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The Effect of Cessation of Community Water Fluoridation on the MFT Index Among 12-Year-Old Children

Alexandria, VA, USA – A study examining the impact of discontinuing water fluoridation on socio-economic disparities was presented at the 103rd General Session of the IADR, which was held in conjunction with the IADR/Pan European Regional Congress on June 25-28, 2025 in Barcelona, Spain.

This study aimed to examine the impact of discontinuing water fluoridation on the MF index (Missing/Filling), a commonly used epidemiological measure of dental caries prevalence, in 12-year-old children between the years 2014-2022 on socio-economic disparities. Considering that CWF is important in the prevention of dental caries. Between 2002 and 2014, the water in communities of at least 5,000 individuals was fluoridated. In 2014, CWF in Israel stopped.

For this retrospective study, electronic dental treatment records were gathered for restorative and extraction procedures performed on 12-year-old children on permanent teeth during the periods 2014-15 and 2016-22. A statistical significance threshold was set at $p < 0.05$.

The presence of fluoride in water was associated with lower MF rates across all socioeconomic statuses. The discontinuation of fluoridation showed an increase in MF rates, particularly among those in the low socioeconomic status group. The high socioeconomic status group exhibited the smallest change, suggesting that factors other than fluoridation may play a more significant role in this group's dental health outcomes. Moreover, the difference between the MF rates for males and females was consistent across both fluoridated and non-fluoridated conditions, with females consistently having a higher rate.

These findings emphasize the importance of water fluoridation as a public health measure. The discontinuation of fluoridation could lead to increased dental health disparities, with more pronounced effects on lower socioeconomic groups. This suggests that socioeconomic factors play a significant role in dental health, with fluoride being particularly beneficial for lower-income groups. The discontinuation of fluoridation may disproportionately affect these populations, leading to higher rates of dental decay.

The abstract, "The Effect of Cessation of Community Water Fluoridation on the MFT Index Among 12-Year-Old Children" was presented by Guy Tobias of the Hebrew University, Israel during the "Childhood and Adolescence II" Poster Session that took place on June 28, 2025 at 3:45 p.m. CEST (UTC+2).

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