Income-Related Inequity in Dental Care Use and Oral Health in Greece

HPR203

ISPOR Europe 2026
8–11 November 2026

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1 BACKGROUND

- Dental care in Greece is delivered largely through a dense private provider network, with limited public coverage and substantial reliance on out-of-pocket payment.
- High provider availability does not necessarily ensure equitable realised access, as socioeconomic and financial barriers may influence patterns of dental care use and oral health.
- Assessing equity therefore requires examining not only income-related differences in use and oral health, but also whether utilisation reflects differences in need and how the financing burden is distributed across income groups.

2 OBJECTIVE

To quantify income-related inequality and need-standardised inequity in dental care use and oral health in Greece, and to set them against the country's dental supply and financing.

3 METHODS

Design — Cross-national comparison combined with cross-sectional analysis of Greek adult microdata, accounting for the complex survey design.
Data — Eurostat/EHIS and dentist-density data for the EU comparison; IHME GBD 2019 for oral-disorders prevalence; ELSTAT EHIS 2019 for within-country use and oral health; HBS 2023 for financing.
Outcomes — Dental visit within the previous 12 months; poor or very poor self-rated oral health.
Inequality — Survey-weighted Erreygers-corrected concentration indices for dental use and oral health, with adults ranked by equivalised income.
Inequity — Horizontal inequity in dental use estimated by indirect need standardisation for age, sex and self-rated health; the index equals the standard CI of observed use minus the CI of need-expected use.
Financing — Kakwani indices assessed the progressivity or regressivity of private health payments across the income distribution.
Adjusted analysis — Survey-weighted logistic regression reporting adjusted odds ratios (OR).

STUDY DESIGN AT A GLANCE

EHIS 2019	**7,553 / 5,626**	**HBS 2023**
Greek adult and household microdata	Adults in the oral-health / dental-use models	Household financing analysis

4 RESULTS

Supply → inequity in use and health → who pays

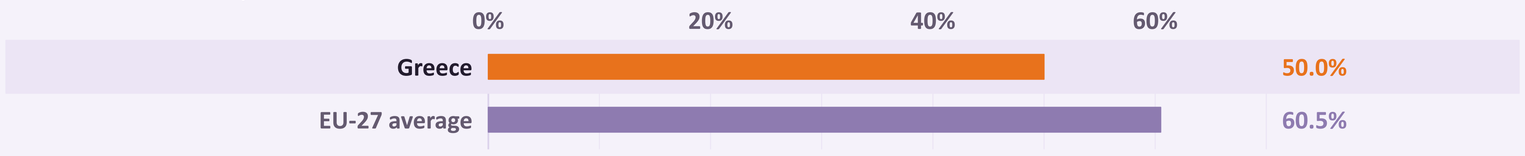
4.1 Abundant supply, below-average use

Greece has the most dentists in the EU and among the fewest dental visits.

13.8	**50.0%**	**21st of 27**
dentists per 10,000 — the highest rate in the EU	of adults visited a dentist in the previous 12 months	EU rank for dental attendance (EU-27: 60.5%)

Oral-disorders prevalence in Greece (51.5%) sits mid-range in the EU (41.2%–60.9%): the burden is ordinary, the shortfall is in use.

DENTAL ATTENDANCE, PAST 12 MONTHS

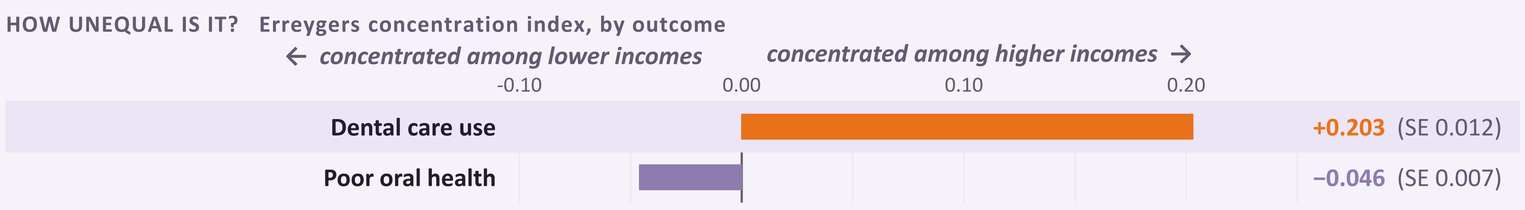


Density: Eurostat and ELSTAT (2023). Attendance and EU rank: EHIS (2019).

4.2 A double inequity in use and in health

Poor oral health sits with low-income adults; dental care does not.

HOW UNEQUAL IS IT? Erreygers concentration index, by outcome



IS THE GAP EXPLAINED BY DIFFERENCES IN NEED?
Standard concentration index for dental care use, before and after allowing for age, sex and health



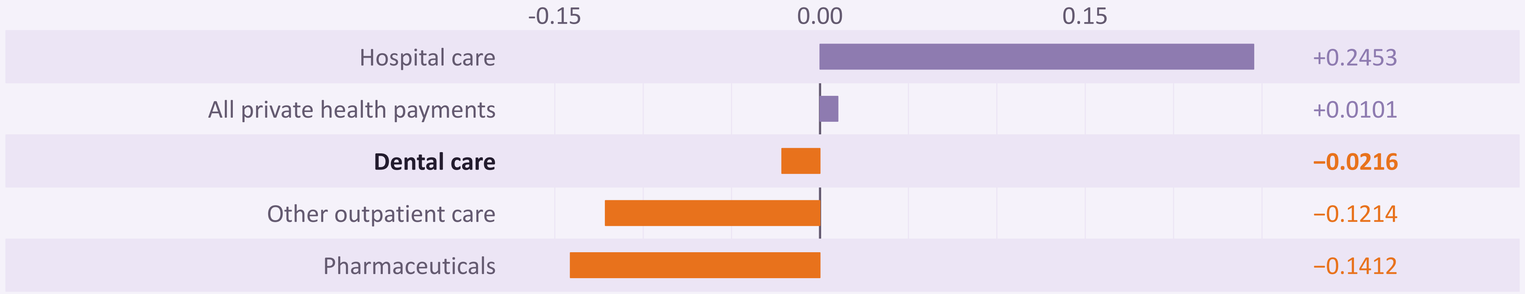
If need explained the gap, the second bar would shrink towards zero. It barely moves.

Erreygers indices; adults ranked by equivalised income; all p < 0.001. The two scales are not interchangeable: the need-standardised value compares with 0.102, not with 0.203.

4.3 Who carries the cost of dental care

Dental bills take a larger share of income from poorer households.

← regressive: greater relative burden on poorer households | progressive: greater relative burden on richer households →



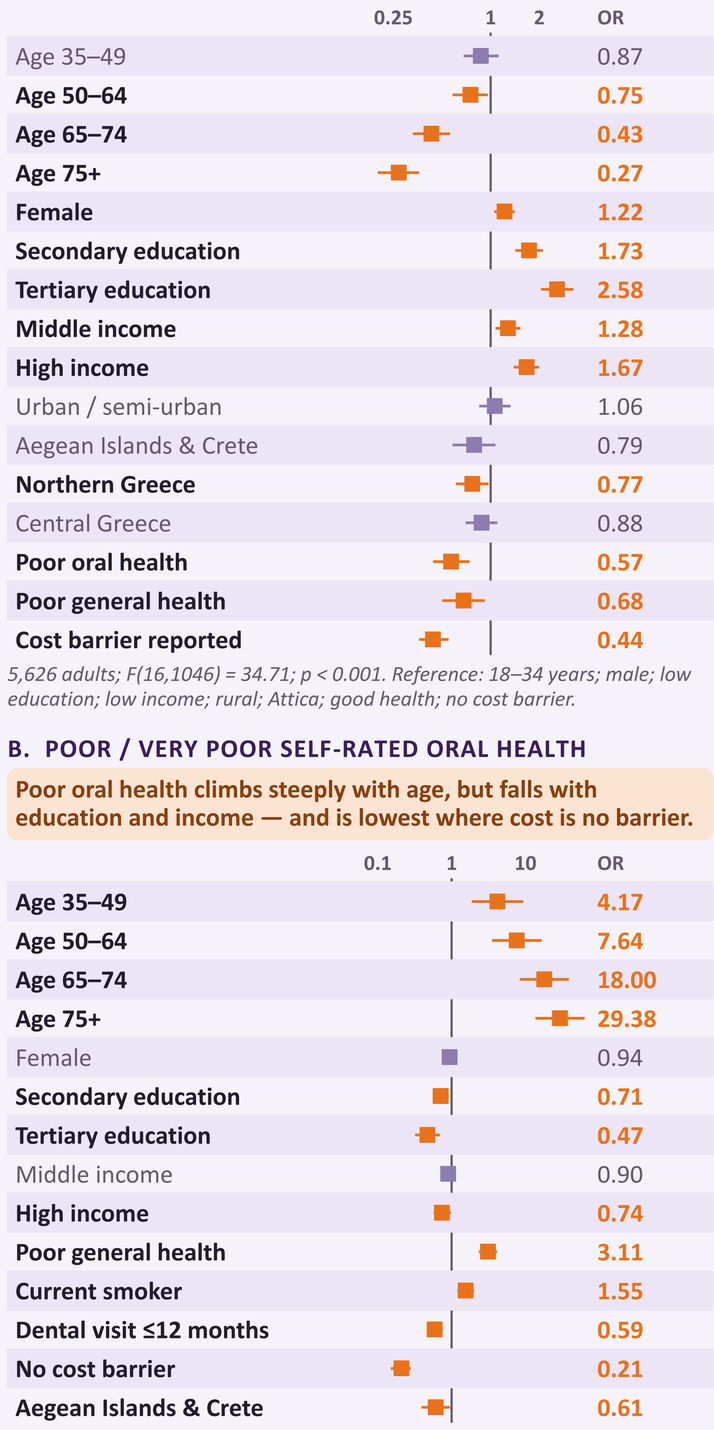
Kakwani index of private health payments, HBS 2023. Negative values indicate a greater relative burden on lower-income households.

4.4 Adjusted analysis

p < 0.05 · not significant

A. DENTAL CARE USE IN THE PAST 12 MONTHS

Use rises with income and education, and falls where oral health is worst — care follows means, not need.



5,626 adults; F(16,1046) = 34.71; p < 0.001. Reference: 18–34 years; male; low education; low income; rural; Attica; good health; no cost barrier.

B. POOR / VERY POOR SELF-RATED ORAL HEALTH

Poor oral health climbs steeply with age, but falls with education and income — and is lowest where cost is no barrier.

7,553 adults; F(26,1096) = 29.41; p < 0.001. Also adjusted for comorbidity, lifestyle, urbanicity and region. Squares are ORs, lines 95% CIs on a log scale.

5 CONCLUSIONS & KEY IMPLICATIONS

1. Greece has the EU's highest dentist density (13.8 per 10,000) yet ranks 21st of 27 on attendance: capacity is not reaching patients.
2. Dental care concentrates among higher-income adults (+0.203) while poor oral health concentrates among lower-income adults (−0.046); need explains almost none of the gap.
3. Improving public coverage and financial protection—not increasing dentist supply—is central to translating available capacity into more equitable access.

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FUNDING

This study has been funded by the Hellenic Dental Association.