

Objective:

Evaluate the annual value of pharmaceutical work done in the Finnish community pharmacies in 2023.

Knowledge gained:

Pharmaceutical work and especially counselling creates considerable societal value, most of which are from HRQoL and productivity benefits.

Analysis:

Modelled societal value, and provider and pharmacy customer savings on public health care services.

Key message:

Policy discussion should consider how much pharmaceutical work and counselling is desired, and how the aim can be achieved.

Finnish Society Gains 2.6 Billion Euros of Value Annually from the Pharmaceutical Work Provided by the Licensed Community Pharmacies

Haikonen-Salo L*, Jalkanen K*, Väättäin S, Mankinen P, Soini E

ESIOR Oy Kuopio, Finland. * Equal contribution.

BACKGROUND

Importing, wholesaling, pricing, and dispensing of medicines are highly regulated in Finland. Only pharmacist owned licensed community pharmacies and pharmacies owned by the universities dispense outpatient medicines, which constitute 69 % of the pharmaceutical sales in Finland.¹

Personnel with pharmaceutical training carry out pharmaceutical work, including self-care and over the counter (OTC) medication counselling, prescription medication counselling, as well as checking prescriptions for errors and medication interactions, and resolving them as needed. The pharmaceutical work is required by law, and it is given without any additional compensation to the community pharmacies.

This is the first time the full societal value of the pharmaceutical work of Finnish community pharmacies has been evaluated.

METHODS

The economic evaluation utilised the PICOSTEPS framework.²

COMPONENT	CONTENT
Population	Finnish pharmacy customers and the Finnish society.
Intervention	Pharmaceutical work done in the Finnish pharmacies including self-care and over the counter (OTC) medication counselling, prescription medication counselling, checking prescriptions for errors, and checking for medication interactions.
Comparator	Counterfactual scenario, where the pharmacies do not provide pharmaceutical work.
Outcomes	Modelled monetary value to society, and savings to healthcare providers (wellbeing service counties) and pharmacy customers.
Setting	Examination of observed use of healthcare services and productivity based on available information ³⁻¹¹ , and the change in it if the pharmaceutical work was not provided by the pharmacies estimated by Finnish physicians ¹² , with a model, that considers the overlap within the pharmaceutical work and the utilisation of the community pharmacies in Finland ¹³ .
Time	Latest available year, 2023. Continuity correction or discounting were not applied.
Effects	Impacts on the costs of health care resource use ¹² for providers ¹⁴⁻¹⁶ and customers ¹⁷ . Additionally, for society, impacts on the productivity ^{11,12, 18,19} and customers' health-related quality-of-life (HRQoL) ^{12,20} . Travelling costs, and the effects of the changes in absenteeism and HRQoL for customers were not modelled.
Perspective	Society (all benefits), healthcare providers, and pharmacy customers.
Sensitivity analyses	Estimates using the bootstrapped confidence intervals for the effects on the health care service use. HRQoL impacts valued realistically (€29,997 per QALY) instead of conservative base case (€14,998,50) ²¹ , and productivity losses valued based on gross domestic product ²² instead of employer costs in the base case.

ACKNOWLEDGEMENTS

Association of Finnish Pharmacies for funding. Inka Puumalainen and Erkki Kostiainen from the Association of Finnish for support and advice. Physicians participating to the survey. SuccessClinic for the distribution of electronic survey developed by ESITOR Oy with their SPESIOR® tools.

REFERENCES

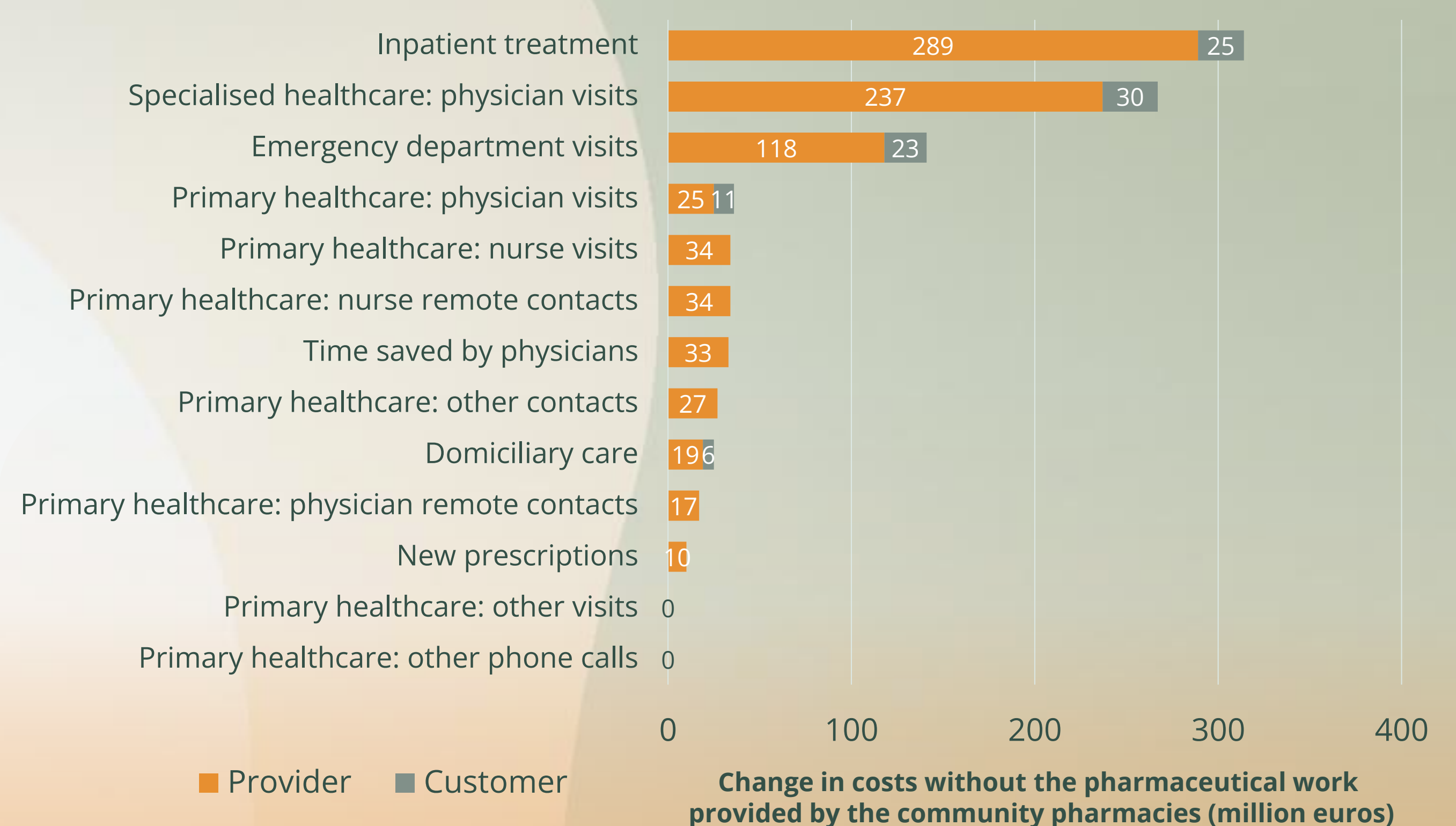
- 1) Finnish statistics on medicines 2022. <https://urn.fi/URN:NBN:fi-fe202403019539>
- 2) Soini et al. 2017. Cost-utility of First-line Disease-modifying Treatments for Relapsing-Remitting Multiple Sclerosis. <http://dx.doi.org/10.1016/j.clinthera.2017.01.028>
- 3) Official statistics of Finland: Population aged 15-74 by labour force status and region, 2023. <https://stat.fi/en/statistics/ytyl>
- 4) Finnish Institute for Health and Welfare: Healthcare outpatient visits by service provider [in Finnish]. <https://thl.fi/thl/tilastot-ja-data>
- 5) Finnish Institute for Health and Welfare: Soskanet, indicators 1265, 2536 ja 5344. <https://soskanet.fi/soskanet/en/haku>
- 6) Official statistics of Finland: Statistical report 62/2023 [in Finnish]. <https://urn.fi/URN:NBN:fi-fe2023110144601>
- 7) Social Insurance Institution of Finland: Amount of data stored in the Kanta Services. <https://tietotarjotin.fi/en/publication/956744/amount-of-data-stored-in-the-kanta-services>
- 8) Timonen et al. 2017. Electronic prescription anomalies: a study of frequencies, clarification and effects in Finnish community pharmacies. <https://doi.org/10.1111/jphs.12224>
- 9) Toivo et al. 2015. Identifying high risk medications causing potential drug-drug interactions in outpatients: A prescription database study based on an online surveillance system. <https://doi.org/10.1016/j.sapharm.2015.09.004>
- 10) Helkura & Taskinen 2023 [in Finnish] <https://stat.fi/tietotrendit/artikkelit/2023/yhden-ja-kahden-paivan-sairauspoissaolot-yleisia>
- 11) Ministry of Social Affairs and Health: Value of lost labour input in Finland. <https://stm.fi/en/value-of-lost-labour-input-in-finland>
- 12) Survey to Finnish physicians carried out in Spring 2024.
- 13) Taloustutkimus: Pharmacy visits in Finland 2020. Association of Finnish Pharmacies 2020.
- 14) Mäkinen & Kokko: Unit costs of health and social care in Finland in 2017 [in Finnish]. Finnish Institute for Health and Welfare 2021.
- 15) Official Statistics of Finland: Price Index of public expenditure <https://stat.fi/en/statistics/jmhi>
- 16) Official Statistics of Finland: Index of wage and salary earnings <https://stat.fi/en/statistics/ati>
- 17) Ministry of Social Affairs and Health: Health care payments [in Finnish]. <https://stm.fi/terveydenhuollon-maksut>
- 18) Insurance institute: Statistics on sickness allowances 2023. <https://tietotarjotin.fi/en/statistic/2856248/statistics-on-sickness-allowances>
- 19) Official statistics of Finland: Hours worked, cost of an hour worked and labour cost per staff-year by sector, 2020. <https://stat.fi/en/statistics/tvtvk>
- 20) Klante et al. 2014. Estimating the minimum important change in the 'SD' scores. <https://doi.org/10.1007/s11136-014-0787-4>
- 21) Claxton et al. 2015: Methods for the Estimation of the NICE Cost Effectiveness Threshold. <https://doi.org/10.3310/hta19149>
- 22) Official Statistics of Finland: Annual national accounts, Gross domestic product and national income, supply and demand, annually, 1975-2023*. https://stat.fi/tup/tilastotietokannat/index_en.html

RESULTS

With conservative valuation of HRQoL and productivity, the annual societal value of pharmaceutical work was estimated at €2,599 million.

The main value driver was self-care and OTC medication counselling (66%) followed by prescription medication counselling (26%) and checking of prescriptions for errors (7%) and interactions (2%).

The Finnish physicians responding to our questionnaire attributed significant benefits to all four dimensions of pharmaceutical work and 70% of them would keep OTC medicine dispensing in the licensed pharmacies.



The average annual societal health service cost savings were estimated at €950 million, of which €855 and €95 million were to providers and customers, respectively.

In the sensitivity analyses, the estimated annual societal savings in health service costs ranged from €618 to €1,327 million, compared to €950 million in the base case. The estimated provider savings (€855 million) represent approximately 3.7 % of the annual national healthcare expenditure.

When HRQoL impacts were valued realistically, and productivity losses valued based on gross domestic product (GDP) the modelled societal value was approximately €5 billion.

CONCLUSIONS

Pharmaceutical work currently provided by the community pharmacies creates considerable societal value, of which around 36 % are savings to public healthcare providers and pharmacy customers.

Especially self-care and OTC medication counselling ease the burden of healthcare producers.

Findings may guide the policy discussion on how much pharmaceutical work and counselling is desired.

Poster abstract



Study report presentation [in Finnish] is available at: apteekkariliitto.fi

