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Group:

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Basic Science Question:

Where do we get fluoride and what delivery methods are available in dentistry?

Report:

Fluoride is a necessary supplement in dentistry as it has proven to have numerous benefits in preventative dentistry. Some of its benefits include its promotion of remineralization of enamel and inhibition of glycolysis and demineralization due to cariogenic bacteria. While there are several available fluoride delivery methods available in dentistry, fluoride varnish and fluoridated water appear to be of critical importance given their effectiveness and efficiency.

Community water fluoridation and fluoride varnish are necessary not only because they have proven to reduce caries, but also because they are easy to use when working with difficult patients such as children and patients from low socioeconomic backgrounds. For instance, CWF is useful because it provides benefits by simply drinking tap water, which is cost effective and simple for aiding in prevention. Additionally, FV has proven efficient because it requires less chairside time and prevents gagging since it does not require a mouth tray for delivery. FV is also useful for children since it comes in a variety of flavors, and is only required in small amounts since it is highly concentrated.

Despite FV's efficiency, there still appears to be a lack of application by dentists. According to an article by Debbie Bonetti and Jan E Clarkson, in a study with 599 participating dentists, "only 15.7% of general dentists, 30.8% of pediatric dentists and 20.5% of public health dentists chose to use FV over other topical fluorides." Hence, it is necessary to make dentists more aware of FV, especially since it can be billed by medicaid, making it not only easier to use, but more affordable for patients. A similar objective is even more imperative with CWF since it could be so easily incorporated into patients' day to day lives.

References:

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