomen or upper buttocks, and the wires are inserted under the skin and then connected to the stimulator. The surgical procedure is simple, takes around an hour and is carried out under local anaesthetic either by an anaesthetist or surgeon.

WHAT ARE THE RESULTS?

The treatment aim is to replace the feeling of pain with a smooth tingling sensation called paresthesia. While it does not cure the pain, it can provide effective relief for pain sufferers in addition to medications or other treatments. Most patients report that their pain is significantly reduced com-



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pared to before and patient satisfaction with treatment is reported to be more than 70 per cent. For some patients, it may be possible to return to work after years of suffering, as well as offer the possibility to reduce the dosage or number of pain medications.

The treatment has further advantages in that it is known to be safe, it does not interact with other treatments or give concern regarding potential drug overdose. Furthermore, the pain relief is maintained over time, is well tolerated and offers the patient the chance to control the stimulation to manage their pain via a remote control.

Penny Reeves, a pain patient, explains: "In March 2009 I had a spinal cord stimulator implanted after three years of terrible pain caused by nerve damage. I was 39 at the time, and as a mum of two girls. I wanted to start living again, be in control of the pain and not take the drugs I had to take. The procedure has changed my life. I am in control, working

full time, I have lost two-and-a-half stone and have more energy to enjoy my girls' childhood."

SPINAL CORD STIMULATION IN THE UK

Clinical studies have shown that SCS Therapy, in addition to conventional management, is cost-effective. It was approved by the National Institute for Clinical Excellence (NICE) in October 2008.

Dr Simon Thomson, consultant anaesthetist and leading pain specialist at Basildon University Hospital, Essex, talks about SCS Therapy for chronic neuropathic pain: "Each year in the UK, around 1,000 patients receive spinal cord stimulation therapy thanks to the National Health Service (NHS). Despite this number, however, it is estimated that this represents only 3 per cent of patients who could potentially benefit from it."

TODAY'S DEVICE TECHNOLOGY

Through constant technological innovation, today's spinal cord stimulators afford additional benefits and options to both physicians and patients. One such device, the Precision Plus™ is rechargeable, allowing patients to recharge their stim-

ulator as often as required while continuing normal daily activities.

The Precision Plus's rechargeable technology is meant to avoid the need for repeat surgeries, due to battery depletion, that are associated with conventional battery technology. The Precision Plus system can last up to 25 years depending on the patient's settings. Such technology allows the physician to treat the patient's pain optimally by maximising stimulation, particularly for patients who have multiple sites of pain.

Furthermore, rechargeability can signify less potential surgical procedure and equipment complications, and can create significant cost savings over time for the NHS.

Spinal cord stimulation therapy is a safe and highly effective treatment option for those patients in need who have suffered years of chronic pain.

The law restricts these devices to sale by or on the order of a physician. Indications, contraindications, warnings and instructions for use can be found in the product labeling supplied with each device.

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Despite the widespread use of TENS machines, their analgesic effectiveness still remains uncertain

cord stimulator by holding a magnetic pulsing device over the skin on top of the implanted generator disk.

PNT (percutaneous neuromodulation therapy) is a non-surgical treatment which uses very thin needle electrodes that are inserted directly into the deep tissues in the area of the spine which is causing pain. The specific placement of the electrodes and delivery of electrical stimulation may help calm hypersensitivity of the nerves. It is a low-risk procedure that can help treat pain in its early stages, increase the patient's mobility, improve quality of sleep and reduce the need for pain medications.

BACK PAIN AND SCIATICA

IDET (intradiscal electrothermoplasty) is another relatively minor procedure which can ease back pain and sciatica. The treatment involves the insertion of a hollow needle into the painful spinal disc with the guidance of an X-ray machine. A wire is threaded down through the needle and into the disc until it lies along the inner wall of the disc's shell. The wire is then heated which destroys small nerve fibres that had invaded the degenerating disc.

Radiofrequency discal nucleoplasty is a similar treatment in which, instead of a heating wire being passed through a hollow needle to the affected disc, a special radiofrequency probe is inserted into the disc. The probe generates a highly focused plasma field with enough energy to break up the molecular bonds of the gel in the central nucleus of the disc, essentially vaporising some of the nucleus. The result is that up to 20 per cent of the nucleus is removed which decompresses the disc and reduces painful pressure.

Not all technologies used to fight pain are confined to the hospital or treatment room. There are a number of pain-relieving devices which are available commercially and on sale to the general public to take home.

Products include TENS (transcutaneous electrical nerve stimulation)

machines which produce small, variable electrical pulses to the body via electrodes placed on the skin. TENS machines are thought to affect the way pain signals are sent to the brain via nerves and the spinal cord. If the pain signals can be blocked, then the brain will receive fewer signals from the source of the pain.

When the machine is set on a high pulse rate, it is thought to cause the "pain gate" to close. According to pain gate theory, certain non-pain-carrying nerves, when stimulated by TENS, for example, can block pain signals to the brain.

But when the machine is set on a low pulse rate, TENS stimulates the body to make its own pain-easing chemicals called endorphins. These act a bit like morphine to block pain signals.

However, according to Oxford University's Dr Kelechi Nnoaham and Dr Jharna Kumbang: "Despite the widespread use of TENS machines, the analgesic effectiveness of TENS still remains uncertain. This has mainly been due to inadequate methodology and reporting in earlier studies, but more recent studies of TENS for chronic pain fail to offer necessary improvements in methodological rigour to define the place of TENS in chronic pain management with any certitude."

Common uses include treatment of acute and chronic pain, back and cervical muscular and disc syndromes, and arthritis. There are virtually no side effects when using a TENS machine, but people suffering from epilepsy and some types of heart disease, and those who have a pacemaker fitted, must not use TENS.

A magic wand: lasers can cut pain without surgery or side effects

Medicines taken orally are diffused throughout the body which means that a great deal of medication must be ingested to get the appropriate quantities to the place it is needed most to ease pain.

But doctors now have the ability to get medicine to exactly where it is required. By surgically implanting a pump under the skin of a person's abdomen and running a catheter to the precise location in the spine where the pain is, they can pump medication directly into the spinal fluid.

MOBILE AND ACTIVE

The pump is refilled every one to three months by inserting a needle through the patient's skin and into a diaphragm on the pump's surface. Several medications, including a combination of drugs, can be administered in this way. Because the whole system is under the skin, the risk of

infection is minimised, and the patient can be fully mobile and active.

For reasons that are not well understood, electrical pulses on the surface of the spinal cord can dramatically reduce pain. Electrical spinal cord stimulators can, therefore, be used to aid the relief of chronic pain. The stimulators are implanted under the skin of the chest, upper buttock or abdomen. Electrical signals are passed through the tip of a connected catheter located at the site of the pain. This produces a tingling over the painful area of the spinal cord which eases the pain. The patient is able to control the spinal

Low level laser therapy is the beginning of a new branch of medicine



Of mice and men

It was 43 years ago, behind the Iron Curtain in Budapest, when a laboratory experiment shone the first light on what was to become a major new treatment for pain sufferers.

A few years after the first working laser was invented, Endre Mester at Semmelweis University in Hungary's capital conducted an experiment to test if laser radiation might cause cancer in mice.

He shaved the hair off their backs, divided them into two groups and irradiated one group with a low-powered ruby laser. The treatment group did not get cancer and, to his surprise, the hair grew back more quickly than the untreated group. He called this "laser biostimulation".

The discovery was to lead to the development of cold lasers and low level laser therapy (LLLT) which today represents a release from both acute and chronic pain for people suffering any of a range of conditions.

"Unlike other medical laser procedures, LLLT is not an ablative or thermal mechanism, but rather a photochemical effect comparable to photosynthesis in plants whereby the light is absorbed and exerts a chemical change," says James Carroll, of THOR Photomedicine.

Laser Therapy (LLLT) relief for chronic pain

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THE FUTURE OF MEDICINE



Medication to ease the misery of pain

PHARMACEUTICALS Millions of people use medication every day to control pain. The global market in painkillers is valued at an estimated £32.5 billion a year. Doctors already have a vast armoury of drugs but new and improved reinforcements are on the way, writes **Roger Dobson**

Bespoke treatment packages can now be custom made for sufferers of both chronic and acute pain.

This so-called multimodal analgesia is a cornerstone of a new approach to pain management that means patients may be prescribed a number of drugs which work together to provide pain relief while minimising side effects. Combinations can include not only different analgesics, but antidepressants and epilepsy drugs.

"Designing the therapy package in pain is very important," says Professor Richard Langford, president of the British Pain Society (BPS).

"If someone sees their GP with an infection, they get an antibiotic which kills that infection. With

pain, it is much more complicated because different people experience pain in very different ways.

"It is not a scatter-gun approach. Using more than one type of analgesic can often reduce the potential risk of side effects and ensure that pain is targeted from different angles. Combining different medications can also make the individual medications more effective.

"The goal in treating chronic, long-term pain is to provide constant pain relief – to avoid peaks of pain breaking through – and we have medications that are highly effective in most cases. We need new approaches, and some very exciting developments are underway, both in terms of new drugs and in the



© Stephen Giardina / Alamy

“The goal in treating pain is to provide constant relief so there are no peaks and troughs, and we have medications that are highly effective in most cases

way we deliver medication in acute and chronic pain.”

PAIN LADDER

Drug treatment for pain is tailored to the severity of symptoms. The World Health Organisation Analgesic Ladder was introduced to improve pain control in patients with cancer pain, but it can also help in the management of acute and chronic pain.

The ladder centres on the core analgesics, some of which have been used for decades. Drugs like paracetamol

or non-steroidal anti-inflammatory drugs (NSAIDs) are the first line of defence against many forms of pain. The next rung on the ladder involves weak opioid drugs, such as codeine and tramadol, which are taken with other drugs to control and minimise side effects. The next level is the prescription of strong opioid drugs, like morphine, which remain the most effective therapeutic drug options for severe pain.

Paracetamol is thought to work by blocking the way in which pain signals are processed in the brain. All NSAIDs, like aspirin and ibuprofen, work by blocking the compound cyclo-oxygenase which is involved in the release of prostaglandins that cause inflammation, swelling and pain.

The problem is that there are two different forms of cyclo-oxygenase, COX-1 and COX-2. The latter, COX-2, produces prostaglandins that cause inflammation and COX-1 triggers the release of prostaglandins needed for keeping the lining of the stomach and intestines healthy. Older NSAIDs block both which is why some people have side effects like gastric bleeding. The newer COX-2 inhibitor drugs act only on COX-2, but some research has suggested that they may carry an increased risk of heart attacks and stroke.

Weak opioids, like codeine, which account for nearly 10 per cent of the market, work by changing the way the body senses pain.

Strong opioid drugs, like morphine, which have a wide range of

SPONSORED FEATURE

Need for improvement in the management of severe chronic pain

Although chronic pain affects around 20 per cent of adults in Europe and the United States, there is substantial evidence that this debilitating condition is often inadequately treated. Many patients are unidentified or do not receive appropriate treatment. But even with treatment patients often find themselves in a vicious circle of insufficient pain relief and debilitating side effects associated with their medication. This situation contributes to low compliance and high rates of treatment discontinuation among chronic pain patients. But gastrointestinal and CNS side effects of the drugs used, for example, are only part of the problem.

CHANGE PAIN® is an initiative which aims to enhance the understanding of the needs of patients with severe chronic pain and to develop solutions to improve pain management. It was initiated by the German company Grünenthal – located in Aachen and whose expertise lies in medicines used to management pain – and is endorsed by the European Federation of

IASP® Chapters (EFIC®). CHANGE PAIN® involves pain experts from across Europe; the International Advisory Board is chaired by Professor Giustino Varrassi, president of the EFIC, and Dr Gerhard HH Müller-Schwefe, MD, president of the German Pain Association (DGS).

The pain experts supporting the CHANGE PAIN® initiative have identified different fields where there is need for improvement. In a consensus publication¹ they specifically call for a change in the following aspects of current practice:

• Assessment of pain and its impact, for example through better communication

It is important that physicians and patients communicate efficiently. This is the only way to assess the level of pain and its consequences for the quality of life of the patient. However, in many cases this communication is too limited to guide optimal treatment. It is crucial to ask, not only how intense the pain is, but also where it would be tolerable for the patient. Thus physicians and patients can establish realistic individual treatment goals;



“The unmet needs of patients with severe chronic pain are evident; too many patients suffer from pain too long and too few patients are satisfactorily treated. A change in severe chronic pain management is therefore clearly needed

Professor Giustino Varrassi, president of the European Federation of IASP® Chapters (EFIC®) and chairman of the International CHANGE PAIN® Advisory Board

• Education of healthcare professionals in pain management

Currently the education of physicians, who do not specialise in pain management, does not cover pain treatment sufficiently. Current pain management focuses mainly on symptom control. A better understanding of the pain pathways and the mechanisms of pain will enable physicians to treat their pain patients more rationally;

• Understanding of the underlying mechanisms in chronic pain and the relevant pathophysiological principles

Severe chronic pain is multi-factorial in nature, but this fact may not be fully appreciated within the medical community. Treatment seems to be driven mainly by tradition and personal experience. However, the underlying pathophysiology can be different from patient to patient. When a neuropathic component – nerve pain resulting from damaged or compressed nerves – is present, the pain is often more severe and more difficult to treat. Pain control in these patients is often insufficient.

PERSPECTIVE

CHANGE PAIN® seeks to achieve these aims by providing better education for healthcare professionals on mechanisms, prevention and pharmacological treatment of severe chronic pain. Three eCME (internet Continuing Medical Education) modules have been accredited in Europe and are accessible on the CHANGE PAIN® website. More modules will follow. The initiative thus offers a useful service to physicians and therefore contributes to the improvement of today's pain management.

Further research supported by the CHANGE PAIN® group, to generate more insights on patients' medical needs and best practice in the management of chronic pain, is underway. Findings will be communicated in future scientific publications and at congresses.

For more information please visit www.change-pain.com

This article was sponsored by Grünenthal GmbH

¹ Varrassi G et al.: Commentary: Pharmacological treatment of chronic pain – the need for CHANGE. *Current Medical Research & Opinion*. May 2010, Vol. 26, No. 5, 1231-1245

uses, including pain related to heart attack, post operative pain, severe back pain and kidney stones, work by blocking the release of brain chemicals and transmission of pain signals to the brain.

Although these drugs make up the mainstay of the analgesic armoury, many other drugs are increasingly being used. Some of the more effective and commonly used medications for chronic pain are drugs that were developed to control other conditions.

Anticonvulsants used in epilepsy are now widely used. Some of these, like gabapentin, work on the brain chemical, gamma aminobutyric acid (GABA), to have a relaxing, anti-anxiety and anti-convulsive effect. Research has also shown that it lowers pain levels, but just how it works in pain relief is not clear. They are used for shingles and other nerve pain conditions.

Antidepressants are important in the treatment of many chronic-pain conditions, even when depression is not a factor. Tricyclics are the most widely used and one theory is that they may increase neurotransmitters in the spinal cord that reduce pain signals. Antidepressants, which act on the brain chemicals serotonin and norepinephrine, are also used to increase the effectiveness of opioids.

VIAGRA AND CANNABIS

Local anaesthetic drugs, or nerve blocks, which work by numbing specific nerve fibres, much as dentists do, are highly effective in both acute and chronic pain.

Many other drugs, including Viagra, antibiotics, nicotine, Botox, anticonvulsants, cannabis, caffeine and chilli peppers, have also been used for different types of pain.

Antibiotics may seem an unlikely way to treat low back pain, but researchers have suggested that as

Some very exciting developments are underway, both in terms of new drugs and in the way we deliver medication

many as one in five cases may be due to a bacterial infection of a disc. "What we think happens is that the patient has a herniated disc, they brush their teeth, bacteria gets into the bloodstream, travels to the damaged disc, where it thrives, and the body reacts to the infection, and the result is low back pain," says Dr Hanne Albert, of the University of Southern Denmark

To meet unmet needs, researchers and drug companies are focusing on two key areas: reformulating existing drugs and changing the way they are delivered; and developing entirely new drugs.

Changing the way drugs are delivered is a major growth area. When drugs are delivered orally in pill form, much of the medication ends up in parts of the body where it is not needed. It can also take time to become effective and there is often a spike of activity which means pain returns as soon as the effects wear off.

Other forms of delivery are much more efficient. Nasal or mouth sprays, for example, mean that the drug gets into the bloodstream and becomes effective much more quickly. Controlled release drugs ensure that adequate amounts of a painkiller are slowly released over time so there are no peaks and troughs in pain relief, and the user does not wake up in the middle of the night in pain.

Widely used skin patches ensure that medications, like lidocaine and fentanyl, get to the place where they are needed as quickly as possible with fewer systemic side effects.

Recent research into pain has also helped to identify many new potential drug targets for analgesia.

OPIOID AND NON-OPIOID

Tapentadol is a new drug that has both opioid and non-opioid activity. It works as opioid agonist and norepinephrine reuptake inhibitor, and has many potential uses in acute and chronic pain. Essentially, it works by changing the way the body responds to pain.

Research has also shown that nerve growth factor (NGF) plays a key role in the development of both acute and chronic pain. High

levels of NGF have been found in wounds, for example.

Blocking NGF is one of the key new approaches in drug development for pain. Several drugs based on antibodies to NGF are in trials, including tanezumab. If approved, they will be the first biologics for treating chronic pain.

Another target is the glial cells. These brain cells are now known to be important players in the creation and maintenance of pain. It is thought that they increase nerve pain by interfering with the neurones that transmit pain signals. New drugs in development, which act on these cells, not only seem to reduce pain when used on their own, but also reduce opioid side effects, like addiction, when used with them.

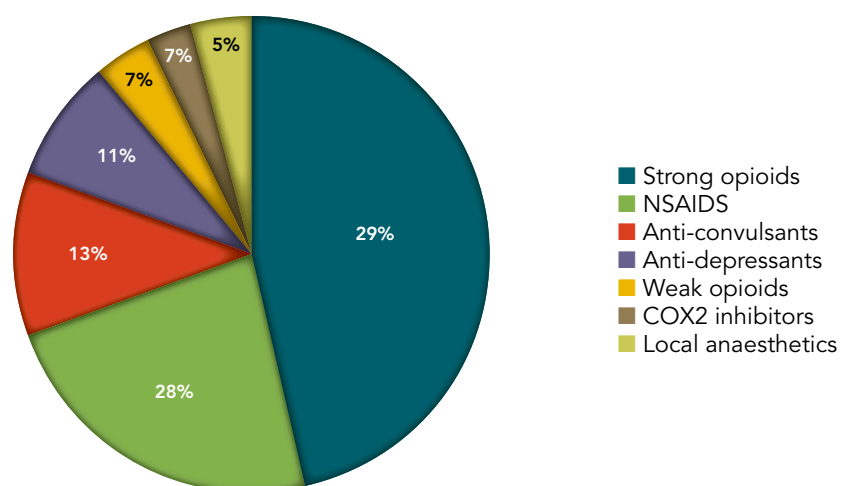
Different genetic responses to pain are also a target for researchers looking for new way of tackling pain, as Professor David Blake, of Bath University and the Royal National Hospital for Rheumatic Diseases, points out.

"Genetics are an interesting area in pain. We know from studies of genetic defects in children, that there are those who do not feel pain and those who are indifferent to it," he says.

"There is an important difference between not feeling it and being indifferent to it. Pain is a warning signal and children who do not feel it do not do well. A bit of fluff in the eye that goes undetected could, for example, lead to blindness. Genetic changes, where people are indifferent to pain, are a more useful area of future treatments. Indifference is pretty much the mode of action of morphine and that is the best drug we have at present."

Big pill to swallow: market share of major drug classes

US figures show which drugs dominated market sales in 2009



Source: Irena Melnikova, Nature Reviews Drug Discovery 9, 2010

SPONSORED FEATURE

NeuroStimulator PENStherapy®: innovative technology of interest

Algotec Research and Development Limited provide innovative electro-analgesic solutions to improve the quality of care for patients suffering from chronic neuropathic pain

Neuropathic pain has been proven to impair patients' overall health-related quality of life, including important aspects of physical and emotional functioning such as mobility and ability to work. It also generates substantial costs to society. It is estimated that around 7 per cent of the general population in the UK have symptoms of chronic neuropathic pain; half of which require medication and support.

Neuropathic pain is pain in which the nerve fibers have become damaged or dysfunctional. As a result, they send incorrect signals that are perceived as pain.

Conventional analgesics, such as opioids and non-steroidal anti-

inflammatory drugs, are prescribed frequently for patients with neuropathic pain, despite potential risks and limited efficacy. Inappropriate or delayed treatment is a serious concern because it may worsen the patient's condition.

The NeuroStimulator PENS therapy® is one of Algotec's solutions for the cost-effective and less invasive management of patients suffering from neuropathic pain. PENS therapy alters the activity of peripheral nerves in order to control pain. It can be used as a means of identifying patients who might benefit from an implanted neurostimulation device. Such preliminary assessments could reduce the incidence of patients who would fail to benefit from a lengthy and costly surgical procedure, as well as substantially reducing associated surgical risks.

PENS therapy is a reversible, non-destructive and painless procedure. It is indicated for chronic peripheral neuropathic pain, including low back pain, occipital and supra-orbital headaches, post-surgical pain and post-hernia repair pain.

"Cancer patients undergoing treatment require frequent MRI scans for their follow-up and this limits the use of implantable neurostimulators for

controlling their pain. PENS therapy gives us the option to do peripheral nerve / field stimulation for alleviating focal neuropathic pain, a common side effect following cancer surgery and radiotherapy. PENS therapy is minimally invasive, considerably less expensive and carries very little risk. PENS therapy is also a very useful non-pharmacological adjuvant to neuropathic pain medications and opioids. PENS is tolerated well by patients as a day-case procedure and has the potential to significantly reduce pain leading to a reduction in systemic analgesics." Dr Arun Bhaskar, consultant in Pain Medicine and Anaesthesia, The Christie NHS Foundation Trust, Manchester.

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A minimally invasive neuromodulatory therapy

Living with pain... and winning

THERAPIES A life of pain can be hard to bear and impossible to imagine. How to adapt and come to terms with physical suffering can prove equally challenging, but there are beacons of hope and triumph. Lilian Anekwe reports

People can experience pain in countless ways but a common theme is the profound change it brings to their lives.

Paul Brighthouse injured his lower back working as a fireman and went from a fit man, who enjoyed the physical nature of his work, to being medically pensioned off at the age of 30.

"I had to rethink my whole career and it was frightening," he says. "For the first five or six years I struggled. I had gone from being active to having to be careful about everything I did."

Chronic pain creates daily physical challenges which Paul says prevented him from doing even commonplace activities.

"I remember one day I dropped a tea towel and tried to catch it, and my back just went. It sounds like a little thing, but these things affect me greatly."

Paul attends the Expert Patient Programme, a social enterprise offering courses teaching people to deal with the problems that chronic pain causes.

"It encourages people to share experiences and teaches cognitive

behavioural therapy – techniques to break the pain cycle by helping you recognise when things are in danger of spiralling out of control," he says.

Through her collaborations with doctors at St. Thomas' Hospital and University College Hospital London, Deborah Padfield, an artist who lives with chronic pain, encourages patients to create a "visual language for pain" by representing it through art. The images have been published in a book entitled *Perceptions of Pain*.

"What a lot of people say is it puts them in control of their condition rather than the other way around," she says. "I believe it's important to challenge the sense that pain controls you and there's nothing you can do about it."

Doctors are often keen to attach a label to pain, Deborah says. But visualising their pain can help validate peoples' experience of it.

"Pain is a personal experience that people find hard to put into words. You can't see pain on a scan or X-ray. This is validating people's experience by making it visible and

that's often a trigger to start a dialogue about it," she says.

Communication is crucial in avoiding the isolation that Paul says contributed to a diagnosis of clinical depression.

"I felt very despondent and had thoughts of self-harm," he says. "Having a diagnosis helped me become more open with others about how I am feeling. I still have bad days but mentally I'm much tougher. To look at me you would not know I have back pain."

James Drennan broke his neck in an accident ten years ago and is paralysed from the neck down.

"I had no pain for the first five years after my injury but now I'm on drugs, including morphine, and it's a battle every day," he says. "It affects my relationships because I can get grumpy or angry and snap at people. It's hard for partners too – they can see you suffering but they can't empathise."

Living with chronic pain can have a devastating effect on families. At 27, Donna-Marie was unusually young when, three years ago, she was diagnosed with polycystic kidney disease (PKD), a condition where cysts develop in the kidneys. It means she attends regular hospital appointments which disrupts her work and home life.

"I'm thankful that I have an understanding boss," she says. "I did raise my illness when I was offered the job. I know I should have men-

tioned it during the interview, but it's not who I am, it's just something I have to deal with."

Donna-Marie can still point to several positives from her experience. "I was rebellious when I was younger and had a strained relationship with my mother," she says. "But it has made us a lot closer. It's brought the family much closer together."

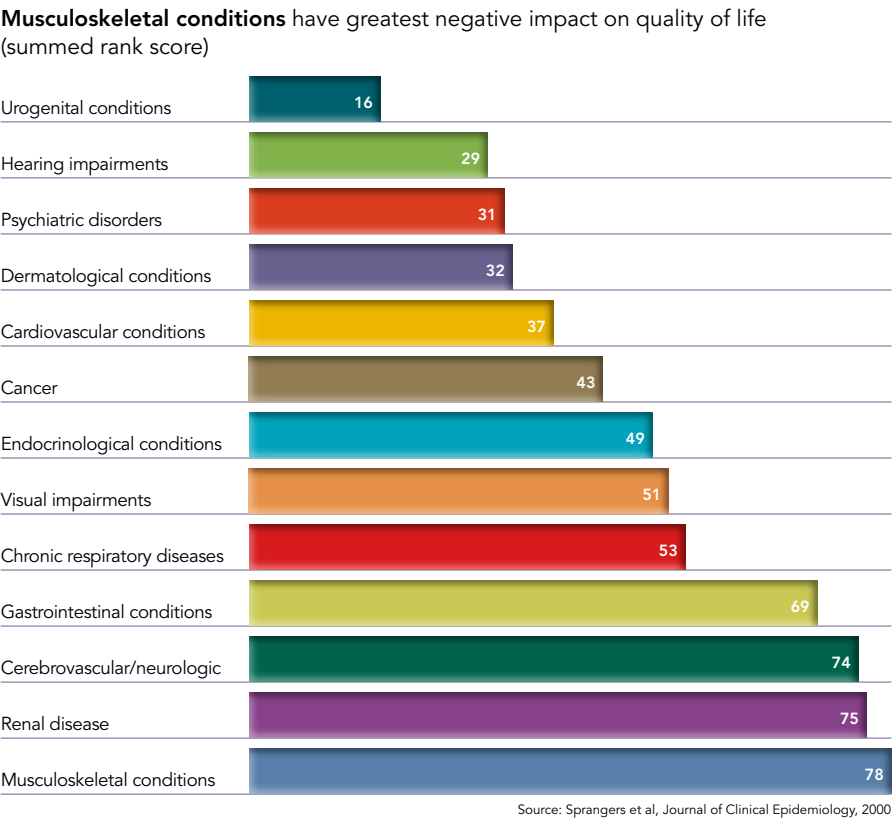
James' life has also changed for the better. "I was quite a naughty lad before my accident, but now that I am not able to pursue that lifestyle any more, I'm in a much better place than I would have been if I had not had my injury," he says.

"It's taken me down a different path and changed me mentally."

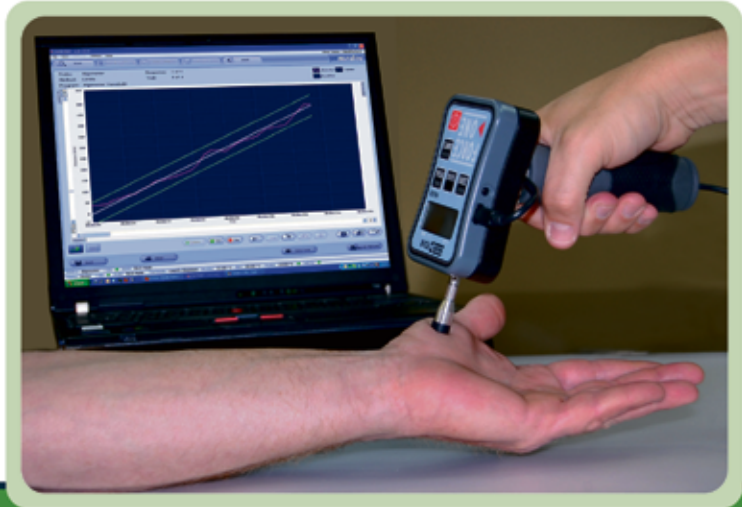
He now works for Aspire, a charity that provides support for people with spinal-cord injuries, as an independent living adviser in the same Wiltshire hospital in Salisbury where he was a patient. His work offers him an important opportunity to encourage others living with chronic pain.

"I'm independent, I work, drive, I go to the gym and have an active social life. It's important for me to show people that, if I can do it, so can they, and their pain need not prevent them."

Impact of chronic conditions



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...And in the end, no more pain?

PALLIATIVE CARE For many, the end of life is a taboo subject. Mention palliative care and most of us immediately think 'hospice'. **Lorrie Kelly** explores the current state of care for the dying and how it might be improved



Death is inevitable and yet we live in a society which, for the most part, prefers not to think about dying.

Paradoxically, charity donations to UK hospices and palliative-care units can exceed £300 million a year.

For Michael Bennett, Professor of Palliative Medicine at Lancaster University's International Observatory on End of Life Care and chairman of the British Pain Society's Cancer Pain Committee, concern for the dying is a day-to-day occupation.

"Palliative care teams are better at initiating discussions with patients about planning ahead and whether or not to continue treatment. I think that is what distinguishes us," he says. "We offer good basic clinical care, medical and nursing assessments. We ask the patient about their mood, distress and how their families or carers are coping."

But how do we make our death or the death of a loved-one as comfortable as possible and in a place of our own choosing? In essence, that is what palliative care is meant to answer.

According to Professor Bennett, one of the greatest benefits of palliative care is its ability to empower patients. They are more likely to have discussions around resuscitation or withdrawing from chemotherapy treatments, for example. Palliative care gives patients the support and information they need to make difficult decisions.

"The simple act of helping people to prepare for death, helping them choose and plan ahead, actually has a beneficial effect," he says.

Modern hospice care has changed little in ideology since its creation in the 1960s. Jon Andrewes, chief executive of St Margaret's Hospice in Somerset, believes the tried-and-tested philosophy remains true. St Margaret's approach to palliative care

is from the perspective that dying is a natural part of living, he says.

"The hospice formula of care is not just medical," says Mr Andrewes. "It also includes social care as well as warmth and understanding, balanced with honesty. In palliative care we work from the standpoint that someone has a life-limiting illness and the curing process has ended."

"Making every day count is really at the centre of hospice care," he says. "We find that the approach brings patients a sense of wellbeing through knowing where they are and what is happening. From this place, patients achieve a better quality of life."

DIE AT HOME

According to the National Council for Palliative Care (NCPC), 56 per cent of people in England would choose to die at home but only 20 per cent actually achieve this. In reality, more than half of us die in hospital, a statistic that specialists in palliative medicine, like those at St Margaret's Hospice, hope to reduce.

Though St Margaret's currently maintains two residential hospice care units, the vast majority of their patients – more than 2000 – live in the community. Mr Andrewes says it is their goal to be "a hospice without walls", able to provide exactly the same care in any location. For specific populations, such as those who live alone and people with dementia, remaining in familiar surroundings gives them a sense of peace and comfort that a traditional hospice simply cannot provide. St Margaret's, like many others, cannot currently accommodate this ideal due to lack of resources, though they hope to provide this much-needed option in the future.

Some palliative care clinicians feel constrained by hospice methods and

had hoped to see more evolution within the field of palliative medicine. Sam Ahmedzai, Professor of Palliative Medicine at the University of Sheffield, became impatient waiting for change within the specialty he helped to create. So he devised a new structure for palliative medicine known as the Sheffield model of supportive care.

Not one to mince words and armed with very strong opinions about the current state of palliative medicine, Professor Ahmedzai believes the spe-

More than half of us die in hospital, yet most want to pass away at home

more and more palliative treatments," he explains. "Supportive care is needs-based as opposed to prognosis-based, that's the big difference. Palliative care and hospice care is based on the prognosis of the patient, that's what triggers the referral. Someone says 'this person's dying.'"

NEW GUIDELINES

Professor Ahmedzai's particular passion is pain management. Recently, the International Association for the Study of Pain (IASP) asked him to head up a task force in charge of creating new guidelines for the treatment of cancer pain. The task force will examine current medications as well as complimentary therapies, such as acupuncture and psychological techniques, to fully assess how each fit into the modern model of pain management.

He is keen to see progress in the area of drug choice, something he

believes has been driven largely by tradition and cost rather than research evidence and effectiveness.

"The whole of cancer pain management, particularly through the palliative care world, is all based on opioids as if these were somehow God's chosen molecules for treating pain," he says. "There are at least 50 potential receptors in the body that are part of the pathway of pain. We have drugs for twelve of those now. To only concentrate on opioids is absolutely missing the point. We should be using the whole range of drugs."

Perhaps the strongest point that Professor Ahmedzai makes is that palliative medicine is not without creatures of habit but, unlike other fields of medicine, it simply cannot afford to indulge this tendency. "The rest of healthcare had to move on. You can't just keep doing the things you've always done because it makes you feel comfortable," he concludes.

The simple act of helping people to prepare for death, helping them choose and plan ahead, actually has a beneficial effect

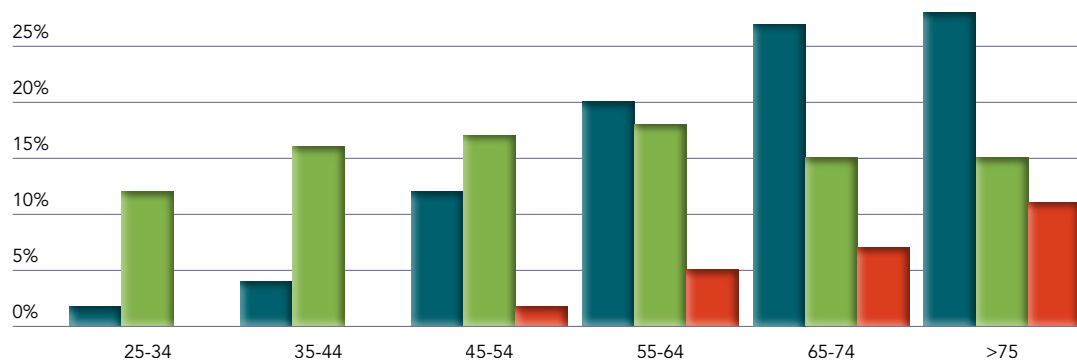
cialty should be regulated and funded by the NHS, and not left in the hands of charitable organisations, though he admits they do an excellent job. Most importantly, he believes palliative care – alleviating pain – should be available to everyone whether they are dying or not.

"With the traditional palliative care model, you start with curative treatment, say for cancer, and as the chances for cure get less and less you do

Age-related painful conditions and co-morbidity

With age comes pain, notably pain from arthritis, although back pain is also prevalent

■ Arthritis ■ Back pain ■ Angina



Source: Elliott et al, Lancet, 1999

Call to honour a dying wish

Everyone with terminal cancer should have round-the-clock access to a community nurse so they can fulfil their wish to die at home.

So says Macmillan Cancer Support which is calling on the Government to redirect funding and ensure cost-effective palliative care.

"Macmillan believes that people should be able to die at home if they wish and that access to a community nurse, whenever they need one, will help these wishes to be met," says the cancer charity's policy analyst Helen Rainbow.

Of the half a million people who pass away in England each year, more than a quarter (27 per cent) die of cancer. At present, most cancer patients die in hospitals (48 per cent) or hospices (18 per cent) and less than a quarter (24 per cent) die at home.

Yet most people would prefer to end their life at home. A recent Macmillan survey showed that 73 per cent would choose to die at home if round-the-clock care was provided. Only 1 per cent would want to die in hospital.

As well as contrasting with the majority of patients' wishes, institutional deaths are far more expensive than home deaths. According to Macmillan, if the trend for fewer home deaths continues, it will prove extremely costly for the NHS.

Public spending watchdog, the National Audit Office, has estimated that the average cost of keeping someone in hospital for their last year of life is £222 a day. In comparison, the average daily cost of home and community care is £28, nearly eight times less.

Macmillan says people's wishes about where they would choose to be at the end of life need to be recorded and accessible to healthcare professionals via integrated IT systems. Nursing skills need to be improved, in part through engaging specialist palliative care nurses, and teams and services need to be reorganised to provide 24/7 cover.



Ambulatory Syringe Pump

Safer by Design – The new standard in ambulatory infusion



- ✓ CME presents the new standard in chronic pain infusion management having engineered the T34 to address the recognised issues with current technology
- ✓ T34 eradicates recognised user programming and calculation errors¹ due to automatic syringe recognition, automatic volume detection & infusion rate calculation
- ✓ Around 25% of NHS Acute & Primary Care Trust's have already recognised the benefits and made the move to the CME T34 making it the proven alternative
- ✓ CME offer unrivalled after-sales support assisting palliative care service providers in the transition to safer, modern infusion devices

1 National Reporting & Learning Service data

2 CEPO8046: Buyer's Guide - Ambulatory Syringe Drivers (December 2008)

- ✓ NHS Centre for Evidence based Purchasing Buyer's Guide² scored T34 highly in many aspects including ease of set up, programming, safety and usability
- ✓ Fully compliant with current infusion safety standards (IEC60601-2-24)
- ✓ Ambulatory infusion pumps facilitate early discharge, out-patient & homecare therapy due to lightweight, compact and robust design
- ✓ Infusion history and event log facilitates clinical audit & service investigations
- ✓ Comprehensive range of alerts & alarms ensure safe operation and quick resolution of interruptions to the patients regime

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Listen > Develop > Deliver

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