

**Conference Report on the Society for Back Pain Research meeting in Dublin  
November 2014  
CPD / Educational Bursary Award  
Matt Daly MACP Member**

Firstly, I would like to thank the MACP PDC committee for awarding me the MACP bursary to attend this conference which was held in Dublin this year.

In feeding back, I hope to present key items from the main speakers and some of the other work that was presented that I personally found useful. I have inserted a few sections in *italics* to give my own voice to the experience at the conference. Obviously these are my own personal comments and they are endorsed by the MACP.

The meeting was the annual conference for The Society for Back Pain Research. The Society was formed in 1971 to promote the study of all clinical and scientific aspects of spinal pain, including the neck, and to encourage research into its causes, treatment and prevention. The Society has 200 members of the Society, from a wide range of disciplines including clinicians such as Orthopaedic Surgeons, Rheumatologists, Neurologists and General Practitioners, basic scientists including Biochemists, Bio-engineers, Anatomists and Epidemiologists as well as various other practitioners including Physiotherapists, Osteopaths and Chiropractors.

The theme for this year's meeting was 'Back Pain – The big picture'.

*I was intrigued by the meeting as it had a number of speakers discussing the behavioural elements to back pain which I hadn't seen much of at other conferences of late. I have outlined a summary of the keynote speakers below:*

**Professor: Susan Michie - UCL. Lecture title: Behaviour Change Theory and Application to Improving Outcomes of Back Pain Research.**

Professor Michie is a researcher who focuses on behaviour change in relation to health. She proposed that we need to understand it theoretically and how to develop more effective interventions and for the strategies for prevention and for implementation of change. Her research develops methods to advance the study of behaviour change e.g. specifying intervention content using taxonomies of behaviour change technique, and applying theory to intervention development and evaluation, and to evidence synthesis.

The Behavioural Change Wheel (BCW) model she proposes involves an integration of interventions and policies to change behaviour. This model reflects a 'behaviour system' at the hub, encircled by intervention functions and then by policy categories. She acknowledges that research is needed to establish how far the BCW can lead to more efficient design of effective interventions. The wheel is essentially a synthesis of existing frameworks with 9 intervention functions, each include one or

more behaviour change techniques, incorporating 7 policy categories that could enable or support these interventions to occur.

For further information: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3096582/>

*The proposal here is that this could become a useful model for behavioural change required in the management of back pain. Certain behaviours are being identified with patients who present with persistent symptoms such as fear-avoidance related behaviour. The model may have some value in establishing better interventions for this behaviour.*

*I was unable to obtain slides from her presentation but I found a link to another presentation she has done in Australia to support some of the concepts she introduced.*

*Please follow: [http://www.behaviourworksaustralia.org/wp-content/uploads/2012/11/BWA\\_Michiefinal.pdf](http://www.behaviourworksaustralia.org/wp-content/uploads/2012/11/BWA_Michiefinal.pdf)*

Prof Michie has been working with NICE in advisory role and so no doubt her influence will impact on the both the NICE guidelines for behaviour change but perhaps future back pain guidelines too.

**Professor Brian Caulfield – University College Dublin. Lecture title: Connected Health Approach to Managing Back Pain.**

Prof. Caulfield's lecture highlighted the emergence of new technology in the advancement of healthcare and its potential implications for back pain. His own research in this field involves a variety of projects involving wearable technology. Anyone aware of fitness trends where these devices have made an appearance will no doubt be aware of 'activity trackers'. They can be wrist bands or other wearable technology linked to phones, tablets and laptops etc.

*It was a coincidence that there was a large web conference was happening in Dublin on the week of this meeting demonstrating how Ireland has a growing economy in the IT industry.*

He demonstrated the level of technology already available to the public in the devices that are available in our everyday lives such as that available in modern smart phones. They have sensors, accelerometers and gyroscopes to mention a few to capture data. Their ability to capture data about human function has reached a stage whereby it may be used practically in healthcare.

With a move in healthcare to become more proactive rather than reactive, the use of and integration of technology may help to change how we view healthcare. The data that is collected can be enormous. Choosing how to 'mine' this data to be valuable to use will require greater the valuable it is in building care models.

Adopting changing models of care and technology is challenging to all those involved in health. The message here is that this can be a good thing but as ever, we need to embrace change.

*The risk averse and technophobes beware!*

The obvious issue of sustainability and the burden of cost is a challenge to those who run health services in ensuring it is both economic and that it positively impacts on healthcare.

Three devices and their limitations were discussed:

1. Valedo Shape (Hocoma) <http://www.hocoma.com/products/valedo-concept/valedoshape/>.
2. Lumbobodytech.com. <http://www.lumobodytech.com/>
3. IEEE sensors from Fujitsu.  
[http://www.ieee.org/about/index.html?WT.mc\\_id=head\\_bm](http://www.ieee.org/about/index.html?WT.mc_id=head_bm).

For a more comprehensive review of what Connected Health is and what it means for back pain, clinicians, researchers and patients please follow the [www.connecthealth.com](http://www.connecthealth.com). and <http://www.ncbi.nlm.nih.gov/pubmed/23676416>

This was also available on the internet:

<http://qjmed.oxfordjournals.org/content/106/8/703>

**Professor Suzanne McDonough - University of Ulster. A Public Health approach to Musculoskeletal Pain.**

*Although I couldn't make it to this year's MACP conference, I was aware that that the subject of physical activity and exercise are 'trending' subject matter at the moment.*

Professor McDonough was keen to bring a similar message to clinicians about our role in promoting activity as part of our interventional profile to patients.

Recognising that the determinants of health are multifactorial, the role of promoting activity in the population has recently received greater attention. It was highlighted that there is a difference between physical activity in the promotion of public health and perhaps our role of prescribing / delivering therapeutic exercise.

She cited that the Chief Medical Officer's (CMO) guidelines on promoting health urges us to take the challenge to patients and indeed it challenges us to make all our contacts with patients count.

She introduced the concept of making every contact count with patients. This is the idea that we have a unique opportunity with every patient we come into contact with to promote the message of increasing physical activity as part of a way to promote better health. Making Every Contact Count (MECC) encourages conversations based on behaviour change methodologies (ranging from brief advice, to more advanced behaviour change techniques), empowering healthier lifestyle choices and exploring the wider social determinants that influence all of our health.

This website (<http://makeeverycontactcount.co.uk/index.html>) provides resources and information to support organisations and individuals implementing MECC using a range of behaviour change methodologies to make their contact count.

*Doing this above and beyond our therapeutic exercise will take some explaining to patients' who are challenged in changing their behaviour in the first place, however there are clearly many gains for musculoskeletal pain but also general health.*

Walking was suggested as an ideal exercise form to promote an increase in physical activity. It is seen as cheap, measurable and it doesn't require any specialist equipment.

Prof McDonough was keen to highlight that in the NICE guidelines that patients are to be advised to 'stay active' but this statement lacks clarity and direction. Embracing the new guidelines on physical activity is important for us all to know and promote with all stakeholders.

The new guidelines include the following points:

1. The intensity at which we exercise is key and light activity such as strolling and housework is unlikely to have much positive impact on the health of most people. For aerobic exercise to be beneficial it must raise your heartbeat and make you sweat.
2. The more exercise you do, the better. Everyone should do a minimum of 150 minutes a week of moderate-intensity aerobic exercise but that really is the minimum for health benefits. If you can go beyond 150 minutes, you'll gain even more health benefits.
3. Sedentary time (time spent sitting down to watch TV, use a computer, read or listen to music) is bad for your health, even for those who are achieving 150 minutes of exercise a week.

The advice for adults aged (19-64) to stay healthy:

150 minutes (2 hours and 30 minutes) of moderate-intensity aerobic activity such as cycling or fast walking every week, and muscle strengthening activities on two or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders and arms). OR

75 minutes (1 hour and 15 minutes) of vigorous-intensity aerobic activity such as running or a game of singles tennis every week, and muscle-strengthening activities on two or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders and arms). OR

An equivalent mix of moderate- and vigorous-intensity aerobic activity every week (for example two 30-minute runs plus 30 minutes of fast walking), and Muscle-strengthening activities on two or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders and arms).

She acknowledged that delivering on this would be a challenge given the current levels of inactivity in the population

## **Professor Tamar Pincus – University of London. Psychologically Informed Approaches to Back Pain Management.**

Prof Pincus is a psychologist who outlined in her lecture that the last decade of research on the psychological factors associated with back pain has left us with some uncertainty. The interventions aiming to change these have had a small short-lasting effect on broader health outcomes such as disability.

Her view and others (*not fully alluded to but it appeared to have been colleagues in psychology*) is that the trials have used 'sub-optimal' interventions which may go in some way to explain their lack of success. She maintained that interventions in trials were delivered at low dose by non-experts and are described as 'psychologically informed'. She maintained that the information alluded to some 'diluted cognitive-behavioural aspects but maintained that they interventions have rarely been designed from theoretical principles.

She also highlighted new theoretically driven interventions such as mindfulness and acceptance based interventions and strength-based structured therapy which could be implemented. However there is a challenge is to identify which of these interventions targets what mechanism so that matching treatment vulnerability is optimised.

I have long struggled with the issue of having identified barriers to recovery such as fear-avoidance that the subsequent intervention lacked the perceived precision of my other interventions. With her lecture, Prof Pincus appeared to be essentially describing a sub-classification or stratifying of patients from a psychological perspective.

She described the issue of the lack of psychologists involved in pain management but also of deciding which of these psychological interventions should be delivered by physiotherapists. The link below relates to a paper she has co-authored to allow a broader understanding of the lecture.

<http://pure.rhul.ac.uk/portal/en/publications/psychological-factors-and-treatment-opportunities-in-low-back-pain%28ed0f2280-a647-408d-8f36-ac4aa0c26b56%29.html>

She cited a study by Morley et al (2013) as highlighting the time for a paradigm shift in the management of persistent pain using new models of care.

[http://hcpportalco20140408.pfizer.edrupalgardens.com/sites/g/files/g10012911/f/publicaciones/2013\\_154\\_10\\_Examining-the-evidence-about-psychological-treatments-for-chronic-pain-Time-for-a-paradigm-shift\\_1929\\_1931.pdf](http://hcpportalco20140408.pfizer.edrupalgardens.com/sites/g/files/g10012911/f/publicaciones/2013_154_10_Examining-the-evidence-about-psychological-treatments-for-chronic-pain-Time-for-a-paradigm-shift_1929_1931.pdf)

The meta-analysis of referred to highlights the poor quality of research in the area and that studies in the future will need to raise the bar on quality. Studies that do not measure adverse events should be considered unethical. Studies that do not control therapist allegiance should also be considered flawed. Studies that are small should be ignored.

*So, no surprises here that more and better quality research is needed.*

Finally, the systematic review cited in the link below concluded on a point that Prof Pincus made that, there is no need for more general RCTs reporting group means but that different types of studies and analyses are needed to identify which components of CBT work for which type of patient on which outcome/s, and to try to understand why.

<http://www.scopus.com/record/display.url?eid=2-s2.0-84872173509&origin=inward&txGid=8A90E0B22079946230444F595C4781F8.iqs8TDG0Wy6BURhzD3nFA%3a2>

**Dr Frances Williams - Kings College London. Lecture Title: Genetic epidemiology of intervertebral disc degeneration.** <http://www.genomicseducation.hee.nhs.uk/>

*This presenter had a difficult slot on the last day and in the afternoon after lunch.*

Her subject matter related to the exploration of underlying genetic variants involved in lumbar disc degeneration. She states that lumbar disc degeneration has a surprising degree of heritability.

Her findings suggest that the gene called **Park2** is a heritable gene associated with disc degeneration that affects the rate at which it degenerates.

*Obviously the weight of the findings and the orientation of the subject matter is suggesting that there is a link between LDD and back pain. But what I wasn't able to establish was that whether LDD was suggested as a normal aging finding or if it seemed pathological in some way. Therefore I wasn't necessarily convinced that causality was being suggested or that there was promising genetic links to LDD that could now be established.*

Her studies have suggested that up to 4 out of 5 people inherit with LDD.

The authors have used data collected from around the world and report the biggest genome-wide association analysis of LDD. They have reported that the gene may be switched off in people with the condition. Other factors such as environmental factors are involved, for instance lifestyle and diet which could trigger epigenetic changes that in turn switch off the gene.

The team hopes disc researchers will now take the findings further, and discover exactly what role PARK2 plays. The study was funded by the Wellcome Trust and Arthritis Research UK paid for the study.

The lecturer has published the findings in the Journal Annals of Rheumatic Diseases on 19 September.

Catherine Paddock PhD reported on the paper in Medical News Today an internet medical publishing company carried an article related to her article cited in this link: <http://www.medicalnewstoday.com/articles/250575.php>. Catherine Paddock's words helped to summarise my understanding of the authors lecture.

There were other papers presented but due to lack of space, I have not included this in this report.

My appreciation once again goes to the MACP for their support in attending this meeting.

Kind regards,

Matthew Daly