

# Development of quality indicators to measure quality of medication handling in municipalities

Quality indicators on municipal procedures about medication handling, the medication lists, dispensing of medication and medication administration were developed in four steps.

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## Background

Studies have shown that community pharmacies can contribute to strengthening medication handling in municipalities by providing relevant teaching and other pharmacy services to staff at nursing homes, home care and residential facilities about how to work safely with medication handling. A Danish study is being conducted to strengthen the implementation of this teaching and pharmacy services. As part of the study a set of quality indicators has been developed.

## Purpose


The purpose of this part of the study is to develop and test a set of quality indicators to measure the quality of medication handling in municipalities to be used by pharmacies and municipalities to support preparation and practice-orientation of teaching and other pharmacy services about working safely when handling medication for municipal staff.



Figure 1: Development of the quality indicators.

## Methods

Testing of the indicators at a larger scale is being carried out in 20 municipalities by 20 community pharmacies from November 2022 to April 2023, with a before and after teaching measurement to assess sensitivity of the indicators for changes in the quality of medication handling. The measurements are registered electronically in Microsoft Forms. The data will be analysed quantitatively. After the testing in April 2023, the community pharmacies will answer a survey on the use of the indicators and data will be analysed qualitatively. The indicators were developed in four steps (figure 1).




### Procedures (structure indicators)

1. All elements of medication handling are described in a written instruction (yes/no).
2. Elements regarding employees' responsibilities and competencies in medication handling and handling of errors and unintended events about medication are described in a written instruction (yes/no).

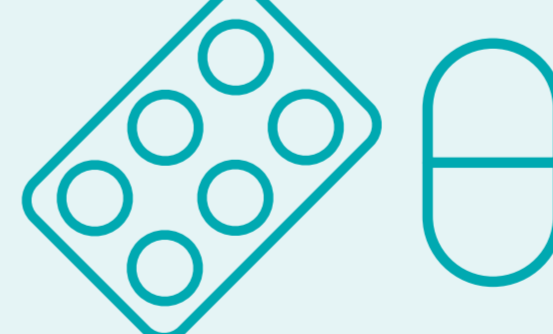
## Findings

Of the six indicators developed, two relate to municipal institutions' procedures (structure indicators), one is a process indicator for the medication list, one is a process indicator for dispensing medication and two are process indicators for medication administration. The measurement will be conducted by community pharmacy staff at a visit to at least one institution in the municipality, e.g. a nursing home. The community pharmacies have received a written instruction and a video on how to carry out the measurement.




### Medication list (process indicator)

The proportion of patients whose medication list is correctly filled in.



### Dispensing medication (process indicator)

The proportion of patients whose medication is correctly dispensed.



### Medication administration (process indicator)

1. The proportion of documented dispensed medicine administrations the past two days.
2. The proportion of documented, non-dispensed medicine administrations the past two days.

Figure 2: Developed quality indicators ready for test in a larger scale.

## Conclusion

A set of six quality indicators, both structure and process indicators, to measure the quality of medication handling in municipalities was developed to be used by pharmacies and municipalities to support preparation and practice-orientation of teaching and pharmacy services. The quality indicators are tested in 20 municipalities by 20 community pharmacies from November 2022 to April 2023 with a before and after teaching measurement.