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### SUMMARY

More than 740 million people worldwide are affected by periodontal disease and are at higher risk of secondary damage such as cardiovascular disease and type 2 diabetes, which place a considerable financial burden on healthcare systems. The aim of this study was to use a computer simulation to estimate the direct and indirect costs of prevention and treatment of gingivitis, periodontitis and related secondary damage in the Swiss population, paid both out of pocket (OOP) and from social welfare (SW).

For three different scenarios, iterations with 200,000 simulated individuals over their assumed life span of 35 to 100 years corresponded to a period of four months, in which an individual could move from one periodontal condition to the next, each associated with presumed direct and indirect treatment costs.

Appropriate diagnosis and adherence to professional periodontal care had a strong benefit saving up to CHF 5.94 billion OOP and CHF 1.03 billion SW costs for the current Swiss population. Considering direct and indirect health care costs, the total expected costs for a 35-year-old individual until death were CHF 17,310 with minimal care and CHF 15,606 with optimal care, resulting in savings of CHF 1,704.

In conclusion, early detection and appropriate treatment of periodontitis can help to reduce both overall costs of treating periodontitis and associated secondary damage, especially in the second half of life. These cost savings may further pay off on an individual level through regular supportive periodontal care, both for treatments paid out of pocket and those covered by social welfare.