



## Harmonized Unit Costs for Health and Social Care Services Based on the PECUNIA tools: The Example of Austria

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### 1. BACKGROUND AND OBJECTIVES

Previous research has shown that depending on the methodology applied in the unit cost development, staggering differences in unit costs may arise. In light of this, the **ProgrammE in Costing, resource use measurement and outcome valuation for Use in multi-sectoral National and International health economic evaluations (PECUNIA)** aims to i.a. **harmonize the cross-sectoral and cross-country unit cost development** and calculate standardized unit costs for selected services in several countries, including Austria.

### 2. METHODS

- Using the Microsoft Excel-based **PECUNIA unit cost calculator** templates for services allowing for standardized, transparent unit cost development,
- drawing on **national-level, publicly-available secondary data**,
- matching **harmonized service descriptions** allocating DESDE (Description and Evaluation of Services and Directories in Europe) codes and **harmonized units of analysis** derived in previous PECUNIA research,
- unit costs for **five core health and social care services** differentiated by service funding were calculated,
- for **Austria in Euro for year 2019**.

### 3. RESULTS

Table 1. Calculated unit costs for Austria (excerpt)

Resource use item	Provider	Unit of analysis	DESDE code	Unit cost in Euro (2019)	Details on data source	Unit cost calculation approach
Dental care	State/Social insurance-funded	per contact	SH-NX [K00-K14] O8.1u + 2261 (ISCO-08)	70,10 €	Statistisches Handbuch der österreichischen Sozialversicherung 2019, additional information on contacts per case retrieved from Dachverband (10.07.2020).	Proxy approach
Dental care	Privately funded (by patient/patient's family)	per contact	SH-NX [K00-K14] O8.1u + 2261 (ISCO-08)	120,00 €	Autonome Honorarrichtlinien 2019/2020, versäumte Sitzung (pro Stunde), assumption: 30 minutes	Proxy approach
Dental care	Mixed	per contact	SH-NX [K00-K14] O8.1u + 2261 (ISCO-08)	73,95 €	See above; weights: Ärztlich ambulante Versorgungseinheit (2018) retrieved from Dachverband (31.07.2020)	Proxy approach
General practitioner	State/Social insurance-funded	per contact	SH-NX [ICD-10] O8.1 + 2211 (ISCO-08)	31,80 €	Ärztekostenstatistik 2015; share overhead costs: Kemmetmüller (1994); direct-indirect time ratio and average length of consultation: Hoffmann et al. (2015).	Top-down gross-costing
General practitioner	Privately funded (by patient/patient's family)	per contact	SH-NX [ICD-10] O8.1 + 2211 (ISCO-08)	45,45 €	(Non-binding) price recommendations by the regional physicians' chambers for non-contracted physicians from six federal states, average	Proxy approach
General practitioner	Mixed	per contact	SH-NX [ICD-10] O8.1 + 2211 (ISCO-08)	32,04 €	See above; weights: Ärztlich ambulante Versorgungseinheit (2018) retrieved from Dachverband (31.07.2020)	Mixed approach
Health-related day care centre	State/Social insurance-funded	per client day	SH-NX [ICD-10] D4.1; SH-NX [F00-F99] D4.1; SS-NX	78,93 €	Statistik Austria, Pflegedienstleistungsstatistik, Pflegedienstleistungsstatistik 2018	Top-down gross-costing
Health-related support line	State/Social insurance-funded - applicable only	per contact	SH-CX [ICD-10] I1.2.4e	8,60 €	Rat auf Draht Jahresbericht 2018	Top-down gross-costing
Nursing home	State/Social insurance-funded	per night	SS-OX-R11; SH-AO [F00-F99] R11; SH-AO [ICF] R11	76,39 €	Statistik Austria, care services	Top-down gross-costing
Nursing Home	Privately funded (by patient/patient's family)	per night	SS-OX-R11; SH-AO [F00-F99] R11; SH-AO [ICF] R11	127,82 €	Statistik Austria, care services	Top-down gross-costing

Note: Excluding several details (e.g. for data sources, assumptions, up-rating etc.) due to space constraints. Source: PECUNIA Group 2020.

### 4. DISCUSSION AND CONCLUSION

This study is first to **develop internationally harmonized unit costs** for health and social care services for use in Austrian costing studies. Difficulties in the calculation process included the non-availability of secondary data leading to the use of proxy data (n=4; 36%). Further external validation of the unit cost estimates is ongoing. As one of the main advantages, the assignment of **DESDE codes** make the **unit costs semantically interoperable across countries**. Furthermore, the unit costs may be used together with the **PECUNIA Resource Use Measurement (RUM) instrument** advancing RUM and cost valuation in future economic evaluations based on multiple aligned tools. The unit costs will be included in the forthcoming European multi-sectoral, multi-country **PECUNIA unit cost compendium**.



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Fig. 1. Screenshot PECUNIA service unit cost template (excerpt)

SERVICE-1 Top-Down Micro-Costing Unit Cost Template (WP1) (unit cost per direct client)

Basic instructions and data sources: SERVICE-1 top-down micro-costing (WP1) cost template (for unit cost calculation per setting-specific direct client contact minute based on a top-down micro-costing approach) to be filled in by researcher(s) based on published secondary data provider, best "WP1" data collection (SERVICE-1). Further instructions:

Module 1: Service description

Module 2: Unit cost calculation results: bottom-up

Note: Beta version 1.0. Source: PECUNIA Group 2020.

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