

Critically Appraised Topic (C.A.T.): Can Counselling or Behaviour Intervention in a Dental Setting Help in Smoking Reduction?

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CLINICAL PROBLEM

Cigarette smoking remains the leading cause of preventable disease, disability, and death in the United States, accounting for more than 480,000 deaths every year, or about 1 in 5 deaths. In 2020, nearly 13 of every 100 U.S. adults aged 18 years or older (12.5%) smoked cigarettes. Dental professionals are well placed to help their patients stop using tobacco products. The adverse effects of tobacco use on oral health provide a context that dental professionals can use to motivate a quit attempt.

CLINICAL QUESTION

In regular smokers, is counselling/behaviour intervention in a dental setting as compared to minimal or no intervention, an effective method for reducing long-term smoking frequency?

EVIDENCE SEARCH

Search Date: November 15, 2021

PubMed Results: 35 evidence sources

Additional Search: Centers for Disease Control and Prevention (CDC), Journal of the Canadian Dental Association (JCDA), TRIP Database.

REFERENCES

Centers for Disease Control and Prevention. (2022, March 17). Current cigarette smoking among adults in the United States. Centers for Disease Control and Prevention. Retrieved June 3, 2022, from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm

Holliday R, Hong B, Mccoll E, Livingstone-Banks J, Preshaw PM. Interventions for tobacco cessation delivered by dental professionals. *Cochrane Database of Systematic Reviews* 2021. doi:10.1002/14651858.cd005084.pub4.

CLINICAL BOTTOM LINE

There is very low to moderate quality evidence concluding that various interventions delivered by dental professionals may be effective in helping with smoking cessation when compared to usual care/no intervention.



CLINICAL APPLICABILITY

Tobacco cessation interventions are feasible. Studies largely matched our target population. The studies were from 6 different countries. Sufficient follow-up period allowed (average of 6 months). Smoking habits and SES varied between countries. There was considerable variability between age groups. Personal training for health care providers is different from one country to another, which will add to the variability between the studies.

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RESULTS

Single Session Behavioural Support: 9.46% more cases of abstinence from tobacco products, compared to the control intervention group. RD = 9.46% (0.11% - 25.74%)

Multiple Session Behavioural Support: 9.9% more cases of abstinence from tobacco products, compared to the control intervention group. RD = 9.9% (1.87% - 23.21%)

Behavioural Support + Pharmacology: 19.36% more cases of abstinence from tobacco products, compared to the control intervention group. RD = 19.36% (6.38% - 42.02%)

The results were statistically significant and clinically meaningful for all three interventions. However, results were only clinically decisive for the third group, but not clinically decisive for the first two groups in accordance with the minimal threshold requirement of 5%.

STRENGTHS

Extensive, systematic, and easily reproducible search strategy; PRISMA diagram; GRADE approach to assess the evidence quality; sufficient lengths of follow-up; intention-to-treat analyses; RCT study design; meta-analysis; conflict of interest for each study described.

LIMITATIONS

Clinical and statistical heterogeneity ($I^2 > 50\%$); very low certainty of evidence (GRADE) found for most outcomes; Lack of grey literature searched; Attrition, detection and selection biases, and conflict of interest (publication bias).



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