The potential for improvement of patient cost data by using decentralized data on the consumption of medicine in a centralized setting

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Introduction
The Danish Register of Medicinal Product Statistics is unique on a global scale, as it is the only register about consumption of medicinal products, which covers the entire population of a country over so many years (since 1994). While Danish pharmacies report the consumption of medicine under people's CPR numbers (social security numbers), Hospitals register their consumption of medicine under ward codes. The consumption of medicine in the hospitals is therefore not identifiable on a patient level in a centralized setting.

Data on the consumption of medicine is essential to the calculation of patient costs in hospitals and eventually the calculation of DRG tariffs by Statens Serum Institut (National Institute for Health Data and Disease Control, Denmark). Even though the data is not collected on a national level, the regions of Denmark (Denmark is divided in to 5 regions) have systems for registration of the consumption on a patient level.

This work focuses on the exploration of the regional data on medicine consumption's potential for qualifying patient costs

Methods
The work has three areas of focus:
1) Data contents: An exploration of the coverage of the registered medicine data (what types of medicine does the data cover?)
2) Quality of the regional medicine data: By i) comparing with the registered consumption of medicine on a ward level and ii) exploring the quality of registration in the data by comparing the data on a patient level to the registered activity in the different wards, the quality of the data is assessed.
3) The regional medicine data's potential for improving a centralized calculation of patient costs in hospitals: By using prices of medicine reported to The Danish Register of Medicinal Product Statistics the potential for improvement of calculation of patient costs is explored.

Results
The regional medicine data covers a large part of the medicine consumption in hospitals. The regionally registered medicine is of a varying quality - the precision of the registrations seems reasonable when it comes to the precision of time registration (used for joining the data with the registered activities in the Danish hospitals), but the quality is somewhat less good when it concerns quantity of consumption.

Conclusions
The regional medicine data has a (great) potential for improving the precision of calculated patient costs - especially over time. The issue concerning the present quality of the data is that the data is not really used at the present time - neither at a national or regional level. Using the data will give an incentive to improving the quality of registration.

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