Pain in the Media: The Good, the Bad, and the Ugly

The following is a summary from the 43rd Annual Scientific Meeting of the Australian Pain Society, which took place in Canberra from April 2-5, 2023. This session explored all things 'pain in the media', from the opportunities and challenges in how the media represents pain science through to how we can use social media as an innovative way to research pain conditions. Read on for a summary of the plenary panel.

Public knowledge of pain is lagging

Liam Mannix, a multi award-winning journalist from The Age and the Sydney Morning Herald, began his presentation by sharing an anecdote of an in-depth explainer piece he had written about pain. After speaking with Lorimer Moseley and Tasha Stanton and crafting an interesting article about many modern pain concepts, including how there might not be a 'pain signal', his editor came to him in disbelief.

"She came up to my desk and said, 'Liam, I'm sorry, but this article cannot be right. Everyone knows that there are pain signals. When I bang my toe, the signal travels from my toe up to my brain, and that's how I have pain'," Mannix recalled.

So, Mannix went back to Moseley and Stanton to review the article he had written and check whether he correctly understood and presented the concepts they had spoken about. He returned to his editor, who still refused to believe what he had written.

The article was never published and has been relegated to the virtual filing cabinet for the foreseeable future.

But why is the public perception of pain – including those who work in the media – so far from the reality? For Mannix, the answer is how many people think about pain in a mechanical (biomedical) sense.

"I think we live in a very mechanical society, where technology represents the solution to every problem. Every day we're interfacing with devices like our phones that run on wires, and it's very easy to think of the body in the same way. You find the bit that's broken, take it out, and replace it," Mannix postulated. To counter this, Mannix encouraged delegates to engage with the public and push the translation of modern pain science to help people in the community better understand how pain works. Speaking with your university or hospital media and communications team are some good first steps.

Mannix acknowledged the common fear many researchers, clinicians, and scientists have about their words being misinterpreted when speaking to the media but provided assurance that journalists were there to help disseminate your work.

"Mine is a field that attracts a lot of criticism. I've heard plenty of that today, and I think it's reasonable. We do oversimplify and we do get it wrong. But I think there is one misperception about journalists, which is that we're deliberately bad actors, [that] we're trying to stitch you up or that we're trying to do the wrong thing."

"I don't think I know any journalists who didn't get into journalism for the right reasons. We want to help. We want to tell the truth. We want to take the truth to our communities, and we really don't want to be wrong."

Mannix ended on a quick note of hope, pointing to books from Paul Biegler and Rachel Zoffness as examples of modern pain science filtering out in the real world, and announced his own book on "the new science of pain" will be released in September.

What to expect when your research findings are misinterpreted

Professor Giandomenico Iannetti, a neuroscientist from University College London and the Italian Institute of Technology, joined via video link to share his experiences in dealing with the media in response to his research being implicated in the legal battle to overturn abortion access in the United States.

lannetti was initially unaware that his work had been used as evidence to support the revocation of Roe vs Wade and was shocked when he heard the news from colleagues. The Mississippi lawyers who sought to ban abortions claimed that a foetus can feel pain.

"For many years I have used functional MRI (fMRI) to understand the meaning of the brain response you get when you deliver a stimulus that is perceived as painful. And until a few years ago, there was this misconception that the blobs you get on the fMRI scans when someone feels pain were reflecting the neural basis for pain," lannetti explained.

"[But] what I and others have done in the past is shown that you get the same pattern of brain activation when you deliver intense, surprising, and unexpected – but not painful – stimuli, like a bright flash of light, or a sudden loud noise."

These findings were initially misinterpreted by other researchers, who went on to claim that <u>the cerebral cortex is not necessary to feel pain</u>. The lawyers fighting against abortion rights based their argument around the incorrect interpretation of lannetti's results.

lannetti felt the fellow researchers – and by extension, the lawyers – had "changed the question" his research was designed to ask. He and other scientists wrote an amicus brief to the US Supreme Court to highlight the misinterpretation and improper use of the research findings, but this was ignored.

Roe vs Wade was overturned, stripping millions of American women of their access to abortions.

The amicus brief was inevitably picked up by the media, which resulted in lannetti receiving a significant amount of attention from journalists. lannetti would describe his experiences with the media as a mixed bag.

"As Liam said, I could really feel and perceive [some] journalists trying to get it right and to understand what happened. For example, there was a very nice piece that came out in *The Observer* (the Sunday edition of *The Guardian* in the UK). However, there was massive variability in the types of questions I was getting from different media outlets."

lannetti used his experiences – which included being asked about his personal views on abortion – as an example of how to highlight how to deal with potentially tricky questions that go beyond simply talking about science.

"It doesn't mean that you cannot [answer these questions]. But if you do, I think it's very important to acknowledge that you are stepping into a different field which goes beyond your scientific knowledge," he concluded.

Improving communication with patients and the public using social media

To conclude the panel, Dr Edel O'Hagan (Westmead Applied Research Centre and the University of Sydney) spoke about how we can reach, understand, and support people using social media.

O'Hagan started by discussing evidence from qualitative research studies suggesting patients aren't always satisfied with their clinical consultations. Patients need time to feel they can safely share their thoughts and concerns with healthcare professionals, which causes challenges for shared decision-making if patients don't feel comfortable communicating their expectations for management.

What's interesting is that people are more willing to speak to a computer than a real person. Pointing to evidence from a 2014 study, O'Hagan discussed how people participating in a mock mental health screening for a job interview were less concerned and more open about discussing their emotions with a virtual human on a computer screen compared to when they were told there was a real person listening to them on the other end.

"This suggests that perhaps we aren't getting the full picture in clinical encounters, that perhaps we're not creating a space where people are willing to disclose some elements of their clinical history," O'Hagan said.

It turns out O'Hagan was right about there being something missing from clinical encounters that was preventing patients from sharing important information – validation. As part of a 2021 study, O'Hagan and colleagues used data scraping tools to identify over 700 social media posts about low back pain. Half of the posts were patients seeking validation for their pain, with one in three responses containing sympathetic messages.

But social media can be used for more than just studying public posts, O'Hagan explained. Social media allows individuals and organisations to reach literally billions of people at the fraction of the cost compared to older advertising methods, such as television or radio campaigns. For example, the "Don't Take Back Pain Lying Down" campaign, which ran in Victoria in the late 1990's and encouraged people with back pain to stay active and avoid extended periods of inactivity, was highly effective at reaching significant proportions of their target population and improving people's beliefs about back pain over time.

Yet attempts to replicate this campaign in other countries, such as Norway, Scotland, Ireland, and Canada were unsuccessful – largely due to the substantial budget used in the original Victorian campaign.

"The budget at the time was seven and a half million, which is at least 15 million these days. I don't think most research groups have that kind of budget," O'Hagan said.

In contrast, using social media to reach people and nudge their behaviour is a far cheaper yet equally effective approach. O'Hagan used <u>an</u> <u>American study from 2021</u> to demonstrate the effects of large-scale social media advertising on human behaviour.

"It was a social media campaign run on Facebook in December 2020, at the height of the COVID lockdowns, and the aim of the campaign was to encourage people to stay home for the Thanksgiving and Christmas holidays," O'Hagan told delegates. The geo-targeted campaign, which featured doctors and nurses in 20-second videos encouraging stay-at-home behaviours, reached 12 million people. The states that were shown the videos in the lead up to each holiday had fewer people travelling for the holidays, which resulted in a decrease in the number of COVID infections in the subsequent days.

"It seems like there is some value in social media nudging at behaviours, or as an intervention that supplements other interventions," O'Hagan concluded.

The session ended with an engaging question and answer component for the three speakers, covering topics such as the slow (yet welcome) decline in clickbait and how to communicate uncertainty when speaking with journalists.

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