In search for comparability: the PECUNIA reference unit costs for health and social care in Europe

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Motivation
Heterogeneity in costing between countries and sectors

Application of international costing
approaches to Austrian data (2015):
general practitioner (GP) unit cost
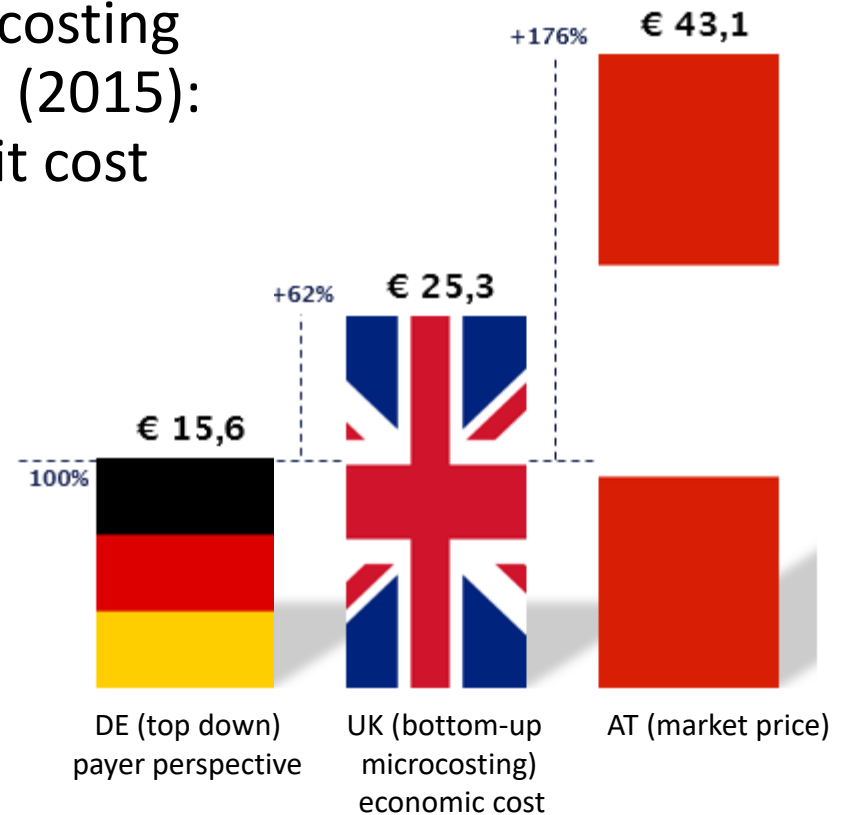
→ staggering differences in
unit cost estimates

+176%   € 43,1

+62%   € 25,3

€ 15,6

100%

DE (top down)
payer perspective

UK (bottom-up
microcosting)
economic cost

AT (market price)

Figure based on Mayer et al. (2020)

PECUNIA

Study aims
Improving unit cost estimates

- **Comparability**
  - Reference Unit Costs (RUC) for cross-country comparisons
  - Harmonized and validated methods (PECUNIA RUC Templates)
  - Five core health and social care services
  - Six European countries (AT, ES, DE, HU, NL, UK)

- **Quality**
  - External validation to assure RUC quality as key step in RUC development

- **Availability**
  - Available in the PECUNIA RUC Compendium and compatible with the PECUNIA Resource-Use Measurement (RUM) questionnaire

Methods
RUC calculation

- RUC calculation in six PECUNIA countries in 2020/2021
  - Aimed at fulfilling harmonized PECUNIA costing standards
    - Representative on the national level
    - Top-down micro- or gross-costing approach

- RUC calculations based on
  - National-level secondary data AND/OR
  - Primary data collected from service providers

- RUCs adjusted to
  - Reference currency: EUR
  - Reference year: 2019

Methods
External validation of RUCs

- Three approaches to external validation
    (1) Presentation at (inter)national conferences and peer-reviewed publication
    (2) Proactive validation
        a) Comparative evaluation against existing UC estimates
        b) Expert feedback
        c) Data provider feedback
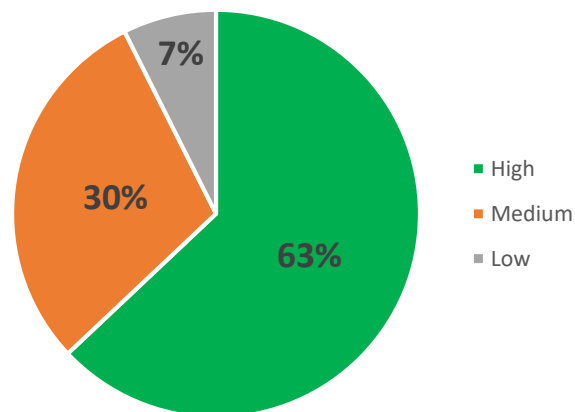   (3) As part of a dedicated validation work package in Spain

Results
External validation

- Initial external validation (November 2020) on 28 preliminary RUCs
  - Re-calculation of five preliminary RUCs:
    - AT: Nursing home
    - NL: Nursing home; dental care
    - HU: Nursing home; dental care (divided into five separate RUCs)
- Outcome of external validation and compliance with PECUNIA costing standards reported as level-of-certainty index
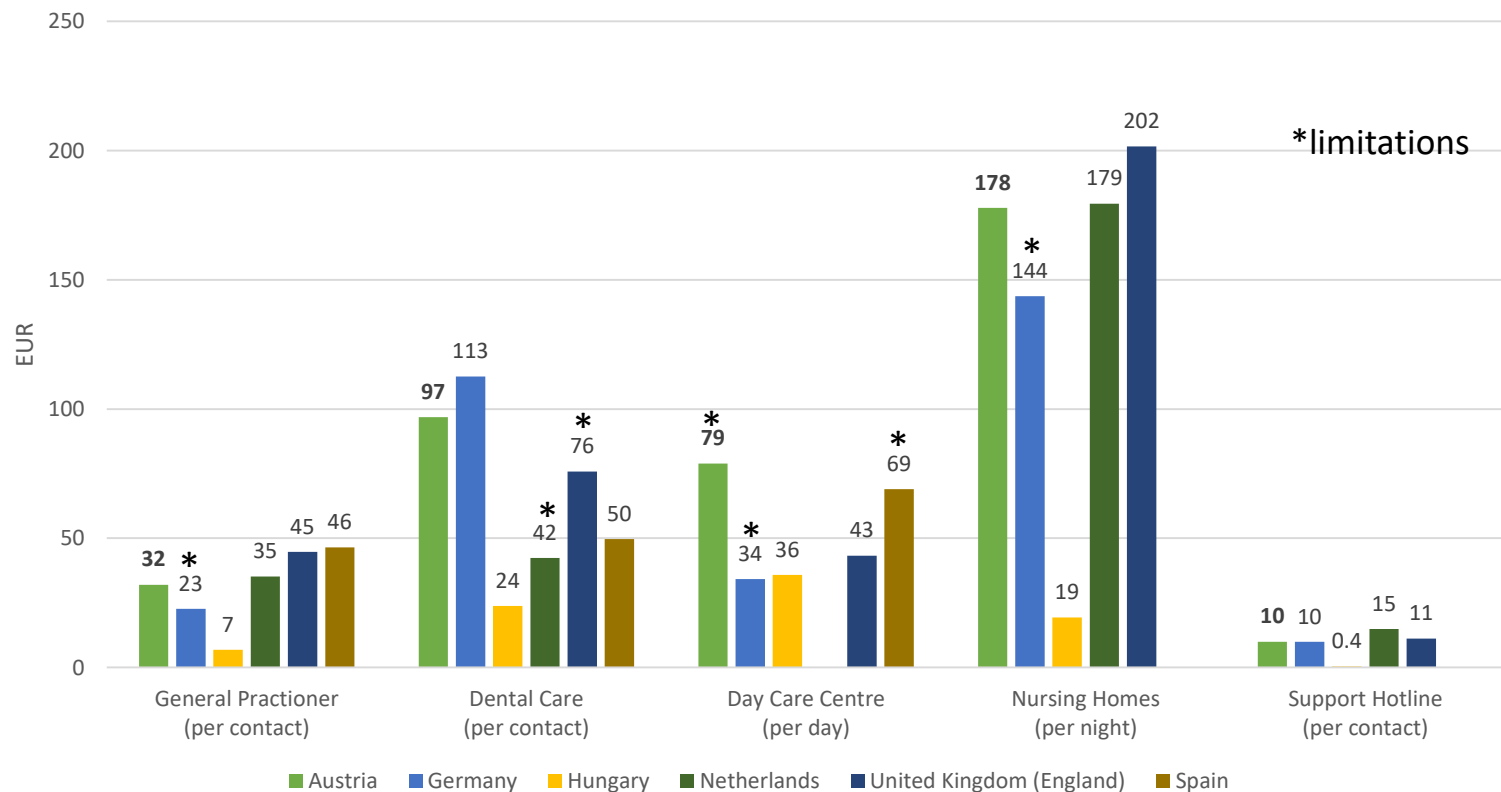
Level-of-certainty of Reference Unit Cost estimates for the core set of health and social care services compatible with the PECUNIA RUM (n=27), in percent

- High
- Medium
- Low

63% — 30% — 7%

Results
Country comparison

Reference unit cost estimates for the core set of health and social care serivces compatible with the PECUNIA RUM (n=27), per country

*limitations

Discussion
RUC development process

- Cross-country RUC variation
  - Exacerbated by differences in
    - Purchasing power
    - Scope of services
    - Healthcare system organization (private versus public funding)
  - Country-specific peculiarities,
    - e.g. dental care tourism in HU

- Data collection
  - Limited cooperation from service providers
    - Time constraints, lack of staff (Covid-19)
    - Sensitive nature of information
    - Inadequate internal accounting
  - Primary data require large samples for national representativeness
  - Secondary data not always harmonized across countries
    - e.g. inclusion of dentures in dental care

Discussion
Results

- First set of harmonized RUCs suitable for cross-country comparisons

- RUCs homogenous across PECUNIA countries
  - Differences reflecting purchasing power and wage levels
  - Outliers caused by data limitations

- RUCs indicate high cost level in AT
  - RUCs for health and social care services in AT rank among the highest for each service

THANK YOU FOR YOUR ATTENTION!

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Further information on PECUNIA

Our website:

https://www.pecunia-project.eu

Request access to the PECUNIA RUC Compendium via:

https://pecunia-project.eu/tools/ruc-compendium

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