

# Non-Dispensed Prescriptions from the Public and Private Health Care Sectors: A Comparative Register Study

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## Introduction

Some prescriptions are never dispensed from pharmacy until the expiration of the prescription. It has been estimated that around 10% of all prescriptions are never filled (Larsen, 2020; Pottegård et al., 2014). The cost of the medication is a one major reason for non-dispensing a prescription (Schafheutle et al., 2002). It is also known that physicians in the private sector are more likely to prescribe expensive medicines (Jussila et al., 2022). The objective of this study is to compare non-dispensed prescriptions prescribed in public and private health care. We analyze the differences by using three different medicines.

## Methods

In this comparative register study, we evaluate non-dispensed prescriptions prescribed in public health care and private sector by using three different types of medicines. One is regularly taken (sitagliptin), the second is usually taken as needed (ibuprofen), and the third is potentially addictive medicine (pregabalin). All three cases were studied separately.

The data consists of all prescriptions for sitagliptin, ibuprofen and pregabalin in 2017–2019. We identified the prescriptions that had not been dispensed within the two-year prescription validity period by using information on dispensations from 2017 to 2021. The data were collected from the national Prescription Centre, which includes all prescriptions prescribed for outpatient treatment in public and private health care. Logistic regression was used to study factors that affect prescriptions to be non-dispensed. Prescriptions prescribed in the public and private sector were studied separately.

## Results

In total, 8.9% (public) and 10.1% (private) of the sitagliptin prescriptions, 13.4% (public) and 13.0% (private) of the ibuprofen prescriptions, and 11.3% (public) and 13.1% (private) of the pregabalin prescriptions were never filled (**Figure 1**). In private sector age and sex affected the probability to dispense the prescription. In addition to the age and sex,

in the public sector the prescribing month had a significant effect on the probability to dispense the prescription in all three cases. The prescribing month was significant also for the non-dispensed ibuprofen prescriptions prescribed in the private sector. Gender distribution was similar between the public and private health care in all three cases, but in the case of pregabalin, non-dispensed prescriptions were more likely to be prescribed to women than men.

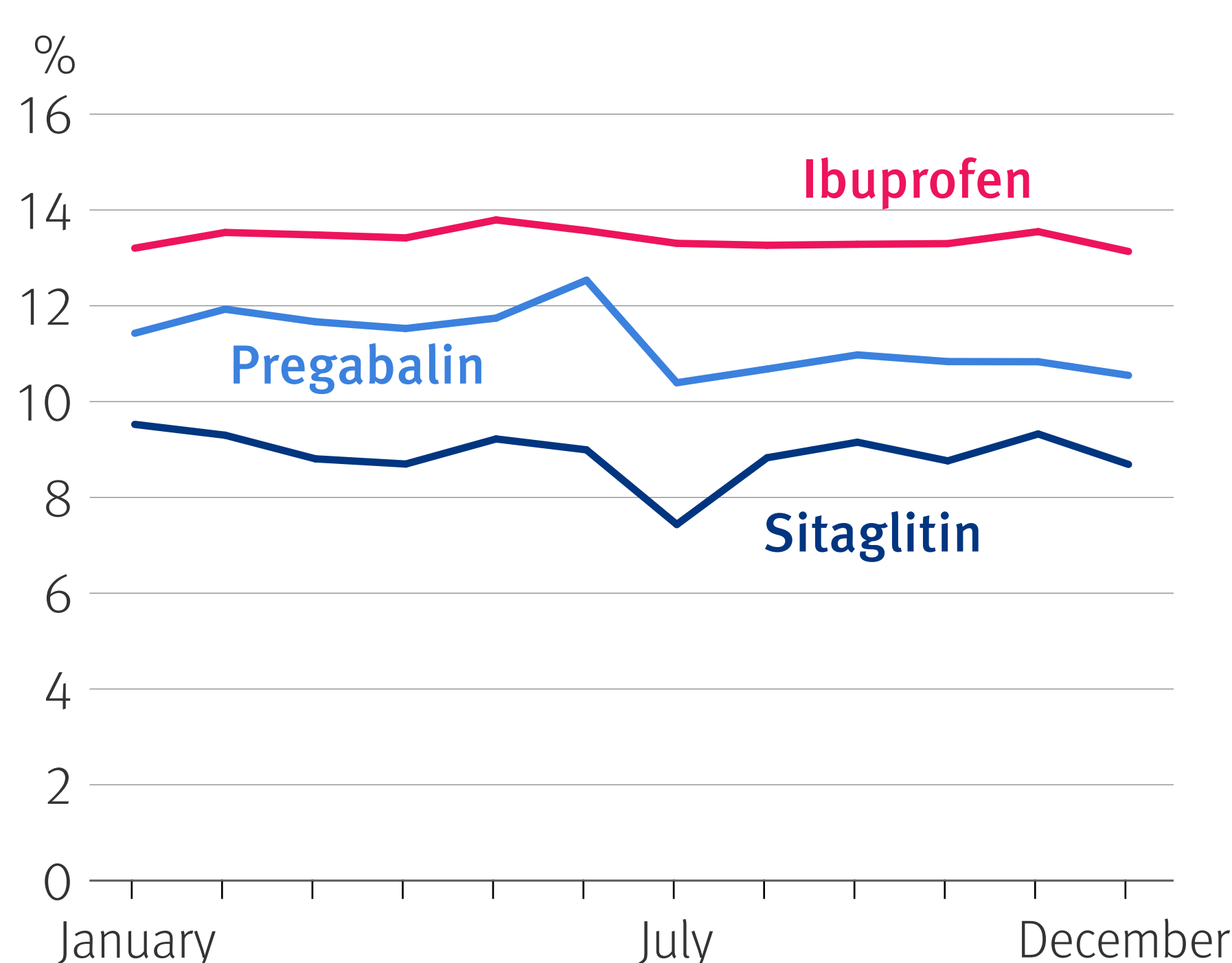
## Conclusion

The factors that affect the probability to non-dispensing vary between the public and private sectors, especially the prescribing month of the prescription. The features of the Finnish medicine reimbursement system and the annual maximum limit on out-of-pocket costs may affect on the purchasing behaviour at the end of the year. Also, the supply of public health care services is lower during the summer months, which may decrease the number of non-urgent appointments and prescriptions.

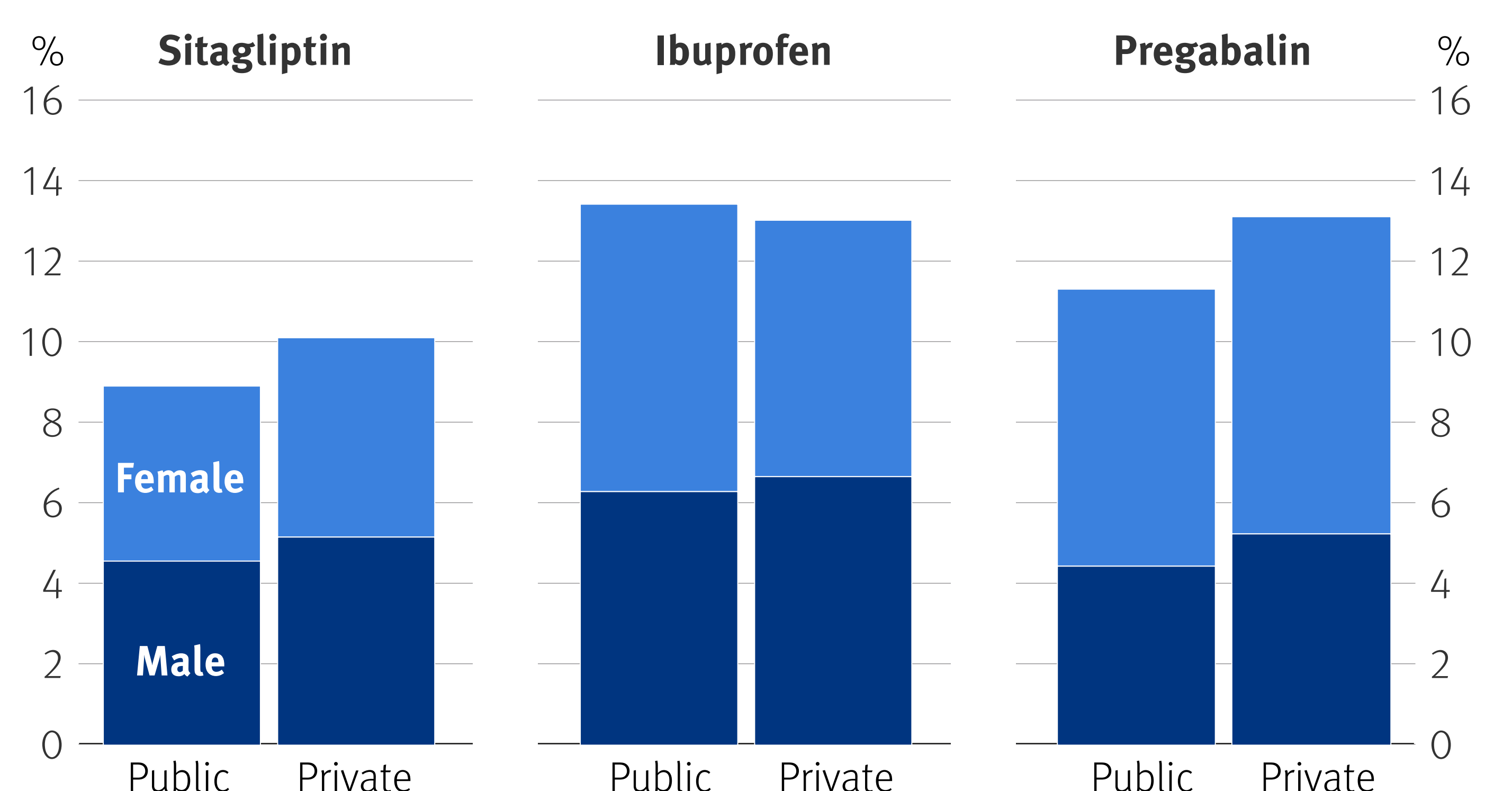
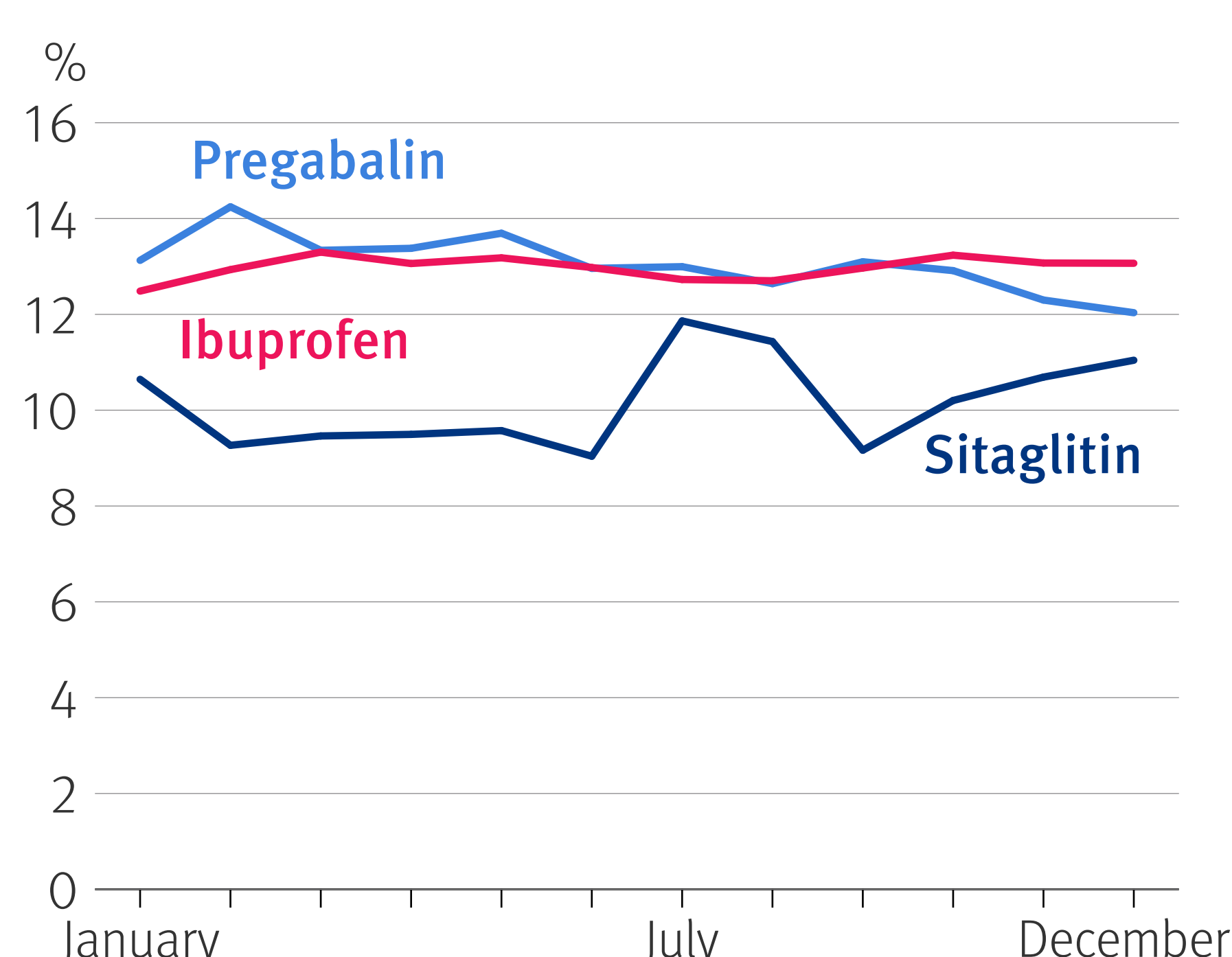
In addition to patient demographics, reasons not to dispense a prescription can be related to other reasons such as a physician-patient relationship and financial burden thus socio-economic factors should be taken into account in future studies.

**Figure 1 Non-dispensed prescriptions prescribed in public and private health care.** Prescriptions for sitagliptin and pregabalin prescribed in the public health care were less non-dispensed than prescriptions prescribed in private health care. Gender distribution was similar between public and private health care in all three cases, but in case of pregabalin, men were more likely to dispense the prescription than women.

**Figure 2 Non-dispensed prescriptions prescribed in the public health care in 2017–2019 by the prescribing month.** In public health care, prescriptions prescribed in December were more likely to be dispensed.



**Figure 3 Non-dispensed prescriptions prescribed in the private health care in 2017–2019 by the prescribing month.**



## References

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