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Time to put our money where your mouth is: Economist Impact launch white paper on inequalities in oral health

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On 13th February 2024, the European Federation of Periodontology (EFP) launched the 2nd Economist Impact (EI) white paper “Time to put your money where your mouth is”¹ in Brussels at a collaborative event with the European Platform on Oral Health. The launch was attended by members of the WHO and MEPs and presented a hard-hitting case for a “levelling up” approach to future oral healthcare provision, focussed on prevention. The EFP advisory team, Professor’s Nicola West, Iain Chapple, Moritz Kebschull and Nigel Pitts presented the context, rationale, process and outcome of this 2-year-long project that was supported by Haleon, but which represents an independent piece of financial modelling and narrative white paper by the EI.

The first EI white paper “Time to take gum disease seriously”² modelled various scenarios for periodontal care against a “business as usual” approach in 6 major European economies, France, Germany, Italy, Netherlands, Spain and the UK, and demonstrated that by focussing on the primary prevention of periodontitis, i.e. managing gingivitis holistic savings varied from €7.8Bn (Netherlands) to €36Bn (Italy) over 10-years, with returns on investment between 15.2 (Italy) to 57.5 (Germany). A similar care pathway model for dental caries was developed, embedding non-targeted population-level primary preventive interventions (e.g. sugar tax, water fluoridation) and individualised interventions spanning the full preventive to interventional spectrum of care. Direct treatment costs were modelled across a 12-65 years-of-age life-course for each stage of the caries care pathway starting with healthy tooth tissue, progressing to sub-clinical demineralisation, cavitation and its restoration, to root canal therapy and ultimately

tooth loss.

A cohort model was developed using data from Brazil, France, Germany, Italy, Indonesia and the UK, to provide diversity in population size, per-capita income, caries prevalence and the differing structural features of health systems. National level DMFT data and progression rates were included and mapped to quintiles of deprivation (most deprived, 2nd most deprived, least deprived etc.). Using an overall annual progression rate of 0.18 (DMFT increment in DMFT/year)³, progression rates were adjusted according to assumptions across deprivation quintiles (least deprived adjustment +0.07; most deprived adjustment +0.29). The changes in these costs were then analysed for a range of interventions:

Scenario-1: non-targeted interventions applied with caries progression rates decelerating by 30% across each deprivation quintile,

Scenario-2: a “levelling-up” approach with prevention and management interventions targeted at a scale/intensity proportional to the degree of need across deprivation quintiles. Here the caries progression rate of least deprived quintile is applied across all quintiles.

Overall direct costs at a population level ranged from \$10,284Bn (Italy) - \$36,231Bn (Brazil), explained partly by population size, but with the highest per-person costs across a 12-65 years-of-age life-course, being \$22,910 in the UK. Principal findings were:

- Mainstream framing of oral disease as non-communicable diseases (NCD) is lacking
- Barriers exist to implementing upstream and downstream preventive measures
- Clinical care for caries remains largely focussed on a “repair” approach”
- The most deprived bear the highest costs of inadequate prevention.

The EI mapped the way forward as:

- Expanding and diversifying the oral health workforce (skill mix)
- Incentivisation of preventive care (financial)
- Population engagement to raise awareness

- Building public-private partnerships to promote population-level prevention
- Address shared risk factors with other NCDs to improve oral health
- Improve epidemiological methods to measure early caries and periodontal diseases
- Collect data and enhance transparency.

The impact of the EI work is already being realised, with oral health one major focus at the World Health Assembly in Geneva, where on 28th May the Global Self-Care Federation discussed self-care in the prevention of oral diseases in their summit in Geneva, attended by ministers for health and WHO representatives⁴.

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