

Osteoarthritis research is failing to reach consumers

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 Check for updates

Given that intra-articular injections for the knee of treatments such as hyaluronic acid, stem cells and platelet-rich plasma are advised against or only weakly recommended by current clinical-practice guidelines, why do people continue to seek information about these treatments?

REFERS TO Jang, C. W. et al. Impact of changes in clinical practice guidelines for intra-articular injection treatments for knee osteoarthritis on public interest and social media. *Osteoarth. Cartil.* <https://doi.org/10.1016/j.joca.2022.12.013> (2023).

A strong body of evidence exists in support of treatments to manage knee osteoarthritis (OA) that include lifestyle interventions such as exercise, physical activity and weight management¹. By contrast, knee intra-articular injections are generally advised against or weakly recommended by the current clinical-practice guidelines. However, this lack of support is not reflected in the level of public interest. Jang et al.² now present the results of a study in which they aimed to summarize the changes in clinical-practice guidelines for intra-articular injections for knee OA and to assess whether these changes were reflected by public interest.

Jang et al.² assessed 16 international clinical-practice guidelines relating to 5 intra-articular-injection treatments for OA (glucocorticoids, hyaluronic acid, stem cells, platelet-rich plasma (PRP) and botulinum toxin), which included the highest-cited guidelines from the Osteoarthritis Research Society International (OARSI)³, EULAR⁴ and the ACR⁵. The authors² correlated findings from the guidelines with public interest by analysing Google Trends data and YouTube video views related to the topics, and assessed changes in search volume from 2004 to 2021.

The results demonstrated that glucocorticoid injections were recommended in clinical guidelines published after 2019, for short-term relief². The recommendations for hyaluronic acid were conflicting, with weak recommendations in favour from OARSI and the Veterans Affairs and Department of Defence (VA/DoD) and a recommendation against from the ACR. Stem cell injections received strong recommendations against (from the ACR and OARSI), weak recommendations against (from the Arthroscopy Association of Canada (AAC) and VA/DoD) and an uncertain or neutral position (from the Italian Society of Rheumatology (SIR)). Of the seven guidelines on PRP, strong opposition to their use was indicated by the ACR, AAC and OARSI, with a neutral position from the SIR and the French Society of Rheumatology and a weak recommendation in favour from the American Academy of Orthopaedic Surgeons (AAOS). Only the ACR provided a position on the use of

botulinum toxin, which was a conditional recommendation against. Despite the changes in updated guidelines to recommend against stem cells and PRP, the data from the analysis of Google Trends and YouTube videos demonstrated opposing results, with greater interest in these treatments and in botulinum toxin injections over time, relative to other injections. This discrepancy matters, because it is important that individuals with OA have access to current evidence-based guidelines about OA management, to make informed decisions about their care.

Why are patients still seeking information about injections that are not recommended? This contrast between public interest and what guidelines recommend might demonstrate a failure of knowledge translation. The definition of knowledge translation is “a dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the health care system”⁶. Knowledge translation is essential to enable evidence-based, informed decisions to be made about one’s health and wellbeing, leading to improvements in standards of care and health-care delivery. The knowledge-to-action framework provides a model for the translation of research into practice, which emphasizes the input from end-users to ensure that the knowledge outputs and their implementation are relevant to their needs⁶. Although the medical research field has begun to heed the importance of knowledge translation, there is still a long journey ahead. Individuals with OA need to be encouraged to manage their condition using behaviour and lifestyle interventions, in the knowledge that the development of disease-modifying drugs might still be some way away. However, there are many barriers to knowledge translation, including the immense volume of published research data, access to research evidence and the skills that are needed to appraise and understand that evidence⁷. Systematic reviews and clinical-practice guidelines aim to reduce the volume of evidence, but these formats are not tailored for consumers of information relating to the treatment of OA.

“Why are patients still seeking information about injections that are not recommended?”

Following the COVID-19 pandemic, we have seen an increase in the remote delivery of health care, as well as an increase in the availability of health information on the internet and social media. These practices aim to close the gap between research findings and clinical practice. For example, the WHO produces infographics to convey health messages to the public. In the context of OA, there are online patient resources for the improvement of knowledge translation of research findings to individuals with OA (such as the Joint Action podcast

Box 1

Perceived barriers to knowledge translation and possible solutions

Barrier

Information is not tailored to the consumer

Possible solutions

Before creation of a knowledge output, the intended end-users should be consulted and should provide ongoing feedback through a co-design approach

Information should be targeted to differing levels of health and numeracy literacy

If possible, translations should be provided in different languages and culturally adapted

Barrier

Lack of awareness of information

Possible solutions

Health-care providers should provide credible sources of information, such as arthritis consumer-advocacy-group websites

Barrier

Lack of access to information

Possible solutions

Information should be provided in more than one format, if possible, to reach more end-users

Training on the use of technology should be prioritized

(<https://www.jointaction.info/podcast>) and the MyJointPain website (<https://www.myjointpain.org.au/>). Although these resources are usually created with good intent, they are still failing to reach the desired audience of individuals with OA. Improvement of knowledge dissemination and the exchange of outputs is required, and these processes should be iterative, with consumer consultation throughout. The collection of preliminary data on how individuals with OA seek

information about their condition and what formats are preferable will ensure that future knowledge outputs reach the intended end-users. Careful consideration should also be paid to other identified barriers to knowledge translation (Box 1).

The results of Jang et al.² reinforce the need to improve and strengthen knowledge translation in relation to OA research, as current methods of dissemination are not reaching the public effectively. Translating evidence into practice, with effective communication and dissemination of information about OA diagnosis, prognosis and treatment options remains a challenge. In an era in which a potentially overwhelming amount of information (and misinformation) is constantly accessible through mainstream and social media, there is an urgent need to optimize knowledge translation to ensure that individuals with OA are receiving evidence-based information about their condition. Future research should place a stronger emphasis on the creation and co-design of knowledge translation outputs to improve dissemination and uptake of research findings. To ensure adequate translation to the community we would recommend co-designed outputs using a range of media such as society-endorsed, consumer-targeted websites or podcasts.

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Competing interests

D.J.H. provides consultation on scientific advisory boards for Pfizer, Lilly, TLCBio, Novartis, Tissuegene and Biobone. V.D. declares no competing interests.