PECUNIA

ProgrammE in Costing, resource use measurement and outcome valuation for Use in multi-sectoral National and International health economic evaluAtions

User Guide

PECUNIA resource-use measurement instrument

(PECUNIA RUM instrument)

https://www.pecunia-project.eu/

Contents

1. Introduction

This user guide is intended to assist users planning to use the resource-use measurement (RUM) instrument developed within the scope of the ProgrammE in Costing, resource-use measurement and outcome valuation for Use in multi-sectoral National and International health economic evaluAtions (PECUNIA) Project (the PECUNIA RUM). This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 779292. The user guide provides information on the instrument (Section 2), on how to access it (Section 3) and on how to use it (Section 4).

The PECUNIA RUM is free-of-charge for non-commercial research, healthcare and academic teaching activities following registration. If you are interested in commercial use of the PECUNIA RUM, please contact the developers via e-mail at pecunia@meduniwien.ac.at first.

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Disclaimer: Although the PECUNIA Consortium has taken every precaution in the compilation of this user guide, it disclaims any liability, responsibility or warranty for the contents and its use with respect to its correctness, quality, accuracy or completeness.

2. PECUNIA RUM

The PECUNIA RUM Instrument is a Microsoft Word©-based internationally standardised, harmonised and validated, generic, self-reported RUM instrument that measures resource use in all relevant sectors for costing from a societal perspective in the adult population: health and social care, education, (criminal) justice, productivity losses, and informal care. It is consistent with the harmonised PECUNIA Costing Concept (PECUNIA Care Atom, PECUNIA Service Lists, PECUNIA Coding System) and therefore with other PECUNIA Costing Tools (PECUNIA Reference Unit Cost (RUC) Templates, PECUNIA RUC Compendium) to achieve cross-country and cross-sectoral comparability by referring to activity-based rather than linguistic equivalence of services. The PECUNIA RUM was developed as a 37-page pen-and-paper questionnaire in English by the scientific partners of the PECUNIA Consortium between mid-2019 and June 2021. It has a modular structure of nine sections covering questions related to:

- Place of living and overnight stays (Section A)
- Non-residential health and social care (Section B)
- Medication (Section C)
- Unpaid help (informal care) (Section D)
- Education (Section E)
- Employment and productivity (Section F)
- Safety and justice system (Section G)
- Out-of-pocket and other expenses (Section H)
- Final remarks (Section I).

While Sections A, B, C, D, E, G, and H were all newly developed, the section on 'Employment and productivity' (Section F, the so called IPCQ PECUNIA) is based on an existing instrument developed by the institute for Medical Technology Assessment (iMTA), the iMTA Productivity Cost Questionnaire (IPCQ). The different modules have been harmonised with each other through the following steps: a comprehensive scoping review to identify existing RUM recommendations, a focus group of health economists to provide feedback on the first draft, an initial wording review, professional English language editing, piloting in (online) interviews with former mental health care users and carers, and a formal translatability assessment. More information about the development process of the PECUNIA RUM can be found in a video here. PECUNIA RUM has been optimized for translation through the wording review and translatability assessment. Translations are available in Dutch and German, and additional language versions (e.g. Hungarian) are under way. An electronic version of the PECUNIA RUM is planned to be made feasible in the future.

3. Accessing the PECUNIA RUM

The instrument can be accessed via the official website of the PECUNIA Project . A. The sample copy of the PECUNIA RUM is available on the official website of the PECUNIA Project. Anyone wishing to use the PECUNIA RUM for non-commercial research, healthcare and academic teaching activities can do so free-of-charge. For further information on access for non-commercial purposes and details of permission to use for commercial purposes, please contact the PECUNIA Consortium via e-mail at pecunia@meduniwien.ac.at.

4. Using the PECUNIA RUM

4.1. Specifications of the PECUNIA RUM

The PECUNIA RUM version 1.0 is designed as a pen-and-paper questionnaire, which has to be printed and completed by the respondents in writing. The PECUNIA RUM can be completed in during an interview with a researcher present. The questionnaire can also be sent to respondents by post to be completed independently. The suggested recall period is set at three months and is intended for resource use data collection covering the period of three months prior to completion of the instrument. Consistent units of measurement with respect to services are used in the PECUNIA RUM. Outpatient services correspond to the measurement unit of 'per contact', daycare services correspond to the measurement unit of 'per day', and residential care services correspond to the measurement unit of 'per night'. Routing was introduced to aid respondents with navigating the PECUNIA RUM. Respondents who did not use a specific type of resources are often able to skip questions and/or sections of the PECUNIA RUM. Routing is added in the form of instructions after answer options as shown in the example below.

B1.1	**Have you used any non-emergency outpatient/social care services in the past 3 months?**
	Non-emergency outpatient/social care services could include routine check-up appointments, scheduled appointments to discuss any physical or mental health issues, and telephone or online contacts (e.g. phone consultation, online prescription ordering). Please only consider the services you used for yourself and not those you may have used on behalf of someone else.

▢	Yes *Please go to question B1.2*
▢	No *Please go to question B2*
▢	I don't know/I would rather not say *Please go to question B2*

Where no routing is mentioned, the respondents should proceed with the next question/section. Please be aware that the routing is the PECUNIA RUM version 1.0 is designed to maintain the consistency of the entire questionnaire.

4.2. Adapting the instrument to a specific setting

The PECUNIA RUM is a standardised comprehensive resource-use measurement instrument designed to facilitate the comparability of resource-use data across studies. To ensure the comparability of resource-use data, it is essential that users use the original version of the instrument as much as is feasible. However, the PECUNIA RUM can be adapted in several ways to suit the specific context in which the study is conducted. In cases where users opt to adapt the PECUNIA RUM, all adaptations need to be documented and reported.

4.2.1. Recall period

The suggested recall period of three months was derived from a workshop with health economists during the 2019 conference of the International Health Economics Association (iHEA) in Basel, Switzerland. It can be adapted to other recall periods to suit the specific study context.

4.2.2. Omitting modules

Table 1 below provides an overview of the PECUNIA RUM modules and their content. The structure of the instruments allows users to adapt the instrument to the specific context by selecting relevant modules and omitting the modules that are deemed irrelevant. The relevance of the modules depends on an array of factors including the target population, the nature of the intervention, and the recommended

perspective for the analysis according to the national costing guidelines. Selection of the modules is at the users' discretion for each particular study. The PECUNIA RUM developers recommend considering the context in which the study is conducted and consulting relevant stakeholders to justify the in-/exclusion of the PECUNIA RUM modules. Please be aware that exclusion of modules would require adding that sections have been deleted. For example "Section C has been omitted from the questionnaire for this study. Please continue with Section D." Another alternative is to adjust the numbering of the sections.

Table 1. Overview of the modules of the PECUNIA RUM

Module	Types of resource-use measured
Place of living and overnight stays	Usual living situation, residential care, and institutional stay selected from a range of residential, health, social, educational and correctional facilities
Non-residential health and social care	Use of health and social services including outpatient, daycare, helplines, and vocational services
Medication	Use of medications
Unpaid help (informal care)	Informal care provided by the respondent's friends, relatives, neighbors or volunteers
Education	Highest level of education, current educational status, absenteeism and presenteeism at school, the use of education services (e.g. tutoring)
Employment and productivity	Current employment status, absenteeism and presenteeism at paid and unpaid work
Safety and justice system	Contacts with police, fire-and-rescue and legal services, material damage caused by the respondent (e.g. theft, vandalism), incarceration
Out-of-pocket and other expenses	Personal expenses including expenses for household help, childcare, purchase of goods (e.g. wheelchair)

4.2.3. Translations and cultural adaptations

The PECUNIA RUM was subjected to a thorough translatability assessment to improve translation quality and comparability for future translations and use in multilingual studies. The English language version of the PECUNIA RUM has been linguistically and culturally optimized for the translation in French, Polish, Hebrew, Portuguese, Russian and Spanish language.

To aid recall, the PECUNIA RUM includes country-specific examples of services. Question B4.2 is displayed for illustration: this lists the country- specific example 'mountain rescue' in 'other rescue services', however, not all countries have mountains (e.g. The Netherlands) and therefore mountain rescuers. Users who would like to translate the PECUNIA RUM should make use of the accompanying Concept Elaboration Document that clarifies the meaning of the source text. It is an aid for translators which contains clear concept definitions and gives recommendations on how to modify the examples of the source text displayed in brackets to the desired country-specific context. We recommend a minimum methodology of Dual forward translation and single back translation related to the standard

[Linguistic validation methodology](#) based on the [Principles of Good Practice for the Translation and Cultural Adaptation Process for Patient-Reported Outcomes (PRO) Measures by Wild et al. (2005)](#). The thorough Translatability Assessment and the detailed Concept Elaboration Document build a strong foundation for future translations that are highly accurate and of high quality.

B4.2	How many times have you used any of the following emergency care services for yourself in the past 3 months? *Please tick all answers that apply and indicate the number of contacts you had with a given service. If you are unsure, please tick 'Other' and provide details.*		
		Number of face-to-face contacts	Number of online or telephone contacts
1	Emergency ambulance (e.g. paramedics)	▣ ____contacts	____contacts
2	Out-of-hours medical service (e.g. night care)	▣ ____contacts	____contacts
3	Accident and Emergency (A&E) department	▣ ____contacts	____contacts
4	Fire brigade	▣ ____contacts	____contacts
5	Other rescue services (e.g. mountain rescue) Please specify:_____	▣ ____contacts	____contacts

4.3.   Instructions for different types of questions

The PECUNIA RUM contains several different types of questions. All question types and exemplary responses are displayed below for illustration.

4.3.1 Checkbox

B1.1	Have you used any non-emergency outpatient/social care services in the past 3 months? *Non-emergency outpatient/social care services could include routine check-up appointments, scheduled appointments to discuss any physical or mental health issues, and telephone or online contacts (e.g. phone consultation, online prescription ordering). Please only consider the services you used for yourself and not those you may have used on behalf of someone else.*

☒	Yes *Please go to question B1.2*
☐	No *Please go to question B2*
☐	I don't know/I would rather not say *Please go to question B2*

4.3.2. Checkbox and free text

B7.2		How many times have you received non-emergency transport for your health and social care needs in the past 3 months? *Please tick all answers that apply and indicate the number of times you used a given service. If you are unsure, please tick 'Other' and provide details.*		
	1	Non-emergency ambulance ride	☒	_3_ times
	2	Taxi service	☒	_1_ times
	3	Other, please specify: *shared taxi service*	☒	_2_ times

4.3.3. Free text

F3	What is your occupation?
	Please indicate the occupation for which you get paid.
	Primary school teacher

4.3.4. Multiple checkboxes and fill in multiple free texts

C1.2 Please list below any prescribed medications you have taken in the past 3 months.

If you have taken the same medication at different doses, please list each dose in a separate row and indicate the duration for each dose if known.

Medication name	Medication type	Dose	Unit	How often have you taken the given medication?	For how long have you taken the given medication in the past 3 months?
Zoloft	■ tablet/capsule ▫ cream ▫ liquid ▫ injection ▫ Other: _____	50	■ mg ▫ g ▫ ml ▫ Other: _____	■ per day ▫ per week ▫ per month ▫ as needed Other: _____ *2__*times	12 ■ day(s) ▫ week(s) ▫ month(s)

4.3.5. Fill in date(s)

F7.1   When did you call in sick?

Please fill in the date below.

Day		Month		Year			
0	1	0	3	2	0	2	1

Please go to question F9, but first read the explanation above question F9

4.3.6. Circle the option

F8.2   On the days that you were bothered by these problems, was it difficult to get as much work done as you normally do? On these days, how much work could you do on average?

Look at the figures below. A '10' means that you were able to do as much work as you normally do. A '0' means that you were unable to do any work on these days.

Please circle the figure that fits best below.

On these days I could not do anything				I was able to do half as much as I normally do				I was able to do just as much as I normally do		
0	1	2	3	4	5	6	⑦	8	9	10

4.4.   Using the PECUNIA RUM with other PECUNIA costing tools

The PECUNIA RUM was developed in conjunction with the PECUNIA costing templates and the PECUNIA RUC compendium with the aim of facilitating the comparability of resource use and cost data. The PECUNIA costing templates are a Microsoft Excel©-based set of tools that enable researchers to calculate unit costs that can be compared across countries and sectors, so called Reference Unit Costs (RUCs), using standardized and scientifically validated methods. More information on the development and use of the PECUNIA costing templates is available here. The PECUNIA costing templates can be accessed here. The PECUNIA RUC compendium is a Microsoft Excel®-based multi-sectoral, multi-country database of unit costs comparable across countries and sectors and developed using standardized and scientifically validated methods (RUCs). More information on the development and use of the PECUNIA RUC compendium is available here. The PECUNIA RUC compendium can be accessed here. Access to PECUNIA tools can be requested via the website of the PECUNIA project (https://www.pecunia-project.eu/).