World Health Organization

European Region

The impact of increasing user charges for diabetes medicines

Lessons from Finland

Improving affordable
access to health care

WHO Barcelona Office for Health Systems Financing

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Abstract

Diabetes is a common chronic condition that affects around 7% of adults in Europe. Many people with diabetes need medicines to control symptoms and prevent complications. In 2017, against a backdrop of rising diabetes care costs and budgetary pressure, the Finnish health system increased user charges (co-payments) for all diabetes medicines except insulin, changing them from a fixed co-payment of €4.50 per item to a percentage co-payment of 35% of the retail price. What at first glance may seem like a relatively modest change in co-payment design led to a substantial increase in out-of-pocket payments for diabetes medicines. This brief summarizes the policy change and its impact and identifies lessons for Finland and for other countries that are concerned about the negative effects of user charges on access to health care.

Keywords

AFFORDABLE ACCESS
COVERAGE POLICY
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FINANCIAL PROTECTION
FINLAND
HEALTH FINANCING
OUT-OF-POCKET PAYMENTS
UNIVERSAL HEALTH COVERAGE
USER CHARGES (CO-PAYMENTS)

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#2

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#3

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About the series

This series of briefs provides policy-makers with information on steps they can take to improve affordable access to health care (financial protection).

Each brief:

- focuses on policy changes introduced in one or more health systems in Europe and central Asia;

- considers the implications of the policy change for out-of-pocket payments, financial hardship and unmet need for health care, particularly in people with low incomes; and

- identifies the lessons learned from this experience, both for the countries involved and for other countries.

The series covers a range of health system issues but always aims to highlight the role of health financing policy in improving affordable access to health care.

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Summary

User charges (co-payments) are widely applied in European health systems but often pose a challenge for affordable access to health care (financial protection), a core dimension of universal health coverage and health system performance. The design of user charges is a key determinant of financial protection: simple changes in design can have a significant impact.

Diabetes is a common chronic condition that affects around 7% of adults in Europe. Many people with diabetes need medicines to control symptoms and prevent complications.

In 2017, against a backdrop of rising diabetes care costs and budgetary pressure, the Finnish health system increased user charges for all diabetes medicines except insulin, changing them from a fixed co-payment of €4.50 per item to a percentage co-payment of 35% of the retail price.

What at first glance may seem like a relatively modest change in co-payment design led to a substantial increase in out-of-pocket payments for diabetes medicines. Studies monitoring the impact of the increase in co-payments found an increase in the share of people finding it difficult to pay for diabetes medicines; an increase in the use of social assistance to cover co-payments for medicines; a decrease in the use of non-insulin diabetes medicines; an increase in scepticism about the fairness of co-payments; and a decrease in satisfaction with diabetes care.

This brief summarizes the policy change and its impact and identifies lessons for Finland and for other countries that are concerned about the negative effects of user charges on access to health care.

The policy challenge

User charges (co-payments) are widely applied in European health systems, particularly for outpatient prescribed medicines, posing a challenge for universal health coverage and health system performance (Box 1). Policy-makers can overcome some of these challenges by paying careful attention to the design of user charges. Relatively simple changes in design can have a significant impact on affordable access to health care (financial protection) (Box 2).

The Finnish health system provides permanent residents with publicly financed access to a broad range of health care but applies co-payments to most types of health care, including outpatient prescribed medicines (UHC watch, 2025). In 2017 the Government of Finland increased co-payments for non-insulin diabetes medicines as part of a larger set of policies to reduce overall public spending.

Diabetes is a common chronic condition that affects around 6% of adults in Finland and around 7% of adults in Europe (IDF, 2025). Many people with type 2 diabetes need medicines to control symptoms and prevent complications. Studies suggest that people in Finland with diabetes are more likely to have a lower income and a higher prevalence of disabling or chronic conditions than other people (Kurko et al., 2018; Aaltonen, Niemelä & Prix, 2022).

Spending on outpatient diabetes medicines grew sharply in the decade before the reform (rising by 95% for insulin and 231% for non-insulin medicines between 2003 and 2015), driven both by the growing number of people with diabetes (an increase of 51% in new insulin users and 114% in new users of non-insulin medicines between 2003 and 2015) and a rapid increase in the use of newer, more expensive medicines to treat diabetes (Soppi et al., 2018).

In 2017 the design of co-payments for non-insulin diabetes medicines changed from a fixed co-payment of €4.50 per item to a percentage co-payment of 35% of the retail price. The co-payment for insulin did not change. What at first glance may seem like a relatively modest change in co-payment design was expected to reduce public spending on non-insulin diabetes medicines by €20 million a year and to lead to a significant increase in out-of-pocket payments, particularly for people using newer, more expensive medicines (Kurko et al., 2018).

This brief summarizes the policy change and its impact and identifies lessons for Finland and for other countries concerned about the negative effects of user charges on access to health care. It is based on a summary of research findings published by the University of Turku, which is only available in Finnish (Rättö et al., 2022).

Box 1. Despite the evidence against them, user charges are widely applied in Europe

A large body of evidence on the impact of user charges shows that they are not effective in directing people to use health care more efficiently. This is because:

- faced with user charges, people reduce the use of essential and non-essential health care, including medicines, in equal measure (Newhouse & Insurance Experiment Group, 1993; Brook et al., 2006);
- people do not value interventions more highly when they have to pay for them out of pocket (Ashraf, Berry & Shapiro, 2010; Cohen & Dupas, 2010);
- user charges fail to address the root causes of informal payments (Gaal & McKee, 2004; WHO Regional Office for Europe, 2018);
- most decisions about health care use and costs are made by providers, not patients (Chernew et al., 2021);
- even relatively low user charges can deter people from using needed health care, reduce adherence to essential medicines and other forms of treatment, increase the use of other health services, lead to financial hardship, increase the use of social assistance and adversely affect health, particularly in people with low incomes or chronic conditions (Tamblyn et al., 2001; Goldman, Joyce & Zheng, 2007; Chernew & Newhouse, 2008; Chandra, Gruber & McKnight, 2010; Persaud et al., 2019; Madden et al., 2021; Rättö & Aaltonen, 2021; Aaltonen, Niemelä & Prix, 2022; Gross, Layton & Prinz, 2022; Guindon et al., 2022; Fusco et al., 2023; Rättö et al., 2022);
- studies have shown that user charges lead to financial hardship (catastrophic and impoverishing health spending) and unmet need for health care for many people in Europe (WHO Regional Office for Europe, 2023; Cylus et al., 2024; Thomson et al., 2024); and
- user charges undermine equity in financing health care and are administratively inefficient compared to public sources of revenue (Wagstaff et al., 1999).

Despite this evidence, user charges are widely applied in European health systems, often to treatment in primary care settings. Many countries rightly avoid applying user charges to primary care visits, outpatient specialist visits and inpatient care but most impose co-payments on outpatient prescribed medicines, medical products (e.g. inhalers and hearing aids) and dental care.

Note: see UHC watch (2025) for up-to-date information on user charges in over 40 countries in Europe and central Asia; select the user charges filter in UHC watch’s Policy explorer.

Source: adapted from WHO Regional Office for Europe (2023).

Box 2. User charges can be redesigned to make them less harmful

User charges are a major driver of financial hardship for households in many countries in Europe. Analysis suggests that they are most likely to undermine affordable access to health care when they are applied without multiple mechanisms to protect people (e.g. exemptions and caps) or when protection mechanisms exist but are poorly designed (Cylus et al., 2024; Thomson et al., 2024).

User charges in many countries are also complex and bureaucratic, which undermines transparency, leads to confusion and financial uncertainty and prevents people from accessing entitlements (Salampessy et al., 2018). Percentage co-payments, balance billing (including internal reference pricing) and extra billing are particularly non-transparent; they also shift financial risk from the purchasing agency to households and expose people to out-of-pocket payments arising from health system inefficiencies.

The harm caused by user charges can be reduced if they are applied sparingly and carefully designed in the following ways:

- exemptions are applied for people with low incomes or chronic conditions;
- an income-based cap is placed on all user charges for everyone;
- exemptions and caps are applied automatically, using digital solutions;
- percentage co-payments are avoided or replaced by low fixed co-payments;
- balance billing and extra billing are avoided or abolished; and
- user charges are as simple as possible, aim to protect people rather than diseases and minimize administrative barriers.

When user charges are carefully designed, people know exactly how much they must pay out of pocket before they visit a doctor, undergo a diagnostic test or collect a prescription; they know that they do not have to pay more than a certain amount a year; and they automatically benefit from exemptions and caps, without having to apply for them.

Source: adapted from WHO Regional Office for Europe (2023).

The policy change

Publicly financed access to outpatient medicines in Finland is provided by the National Health Insurance (NHI) scheme operated by the Social Insurance Institution of Finland (known as Kela). There is a positive list of covered outpatient medicines and co-payments are applied to medicines on the list.

The design of co-payments for outpatient prescribed medicines in Finland is complex (Table 1), involving multiple different types of co-payment: an annual deductible (all adults pay the full cost of covered medicines up to €70 a year); percentage co-payments (users pay a share of the retail price); fixed co-payments (users pay a flat amount per item); and internal referencing pricing (users pay any difference between the reference price and the retail price).

There are mechanisms in place to protect people from these co-payments: children aged under 18 years are exempt from the annual deductible; the percentage co-payment is reduced from 60% to 35% for medicines used to treat specific chronic conditions (e.g. cardiovascular disease (CVD)), replaced by a fixed co-payment of €4.50 per item for medicines used to treat specific severe and chronic conditions (e.g. cancer); and there is an annual threshold for spending on co-payments for outpatient prescribed medicines (€633 per person in 2025), after which people no longer pay percentage co-payments for any covered medicine but pay a fixed co-payment of €2.50 per item instead. Unlike many other European Union countries, however, there are no automatic exemptions from co-payments for households with low incomes or people with chronic conditions and there is no overall cap on co-payments (UHC watch, 2025). People with very low incomes who cannot afford to pay for medicines or other types of health care can apply for social assistance to cover the cost of co-payments.

On 1 January 2017 co-payments for non-insulin diabetes medicines mainly used to treat type 2 diabetes were moved from the special reduced category to the reduced category, so that they would be treated in the same way as medicines for other (often related) chronic conditions like hypertension (Table 1).

Changing the type of co-payment from a fixed co-payment (€4.50 per item) to a percentage co-payment (35% of the retail price) aimed to reduce public spending on non-insulin diabetes medicines. By linking co-payments to price, people using more expensive medicines would be particularly affected by having to pay more out of pocket.

This shift in costs from the NHI scheme to patients was estimated to save the NHI scheme €20 million a year and to lead to a large increase in co-payments for many people with diabetes (Kurko et al., 2018). For people using older diabetes medicines, such as metformin (the cheapest option, recommended as first-line treatment and used by 74% of people with diabetes in 2015), the average amount paid in co-payments per person was estimated to rise from €292 to €304 a year. However, for people using newer diabetes medicines (44% of all people with diabetes), many of whom also used metformin, the average amount was estimated to rise from €343 to €500 a year.

In response to concerns about the impact of an increase in co-payments on people with diabetes, the Finnish Parliament mandated careful monitoring of changes in the use of diabetes medicines and take-up of social assistance to cover co-payments for people with diabetes (Lahtela, 2017).

This brief summarizes the main findings of six peer-reviewed studies that examined the short-term impact of the policy change on people's ability to pay for diabetes medicines; the use of social assistance to cover co-payments for diabetes medicines; the use of diabetes medicines; views on the fairness of co-payments; and satisfaction with diabetes care (Aaltonen, Niemelä & Prix, 2022; Lavikainen et al., 2020b; Rättö, 2022; Rättö & Aaltonen, 2021; Suviranta et al., 2019). See the Annex for a description of the studies' methods and data sources.

Table 1. The complex design of co-payments for outpatient prescribed medicines in Finland, 2015–2025

Notes: NA: not applicable. Children under 18 years old are exempt from the annual deductible. People with very low incomes can apply for social assistance to cover co-payments.

Sources: Tervola, Aaltonen & Tallgren (2021); Aaltonen, Niemelä & Prix (2022); UHC watch (2025).

2015	2016	2017	2021	2023	2024	2025
1. Annual deductible for all adults						
NA	€50					€70
2. Basic co-payment (percentage of the retail price)						
65%	60%					
3. Reduced co-payment (percentage of the retail price) for medicines used to treat specific chronic conditions						
Other medicines: 35%		Non-insulin diabetes medicines + other medicines: 35%				
4. Special reduced co-payment (fixed co-payment) for medicines used to treat specific severe and chronic conditions						
Non-insulin diabetes medicines + other medicines: €3 per item		Other medicines: €4.50 per item				
5. Annual ceiling on medicine co-payments per person (indexed)						
€613	€610	€605	€580	€592	€627	€633
6. Reduced co-payment (fixed co-payment), which applies after a child or adult has reached the annual ceiling						
€1.50 per item	€2.50 per item					
7. Internal reference pricing (people pay the difference between the reference price and the retail price)						

Increase in people finding it difficult to pay for diabetes medicines

The share of people finding it difficult to pay for diabetes medicines increased significantly after the policy change, particularly people with low incomes and those using newer and more expensive medicines.

A longitudinal survey of people with diabetes carried out before and after the policy change found that the share of people experiencing financial difficulty doubled in 2017, rising from 16.5% in the baseline survey (2016) to 30% at 6 months after the increase in co-payments and 33% at 12 months after the increase (Lavikainen et al., 2020b).

Of the 33% of people with diabetes experiencing financial difficulty in 2017 (Suviranta et al., 2019):

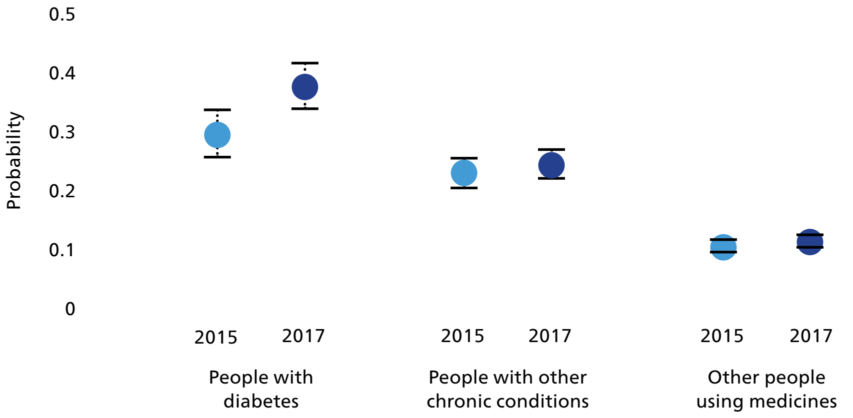
- 17.4% said it was more difficult to pay for their medicines now;
- 9.5% said they had to buy their medicines in smaller doses (one month at a time instead of three months); and
- 8.6% said they now had to save or borrow money to pay for their medicines.

The probability of experiencing an increase in financial difficulty in 2017 was higher in people with low incomes and among those using newer and more expensive medicines (Lavikainen et al., 2020b).

A study using data from the Finnish Medicines Barometer (a cross-sectional survey carried out every two years) compared financial difficulty in three groups of people in 2015 and 2017: people taking diabetes medicines (the only group to experience an increase in co-payments in 2017), people taking medicines for other chronic conditions and a reference group of people taking other prescribed medicines (Aaltonen, Niemelä & Prix, 2022). In 2015 (before the policy change) people with diabetes or other chronic conditions were much more likely to report financial difficulty in paying for their medicines than people in the reference group: 20 percentage points higher in people with diabetes and 13 percentage points higher in people with other chronic conditions (Fig. 1). In 2017 (after the policy change) the difference between people in the reference group and people with diabetes rose from 20 to 26 percentage points, but there was no significant change among people with other chronic conditions (Fig. 1).

A separate study found that people with diabetes bought smaller packs of medicines (e.g. a month's supply rather than three months' supply) more often after the policy change than before, which suggests that this was a strategy some people used to cope with the increase in co-payments (Lavikainen et al., 2020a).

Fig. 1. Change in the probability of finding it difficult to pay for medicines, 2015 to 2017



● 2015

● 2017

Note: error bars represent 95% confidence intervals for average predicted probability.

Source: Aaltonen, Niemelä & Prix (2022).

Increase in the use of social assistance to cover co-payments for medicines

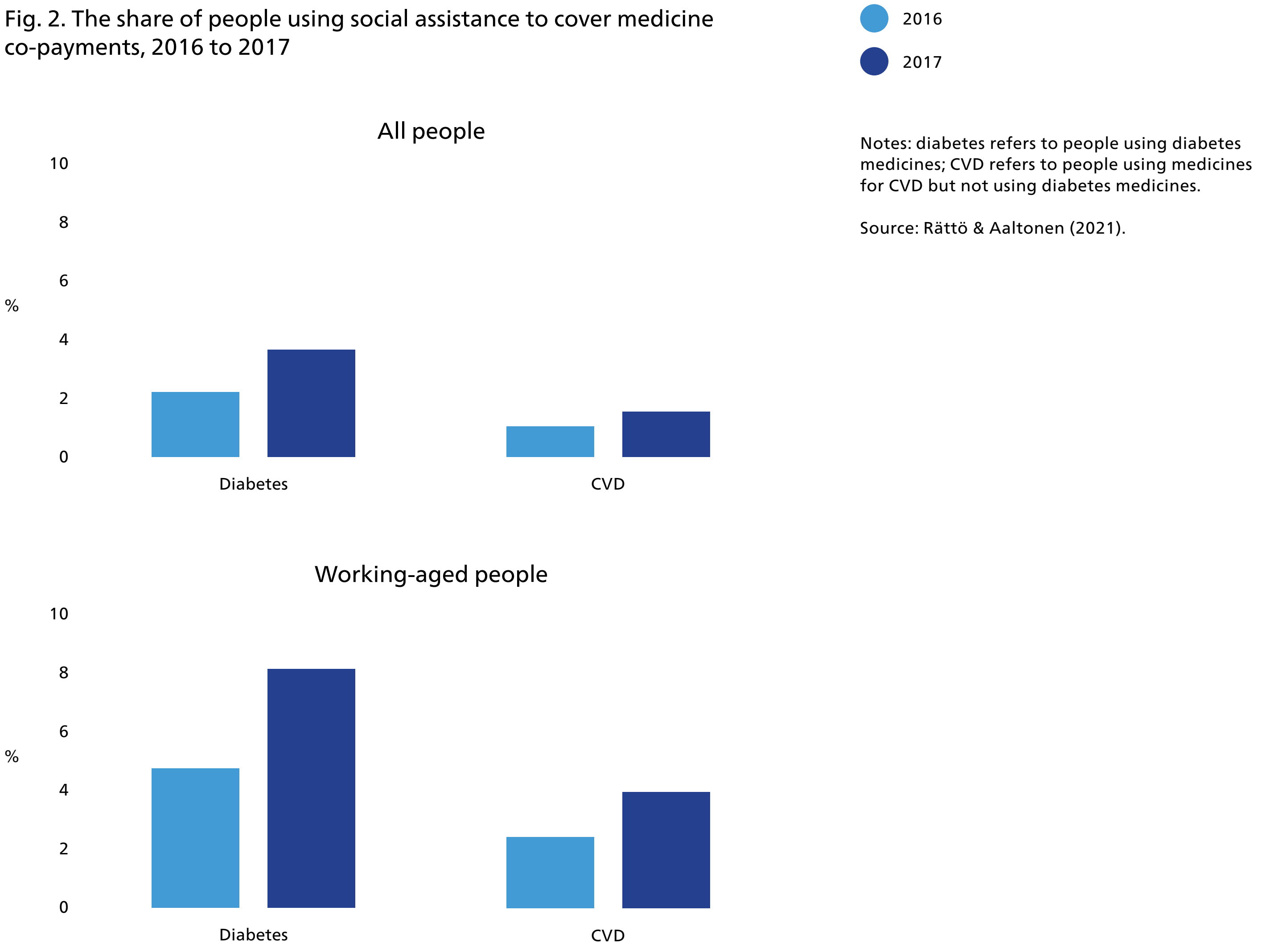
The use of social assistance to cover co-payments rose among people using diabetes medicines after the increase in co-payments, particularly people of working age.

People with very low incomes in Finland can apply for social assistance to cover the cost of co-payments. Social assistance is typically used as a last resort, by people experiencing substantial financial difficulty, and is likely to be underused due to administrative and other barriers to access (e.g. stigma) (Rättö & Aaltonen, 2021). As a result, it only benefits a small share of people finding it difficult to pay for health care in Finland.

A study used registry data to compare the use of social assistance vouchers to cover co-payments for medicines among people using diabetes medicines and people using medicines for CVD (and not using diabetes medicines) in 2016 and 2017 (Rättö & Aaltonen, 2021). Responsibility for basic social assistance was transferred from the municipalities to a national agency (Kela) in 2017. Kela issues electronic vouchers for people eligible for social assistance automatically, leading to a general increase in their use to pay for medicines. However, co-payments for CVD medicines did not increase in 2017, allowing the study to isolate the impact of the increase in co-payments for diabetes medicines from changes in the administration of social assistance.

The study found that the use of social assistance increased in both groups in 2017, on average, but the increase was much higher in the diabetes group (see Fig. 2). The impact was even more pronounced for working-aged people (under 65 years old) (see Fig. 2). This might reflect the fact that older people in Finland are often entitled to other social benefits and therefore have less need for social assistance to cover co-payments. It could also reflect lower take-up among older people due to stigma and the administrative process involved in applying for social assistance (Currie, 2006; Kuivalainen, 2007; Matikka & Paukkeri, 2016).

Fig. 2. The share of people using social assistance to cover medicine co-payments, 2016 to 2017



Notes: diabetes refers to people using diabetes medicines; CVD refers to people using medicines for CVD but not using diabetes medicines.

Source: Rättö & Aaltonen (2021).

Decrease in the use of diabetes medicines

The use of non-insulin diabetes medicines decreased following the increase in co-payments.

A longitudinal survey of people with diabetes found that 28% had stopped using a diabetes medicine other than insulin 12 months after the increase in co-payments and 8% had started using insulin because of the cost of other diabetes medicines (Lavikainen et al., 2020b).

Using registry data from 2014 to 2018, another study found that per-person purchases of insulin and other diabetes medicines had been decreasing in the years before the policy change; purchases of both types of medicine continued to fall afterwards but at a higher-than-expected rate, particularly for non-insulin medicines (Rättö et al., 2021). After the policy change people bought about 5% fewer defined daily doses (DDDs) of non-insulin medicines than would have been expected based on the trend before 2017, but only about 1.5% fewer DDDs of insulin.

This suggests that the increase in co-payments for non-insulin diabetes medicines led to a decrease in the purchase of all types of diabetes medicines but had a greater effect on the purchase of non-insulin diabetes medicines. However, as the policy change was widely debated in the media in 2016, it is possible that some people bought larger-than-usual quantities of both types of medicine at the end of 2016 in anticipation of higher co-payments in the new year, which might explain some of the larger-than-expected decline in 2017 (Rättö et al., 2021).

A separate study used registry data from 2011 to 2019 to examine the impact of the policy change on insulin initiation among people who had been buying non-insulin diabetes medicines only in the preceding three years (Rättö, 2022). It compared a treatment group (2017–2019) to a control group (2014–2016). Both groups had similar characteristics but the treatment group demonstrated higher use of newer diabetes medicines. The study found a general decline in insulin initiation over time, which is attributed to evolving treatment practice – for example, Finnish clinical guidelines are now more likely to recommend newer non-insulin diabetes medicines before insulin (Rättö et al., 2021). While the risk of insulin initiation was lower in people with higher incomes, the increase in co-payments did not significantly widen income inequality in insulin initiation, suggesting that other factors also play a role in these disparities (Rättö, 2022).

The administrative data in the two registry-based studies do not provide information about why people's use of diabetes medicines changed, but an increase in co-payments leading to a reduction in the use of medicines (and in adherence to treatment) is consistent with the literature (Goldman, Joyce & Zheng, 2007; Sinnott et al., 2013; Luiza et al., 2015).

Another study using registry data for one region in Finland (North Karelia) compared glycated haemoglobin (HbA1c) levels in people with type 2 diabetes for 36 months before and 33 months after the increase in co-payments (Lavikainen et al., 2020a). It found that glycaemic control worsened after the policy change, especially in people who were using newer and more expensive non-insulin diabetes medicines, which experienced the largest increase in co-payments. However, the study was not able to explore the reasons for this change in outcome and, because the study only focused on one region, its findings may not be generalizable to the whole country.

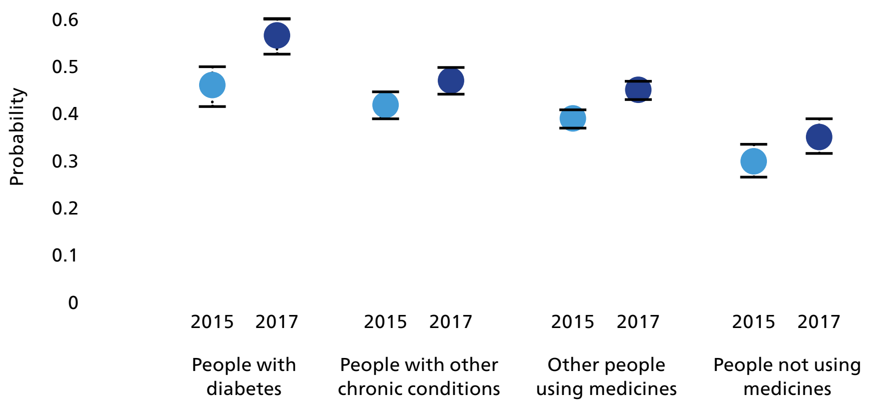
Increase in scepticism about the fairness of co-payments

Scepticism about the fairness of co-payments increased after the policy change, particularly among people with diabetes.

A study using data from the Finnish Medicines Barometer compared views on the fairness of co-payments for medicines in 2015 and 2017 in four groups: people using diabetes medicines, people using medicines for other chronic conditions, people using other prescribed medicines and people not using any medicines (Aaltonen, Niemelä & Prix, 2022). It found that in 2015 people using prescribed medicines were generally more sceptical about the fairness of co-payments than people not using any medicines (Fig. 3). However, while scepticism was higher in all four groups in 2017, it was markedly higher in people with diabetes than in people with other chronic conditions (Fig. 3).

A study using data from a survey of people with diabetes found that around 12% expressed annoyance with the increase in co-payments, including experiencing feelings of resentment, anger or criticism towards the policy change (Suviranta et al., 2019).

Fig. 3. Change in the probability of disagreeing with the statement “the co-payment system is fair and just”, 2015 to 2017



Note: error bars represent 95% confidence intervals for average predicted probability.

Source: Aaltonen, Niemelä & Prix (2022).

Decrease in satisfaction with diabetes treatment

People with diabetes were less satisfied with their treatment after the increase in co-payments.

Data from a longitudinal survey of people with diabetes carried out before and after the policy change found that satisfaction with diabetes treatment fell significantly after the increase in co-payments (Lavikainen et al., 2020b). Measured on a scale of 1 to 10 (where 1 was total dissatisfaction and 10 total satisfaction), satisfaction fell from 8.20 on average at baseline to 7.89 after 6 months and 7.95 after 12 months. The decline in satisfaction was particularly sharp in people who experienced financial difficulty in paying for diabetes medicines; six months after the policy change, satisfaction with diabetes treatment scored only 7.35 in this group compared to 8.15 in people who did not experience financial difficulty. Financial difficulty was measured as a binary variable (some difficulty or no difficulty).

Lessons learned

Research findings on the impact of the increase in co-payments for diabetes medicines provide important lessons for policy-makers in Finland and in other countries.

The increase in co-payments is likely to have undermined affordable access to health care (financial protection) for people with diabetes

A seemingly small change in the design of co-payments for diabetes medicines led to a large increase in out-of-pocket payments for many people with diabetes. As a result of the change from a fixed co-payment of €4.50 per item to a percentage co-payment of 35% of the retail price, co-payments for the 44% of people with diabetes in Finland using newer diabetes medicines were estimated to rise from €343 to €500 per person a year on average (an increase of nearly 50%). This amount does not include other co-payments people with diabetes would be expected to incur (e.g. for doctor visits, diagnostic tests, emergency care or inpatient care) – which could be substantial given the widespread application of co-payments in the Finnish health system, the higher-than-average prevalence of multi-morbidity among people with diabetes and analysis showing that, in general, co-payments in Finland tend to be concentrated in the same groups of people (Hetemaa et al., 2018).

Higher co-payments increased the share of people finding it difficult to pay for diabetes medicines, which is likely to increase financial hardship and unmet need, particularly for people with low incomes. Studies suggest that people with diabetes are more likely to have a lower income than other people in Finland (Kurko et al., 2018; Aaltonen, Niemelä & Prix, 2022). To cope with the challenge of having to pay more out of pocket, a growing share of people bought smaller packs of medicine (Suviranta et al., 2019) or used social assistance (Rättö & Aaltonen, 2021) to cover medicine co-payments. Social assistance is only available to people with very low incomes in Finland; it is also likely to be underused due to administrative and other barriers to access. As a result, the increase in co-payments may have increased the share of households with catastrophic health spending (a key indicator of financial hardship due to out-of-pocket payments), which is typically heavily concentrated in households with lower incomes. However, the data needed to assess this are not available. In 2016, the year before the policy change, 4% of all households experienced catastrophic health spending in Finland, rising to 12% in the poorest quintile; this spending was mainly driven by out-of-pocket payments for outpatient medicines and outpatient care, particularly in households with low incomes (Tervola, Aaltonen & Tallgren, 2021).

Higher co-payments reduced the use of diabetes medicines, which could lead to an increase in unmet need for health care, particularly for people with low incomes. The reduction in use is consistent with the literature on the effect of co-payment increases on the use of medicines and adherence to treatment. It is possible that some of the reduced use led to unmet need for diabetes treatment, but this outcome was not assessed. People with low incomes are generally much more likely to report unmet need for health care than those with higher incomes (Eurostat, 2025a, 2025b). Finland is no exception: in 2019 the share of adults reporting unmet need for prescribed medicines due to cost was five times higher in the poorest than in the richest quintile (15% vs 3%, respectively) (Eurostat, 2025a).

Higher co-payments may have eroded trust in the health system. The policy change increased negative views towards the health system, demonstrated through: an increase in the share of people with diabetes disagreeing with the statement "the co-payment system is fair and just"; one in eight people with diabetes surveyed reporting annoyance with the increase in co-payments, including having experienced feelings of resentment, anger or criticism towards the policy change; and a reduction in the share of people reporting satisfaction with their diabetes care, especially among those who experienced financial difficulty in paying for diabetes medicines.

Co-payment design matters

The change from a fixed co-payment to a percentage co-payment shifted financial risk from the public payer to people with diabetes and exposed people to the price of more expensive medicines and health system inefficiencies. Policy-makers may favour the use of percentage co-payments because they believe that exposure to price will encourage people to choose cheaper alternatives (see Box 13 in WHO Regional Office for Europe, 2023). This belief is questionable when applied to treatment prescribed by health professionals, given the extent of information asymmetry in health care. People in Finland might find it particularly difficult to opt for cheaper diabetes medicines because newer, more expensive medicines are clinically indicated in national guidelines.

The mechanisms used to protect people from co-payments did not prevent people with diabetes from experiencing financial difficulty. Although the Finnish health system uses several mechanisms to reduce co-payments for outpatient medicines, the ceiling above which percentage co-payments are replaced by fixed co-payments is very high (€605 in 2017 and €633 in 2025); there are no exemptions from co-payments for adults; and there is no overall cap on co-payments. Also, while people with low incomes can apply for social assistance to cover co-payments, this mechanism only benefits a small share of people with diabetes (under 4% in 2017), reflecting a stringent income threshold, along with administrative and other barriers to take-up (Rättö & Aaltonen, 2021).

It is possible to mitigate the harm caused by co-payments. International evidence and experience show that countries can strengthen protection from co-payments by exempting households with low incomes; applying an income-based cap on all co-payments – caps that give stronger protection to people with lower incomes are not only more likely to improve financial protection but will also ensure equity and efficiency in the use of public funds and soften the impact on the health budget (García-Ramírez et al., 2025); and replacing percentage co-payments with low, fixed co-payments (see Box 2). Analysis suggests that using all three approaches may lead to a substantial reduction in the risk of catastrophic health spending (Cylus et al., 2024). Protection mechanisms should also be applied automatically, with the help of digital tools, to maximize take-up (Kasekamp & Habicht, 2025).

Co-payments are not the right policy instrument to address concerns about rising health care costs

Co-payments have negative effects. The studies reviewed in this brief add to a large body of international evidence on the harm that user charges can cause (see Box 1).

Negative effects limit the savings gained from higher co-payments. Some of the immediate savings to the health budget in Finland may have been counteracted by the increased use of social assistance. Longer-term savings are likely to have been eroded by the impact of higher co-payments on financial protection, use of diabetes medicines and adherence to treatment.

Health care costs are largely driven by supply-side factors. Health authorities and health care providers have much greater influence than patients on patterns and levels of health care use and spending. Efforts to control the growth of public spending on medicines are more likely to be effective if they target the way in which medicines are priced, selected for coverage, prescribed and dispensed.

Changes to user charges should be carefully monitored

When the new policy was introduced, the Finnish Parliament responded to concerns about the increase in co-payments by mandating impact assessments. This is an example of good practice that should be more widespread.

Strong data systems enable monitoring. The studies reviewed in this brief benefited from the availability of good health system data in Finland, including administrative data from registries, data from regular surveys like the Finnish Medicines Barometer (Fimea, 2025) and data from specially commissioned surveys of people with diabetes.

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Annex. Summary of study methods and data sources[2]

A study by **Suviranta et al. (2019)** used data from a longitudinal survey of people with diabetes carried out before (2016) and after (2017) the policy change (see also Lavikainen et al., 2020) to assess its impact on financial difficulty. Participants were identified in 114 community pharmacies across all areas in Finland, comprising a study cohort of 603 people with type 2 diabetes. The study used data from the baseline survey in November 2016 and a follow-up survey at 12 months after the increase in co-payments.

Suviranta T, Timonen J, Martikainen J, Aarnio E (2019). The effects of reimbursement reform of anti-diabetic medicines from the patients' perspective – a survey among patients with type 2 diabetes in Finland. BMC Health Serv Res. 19:769 (https://doi.org/10.1186/s12913-019-4633-9).

A study by **Lavikainen et al. (2020)** used data from a longitudinal survey of people with diabetes carried out before (2016) and after (2017) the policy change (see also Suviranta et al., 2019) to assess its impact on satisfaction with diabetes care, use of diabetes medicines and financial difficulty. Participants were identified in 114 community pharmacies across all areas in Finland, comprising a study cohort of 955 people with type 2 diabetes. The study used data from the baseline survey in November 2016 and follow-up surveys at 6 and 12 months after the increase in co-payments.

Lavikainen P, Aarnio E, Niskanen L, Mäntyselkä P, Martikainen J (2020). Short-term impact of co-payment level increase on the use of medication and patient-reported outcomes in Finnish patients with type 2 diabetes. Health Policy. 124(12):1310–1316 (https://doi.org/10.1016/j.healthpol.2020.08.001).

A quasi-experimental study by **Rättö & Aaltonen (2021)** used administrative data from the Prescription Registry (for covered outpatient medicines dispensed in pharmacies) managed by the Social Insurance Institution of Finland (Kela) to compare the use of social assistance to cover co-payments for medicines in people with type 2 diabetes (who experienced an increase in co-payments in 2017) and people with cardiovascular disease (who did not experience an increase in co-payments in 2017).

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An interrupted time-series study by **Rättö et al. (2021)** used administrative data from the Prescription Registry (for covered outpatient medicines dispensed in pharmacies) managed by the Social Insurance Institution of Finland (Kela) to measure mean monthly purchases of non-insulin diabetes medicines and insulin in defined daily doses per person before (36 months in 2014–2016) and after (24 months in 2017–2018) the increase in co-payments.

Rättö H, Kurko T, Martikainen J, Aaltonen K (2021). The impact of a co-payment increase on the consumption of type 2 antidiabetics. A nationwide interrupted time series analysis. Health Policy. 125(9):1166–1172 (https://doi.org/10.1016/j.healthpol.2021.05.007).

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A study by **Aaltonen, Niemelä & Prix (2022)** used nationally representative cross-sectional survey data (from the Finnish Medicines Barometer, carried out every two years) to compare people's views on financial difficulty and the fairness of the co-payment system before (2015) and after (2017) the policy change. Data were gathered using postal surveys and an internet panel survey.

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A quasi-experimental study by **Rättö (2022)** used individual-level nationwide registry data from the Prescription Registry (for covered outpatient medicines dispensed in pharmacies) managed by the Social Insurance Institution of Finland (Kela) from 2011 to 2019 to compare insulin initiation in a treatment group from 2017 to 2019 and a control group from 2014 to 2016. Patients were grouped by income quintile and followed for three years.

Rättö H (2022). Socioeconomic inequalities in insulin initiation among individuals with type 2 diabetes – a quasi-experimental nationwide register study. SSM – Popul Health. 19:101178 (https://doi.org/10.1016/j.ssmph.2022.101178).

Source: authors, adapted from Rättö et al. (2022).[3]

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[3] Rättö H, Lavikainen P, Aaltonen K, Martikainen J (2022). Diabeteslääkkeiden korvauksia leikattiin – miten kävi potilaiden? [Reimbursements for diabetes medications were cut – what happened to the patients?]. INVEST Policy brief (Politiikkasuositukset). Turku: Turun yliopistoukset (https://research.utu.fi/converis/portal/detail/Publication/176923344) (in Finnish).

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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