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Background and research aim

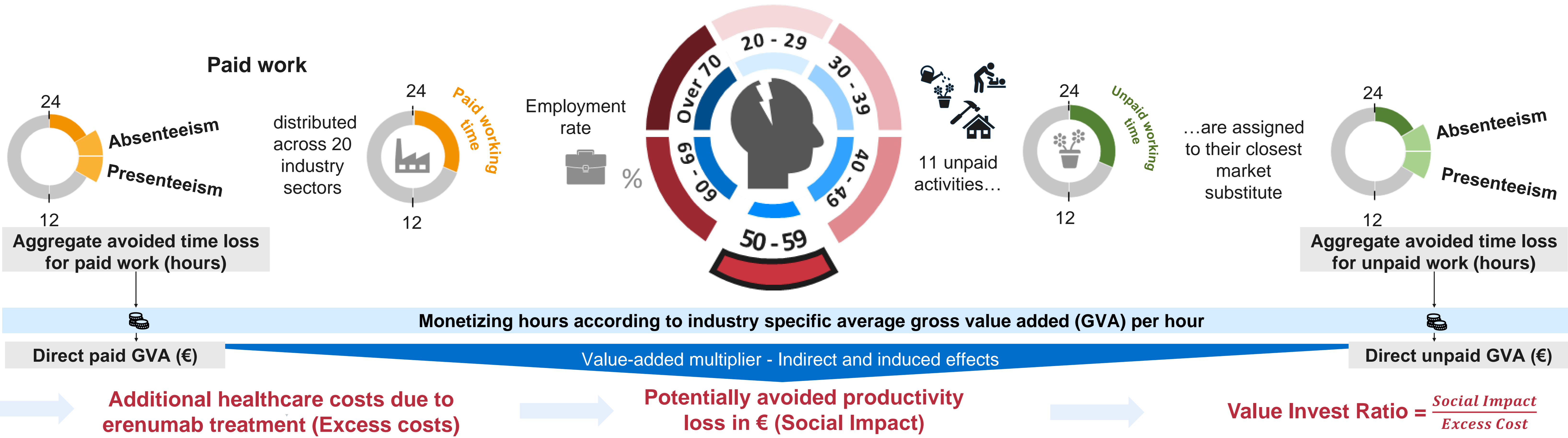
- Erenumab, a human monoclonal antibody blocking the calcitonin gene-related peptide (CGRP) receptor has shown preventive effects in migraine patients by lowering the number of monthly migraine days (MMDs)
- By using a novel approach to value health gains in monetary terms, this study estimates health related and societal effects if erenumab were prescribed to the indicated patient population with four or more MMDs in Germany until 2025

Methodology

An open-cohort model for two treatment scenarios: Erenumab vs. no prophylactic treatment (SoC)

- State-transition model** for 12 average patients (6 age groups x 2 genders).
- The average patients were modelled to reflect the probability of residing in one of **7 MMD states**: 0, 1-3, 4-7, 8-14, 15-19, 20-23, 24+
- The transition matrix for the erenumab scenario was derived from clinical data, while an identify matrix was used in the SoC scenario
- Cohort level extrapolation using demographical and epidemiological data

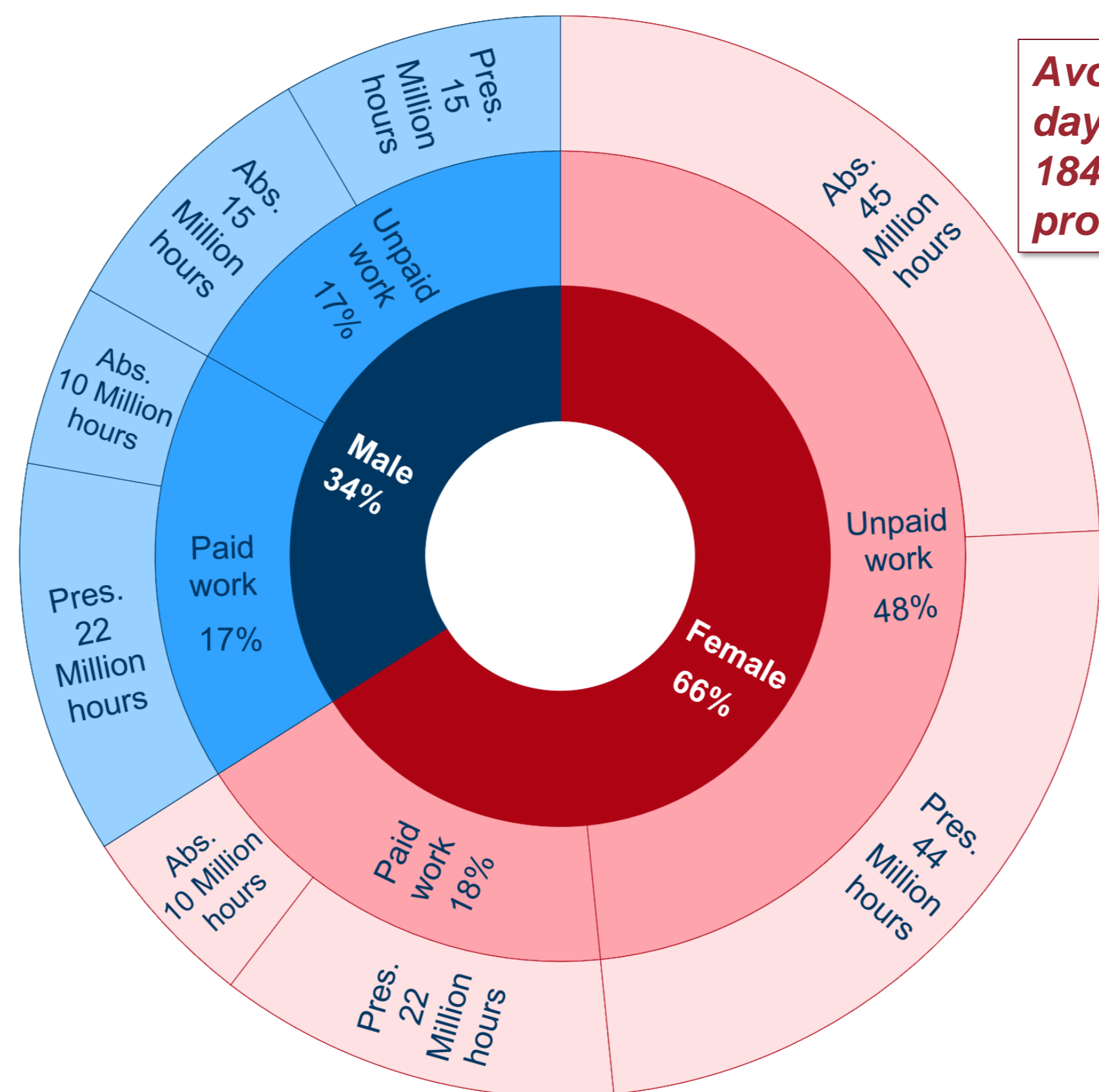
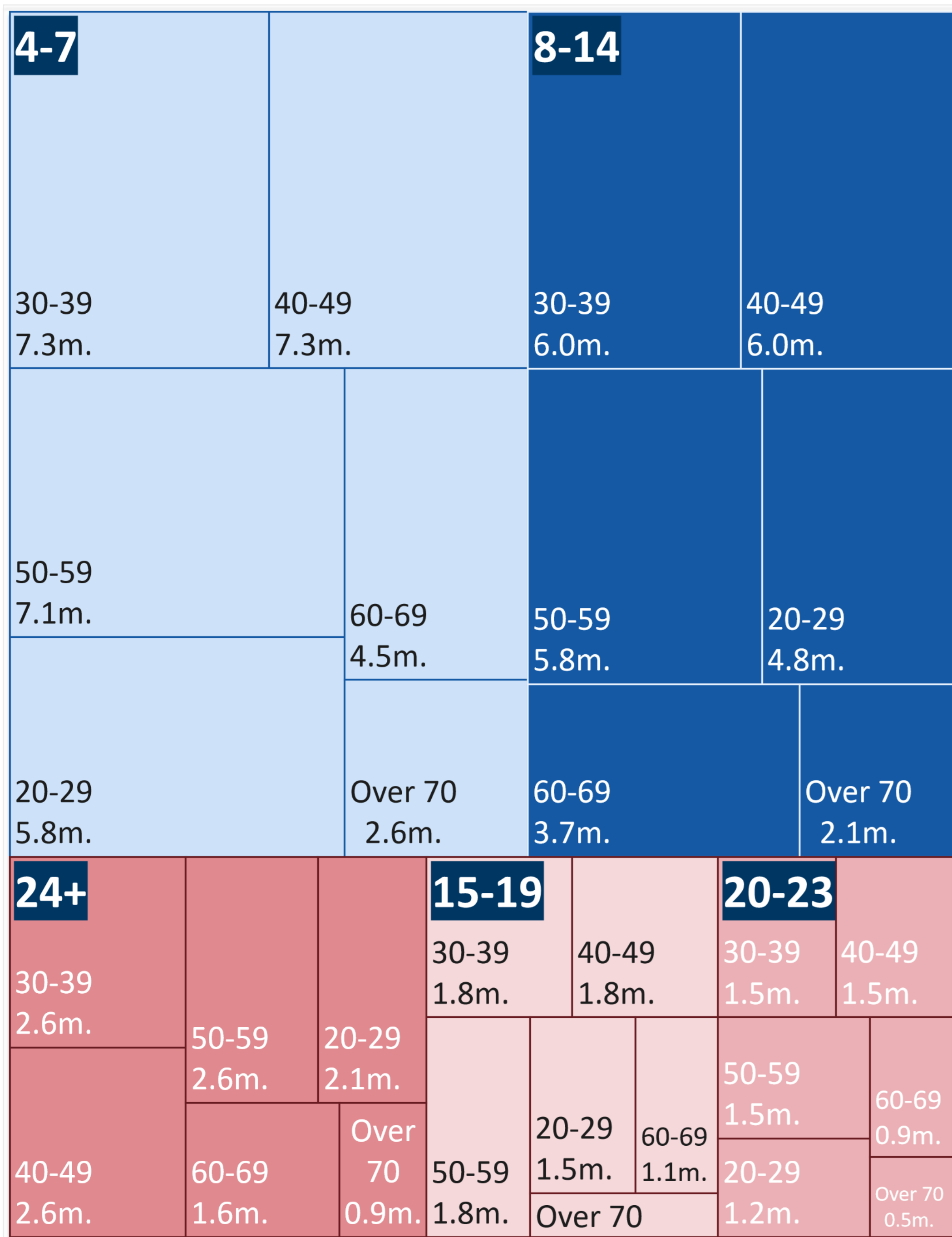
Monetary valuation of a migraine day



Results

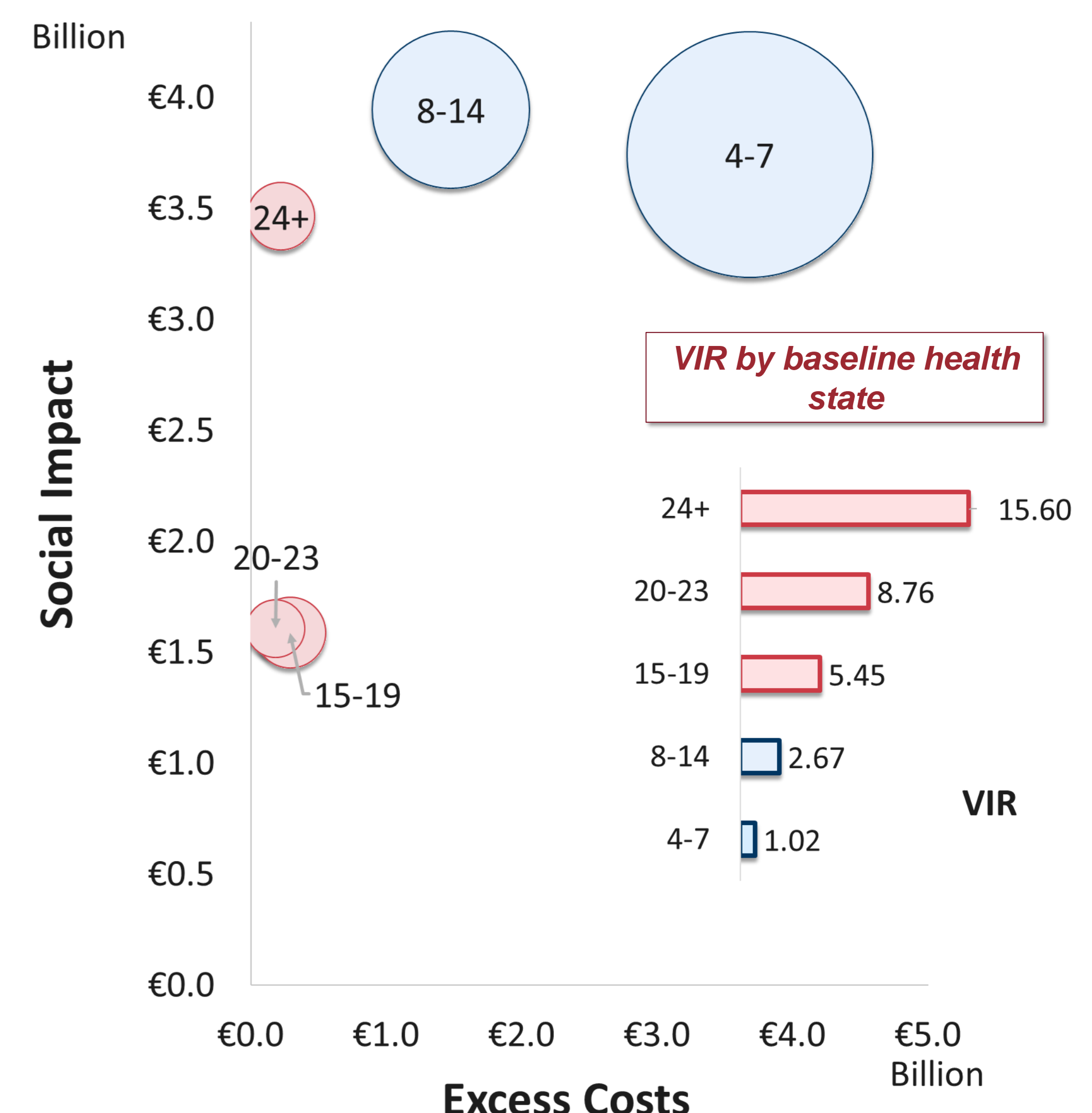
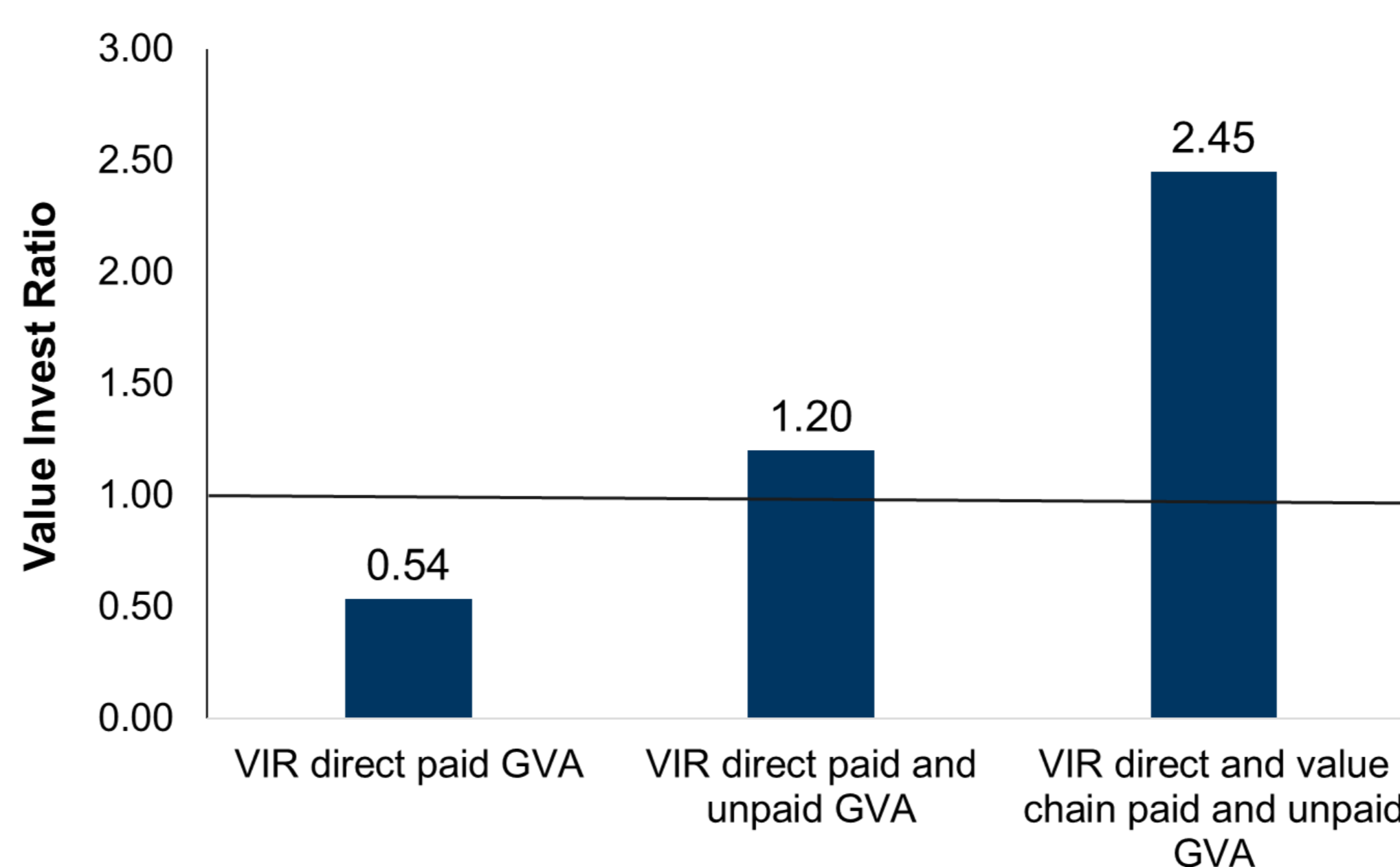
91.2m. migraine days per year might be prevented within the German migraine population with at least four MMDs

Macroeconomic valuation of avoided migraine days results in €14.35 bn. Social Impact



	Direct effects	Value chain effects	Total
Paid work	€3.14 bn.	€3.59 bn.	€6.73 bn.
Unpaid work	€3.9 bn.	€3.72 bn.	€7.62 bn.
Social Impact			€14.35 bn.
Quality adjusted life years (QALYs) gained			56,993
Excess costs			€5.86 bn.
Value-Invest Ratio			2.45

A broader perspective can reveal the full value potential



13.6% of patients start in chronic migraine stages, but 31% of yearly migraine days prevented are observed in this patient group

Conclusions

- Treating all migraine patients eligible for erenumab would prevent 91.2 m. migraine days per year
- Taking an aggregated macroeconomic perspective reveals the full welfare potential of erenumab:
 - an annual investment of € 5.86 bn. generates a value of € 14.35bn. This results in a value-invest ratio of 2.45, i.e.
 - each additional € 1.00 invested into treatment with erenumab returns € 2.45 of welfare back to the society

