

Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.
The abstracts on this page have been chosen and edited by Paul Hellyer.

Joint replacement and antibiotic prophylaxis

Thornhill M H, Gibson T B, Pack C *et al.* Quantifying the risk of prosthetic joint infections after invasive dental procedures and the effect of antibiotic prophylaxis. *J Am Dent Assoc* 2023; **154**: 43–52.

Prophylaxis still recommended in the USA.

Overall, 2.9 million damaged joints are replaced with artificial joints annually worldwide. Strategies are in place to reduce post-operative infection but late periprosthetic joint infection (LPJI) can be catastrophic resulting in further surgery, and possibly amputation and/or death. The belief that bacteraemias from invasive dental procedures (IDPs) causes LPJIs leads surgeons (in the USA) to insist on antibiotic prophylaxis (AP) before IDPs.

Using data from Medicare, Medicaid and linked dental databases, 2,344 patients who developed LPJIs in a ten-year period to 2019 were identified. In the 15 months preceding LPJI admission to hospital, 1,821 IDPs were performed. Of these IDPs, 18.3% were covered by AP. The authors found no association between IDPs and subsequent LPJI. AP cover for IDPs had no significant effect in reducing the incidence of LPJIs.

‘The continued use of AP poses an unnecessary threat to patients from adverse drug reactions and to society from the potential of AP to promote development of antibiotic resistance,’ and should cease.

<https://doi.org/10.1038/s41415-023-5634-y>

Some confusion over ‘centric occlusion’

Astudillo-Rozas W, Valdivia-Gandur I, Vasquez A V *et al.* Declarative knowledge in oral health: The case of the term ‘centric occlusion’. *Eur J Dent Educ* 2022; DOI: 10.1111/eje.12881.

Differences highlighted between specialities.

Declarative knowledge – the facts students need to know – assumes that facts and definitions are consistent across speciality areas. The definition and interpretation of centric occlusion (CO) ‘has historically been a source of confusion.’ In the Glossary of Prosthodontic Terms (GPT), it was not until the 1987 edition that CO and the ‘maximal intercuspal position’ (MIC) were differentiated (CO ≠ MIC).

A literature search found 812 articles published since 2005 across different specialities where a definition of CO could be identified. The majority of articles used the pre-1987 GPT definition that CO = MIC. This was more likely in articles which did not cite GPT in the references, although 26 which defined CO = MIC still used the post-1987 editions of GPT as a reference. The orthodontic speciality was significantly associated with CO = MIC. CO ≠ MIC was significantly associated with the oral rehabilitation speciality.

The lack of academic agreement on the definition of such core concepts as CO ‘generates confusion and miscommunication amongst students, professionals and researchers.’

<https://doi.org/10.1038/s41415-023-5636-9>

Direct to consumer orthodontics

Tabbaa S, Nguyen T, Toubouti Y, Saltaji H. Direct-to-consumer orthodontics: Exploring laypeople’s perception of orthodontic treatment complexity. *J Am Dent Assoc* 2022; DOI: 10.1016/j.adaj.2022.10.017.

How do people decide?

Direct-to-consumer orthodontics (DTC) is increasing in popularity, partly due to convenience (no visits to the clinic) or due to lower cost than traditional treatments. Concerns have been expressed about the health risks of unsupervised treatment but companies providing DTC claim that cases are assessed and planned by dentists, even though in most cases, the patient is never seen clinically. Information provided on DTC companies’ websites has been found to be of poor quality but consumers may be doing their own research. Little is known about why or when consumers choose DTC over traditional treatment.

Photographs of cases of different levels of complexity were shown to 1,362 individuals aged 18+ in an online survey. Participants were asked to assume the pictures depicted their own teeth and whether they would choose DTC for treatment in each case. Cases of mild complexity (minimal or no crowding) were more likely to be chosen for DTC but participants were unable to identify complexity factors such as skeletal or tooth size discrepancies. Males and younger adults were more likely to choose DTC.

<https://doi.org/10.1038/s41415-023-5635-x>

Women in dental research

Haag D G, Schuch H S, Nath S *et al.* Gender inequities in dental research publications: Findings from 20 years. *Community Dent Oral Epidemiol* 2022; DOI: 10.1111/cdoe.12831.

Male privilege still evident.

Although the number of women in the dental workforce is increasing worldwide, in practice, in dental academia and in leadership roles, equity has not yet been reached. This inequality in academia is highlighted by the number of papers published which have women as first or last authors on a publication – first or last author are considered the most prestigious positions.

The Scopus database was searched for dental journals (n = 84) which published continuously between 1996 and 2015. Random samples of all articles and of top cited articles were retrieved for each year. The gender of the first and last author was identified. In the top-cited group, 20.3% of articles had women as first author as opposed to 28.4% in the random sample group. The differences in last author percentages were similar.

The authors highlight these disparities as being across all countries and all dental specialities. To promote equity, organisations ‘must implement specific policies to minimise men privilege in all career stages [...] and to promote an institutional culture of respect and acceptance.’

<https://doi.org/10.1038/s41415-023-5637-8>