

Prevention of gum disease could save billions and lead to healthier lives

Brussels, 15 June 2021. The economic case for the prevention and management of gum disease is outlined today in a report by the Economist Intelligence Unit (EIU) (1).

The most comprehensive analysis on the financial and human cost of gum disease in six Western European countries was produced by the EIU, commissioned by the European Federation of Periodontology (EFP) as an independent study and sponsored by Oral-B.

Severe gum disease, also called periodontitis, affects around half of the world's population. Left untreated, it causes tooth loss and can result in difficulties chewing, speaking, and smiling. In addition, gum disease is associated with nearly 60 other health conditions including heart disease and diabetes (2).

Periodontitis is largely preventable with good oral hygiene and regular dental reviews (check-ups). Yet the report states that in Western Europe, developments in prevention and management appear stagnant. The prevalence of periodontitis has remained largely unchanged over the last 10 years and its awareness among the general public and non-oral health professionals is poor. The document describes a situation in which many people only see a dentist when they have a problem and avoid regular appointments due to the cost.

Few studies have modelled the economic burden of periodontitis and return on investment (ROI) of treatment, particularly across different countries. The authors developed a model to examine the ROI of preventing and managing periodontitis. Separate modelling was performed for France, Germany, Italy, the Netherlands, Spain, and the UK.

To measure the impact of prevention and treatment, the model used the EFP treatment guidelines which outline four intervention points in the progression from health to gingivitis, undiagnosed periodontitis, and diagnosed periodontitis. The estimated current national situation determined the number of individuals starting at each stage of the model.

The authors modelled the transition between the different health and disease stages during a 10-year period according to five scenarios: 1) baseline: current prevention and treatment situation continues; 2) rate of gingivitis management falls from 95% to 10%; 3) incident gingivitis is eliminated through improved oral homecare (periodontitis is thereby prevented); 4) no periodontitis is managed; 5) 90% of periodontitis is diagnosed and managed.

The model calculated the impact of each scenario on total costs, ROI, and the change in healthy life years compared to baseline. The cost of continuing with the baseline scenario ranged from €18.7 billion in the Netherlands to €96.8 billion in Italy over 10 years. In all countries, reducing gingivitis management lowered healthy life years and had a negative ROI. Eliminating gingivitis led to rises in healthy life years, reduced costs and a strong ROI in all countries.

No management of periodontitis resulted in reductions in healthy life years and a negative ROI for all countries. Diagnosing and managing 90% of periodontitis increased healthy life years in all countries and despite cost increases there was a positive ROI.

The authors noted that both eliminating gingivitis (the precursor to periodontitis) and increasing the rate of diagnosing and treating periodontitis to 90% had a positive ROI for all countries and gains in healthy life years compared to business as usual. Neglecting to manage gingivitis had the opposite effects. They called for greater emphasis on self-care and prevention at the individual and societal level, including nursery-based dental care and tooth brushing workshops in schools.

“Dental tariffs and the costs of accessing a dentist is a barrier to early treatment for the general public,” states the paper. The authors concluded that the cost-effectiveness of managing gingivitis and periodontitis shown in this analysis demonstrate that dental costs deserve a review from European policy makers and commissioners.

Report contributor Professor Iain Chapple, EFP Workshop Committee member, said: “It is hugely challenging to determine the economic and societal costs of a complex disease like periodontitis, which is why we needed an independent expert group like the EIU to undertake this modelling. Their data clearly demonstrates that by far the biggest ROI comes from the prevention of periodontitis, i.e. by treating gingivitis, something traditionally regarded as trivial and ignored, with treatment being directed at periodontitis – which is of course too late.”

Report sponsor Dr. Leslie Winston, Vice President, Global Oral Care Professional & Scientific Relations at Procter & Gamble said: “Dental diseases, including periodontitis, are a burden both on an individual and societal level. Fortunately, they can be prevented through oral health maintenance. Key factors are mechanical and chemical plaque control, e.g. using an electric toothbrush with an antibacterial fluoride toothpaste and interdental cleaning. Another important element is to visit dental healthcare providers regularly to ensure that any emerging issues are addressed while they still can be reversed.”

Report contributor Professor Nicola West, EFP secretary general, said: “I am delighted with the analysis presented by the EIU, highlighting the benefit to healthcare providers of treating gum disease early to realise gains in healthy life years, advancing the European Federation of Periodontology’s purpose of promoting periodontal (gum) health for a better life.”

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Notes for editors

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References

1) The Economist Intelligence Unit. 2021. Time to take gum disease seriously: The societal and economic impact of periodontitis. London, The Economist Intelligence Unit.

2) Monsarrat P, Blaizot A, Kémoun P, *et al.* Clinical research activity in periodontal medicine: a systematic mapping of trial registers. *J Clin Periodontol.*2016;43:390–400.

[About the EFP](#)

The European Federation of Periodontology (EFP) is a non-profit organisation dedicated to promoting awareness of periodontal science and the importance of gum health. Its guiding vision is “Periodontal health for a better life.” Founded in 1991, the EFP is a federation of 37 national periodontal societies that represents more than 16,000 periodontists, dentists, researchers and oral-health professionals from Europe and around the world. It pursues evidence-based science in periodontal and oral health, promoting events and campaigns aimed at both professionals and the public. The EFP organises EuroPerio, the world’s leading congress in periodontology and implant dentistry, as well as other important professional and expert events such as Perio Master Clinic and Perio Workshop. The annual Gum Health Day, on 12 May, organised by the EFP and its member societies, brings key messages on gum health to millions of people across the world. The EFP also organises workshops and outreach campaigns with its partners: projects have covered the relationship between periodontal disease and diabetes, cardiovascular disease, and caries, as well as women’s oral health during pregnancy. The EFP’s Journal of Clinical Periodontology is the most authoritative scientific publication in this field and the federation also publishes a monthly digest of research (JCP Digest) and the quarterly Perio Insight magazine which offers expert views and debates. The federation’s work in education is also highly significant, notably its accredited programme for postgraduate education in periodontology and implant dentistry. The EFP has no professional or commercial agenda.

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