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The effect of GPs' and patients' attitudes towards risk on patients' adherence to statin treatment - an interview, questionnaire and register-based study

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This PhD thesis was conducted during my employment at the Research unit for General Practice in Odense, University of Southern Denmark, 2012-2016. It comprises an overview of three papers, all published or accepted for publication in international peer-reviewed scientific journals.

Background
Poor adherence to medical treatment may have considerable consequences for the patients' health and for healthcare costs to society. The general practitioner plays a key role in preventive care and enhancing adherence. The need to understand the determinants of poor adherence has motivated several studies on socio-demographics and comorbidity. Few studies focus on the association between patients' risk attitude and their adherence to statin treatment. Doctors' personal lifestyle, risk taking personality and beliefs about risk-reducing therapies may affect their clinical decision-making. Whether such factors are further associated with patients' adherence with medication is largely unknown.

Aim

- I. To estimate associations between adherence to statin treatment and different dimensions of risk attitude among patients and to identify subgroups with poor adherence.
- II. To explore GPs' professional and personal attitudes and experiences regarding treatment with lipid-lowering drugs, and their views on patient compliance.
- III. To estimate associations between GPs' attitudes towards risk, statin therapy and management of non-adherence and their patients' adherence and to identify subgroups of GPs with poor patient adherence.

Methods
Study I was a combined questionnaire and register-based study with questionnaire data from the Danish Symptom Cohort (DaSC) comprising 49,706 Danes collected in 2012 and register data from Statistics Denmark. Study II was a qualitative interview study with GPs from Copenhagen and the Region of Southern Denmark analysed with systematic text condensation. Study III was a combined questionnaire and register-based study with questionnaire data from a survey to all Danish GPs conducted in 2014 and register data from Statistics Denmark.

Results

Study I: Of the 49,706 initial respondents to the Danish Symptom Cohort, some 6396 patients met the inclusion criteria and 5280 (82.6%) of these were adherent to their medication with statins. For one dimension of health-related risk attitude, “Preference for GP visit once too often than once too late when having symptoms”, risk-seeking patients had poorer adherence than the risk-averse patients OR 0.83 (95%-CI 0.71-0.98). No significant association was found between adherence and financial risk attitude. Further, patients in the youngest age group and patients with no CVD were less adherent to statin treatment.
Study II: The study provided insights to GPs management of cardiovascular risk both professionally and personally. Further, it provided answers into why GPs’ may not always follow guidelines for CVD prevention. The analysis of the ten transcripts revealed the following three main themes: 1. Use of cardiovascular guidelines and risk assessment tools, 2. Strategies for managing patient compliance, 3. GPs’ own risk management. There were substantial differences in the attitudes concerning all three themes.
Study III: We received responses from 1398 GPs (42.2%) who initiated statin therapy in 12192 patients during the study period. In total 6590 (54.1%) of these patients were adherent. Patients who had GPs rarely assessing their treatment adherence were less likely to be adherent than those who had GPs assessing their patients’ treatment adherence now and then, OR 0.86 (CI 0.77-0.96). No other associations were found between patients’ adherence and GPs’ attitudes. The proportion of adherent patients was larger in multi-handed practices than in single-handed practices.

Conclusion

We find some indication that patients’ risk attitude is associated with their adherence to statin treatment, and that risk-neutral and risk-seeking patients may have poorer adherence than risk-averse patients. The identified subgroups of patients with the poorest adherence may deserve special attention from their GP regarding statin treatment. The substantial differences in the GPs’ personal and professional risk perceptions found in Study II may be a key to understanding why GPs do not always follow cardiovascular guidelines. The findings in Study III suggest that GPs’ attitudes to risk, statin therapy or management of non-adherence are not significantly associated with their patients’ adherence.

Relaterede publikationer

Paper I
Associations between patients’ risk attitude and their adherence to statin treatment – *a population based questionnaire and register study.* Barfoed BL, Paulsen MS, Christensen PM, Halvorsen PA, Kjær T, Larsen ML, Larsen PV, Nielsen JB, Søndergaard J, Jarbøl DE. BMC Family Practice, 2016 Mar 9;17:28.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4784361/

Paper II
GPs’ perceptions of cardiovascular risk and views on patient compliance - *a qualitative interview study*. Barfoed BL, Jarbøl DE, Paulsen MS, Christensen PM, Halvorsen PA, Nielsen JB, Søndergaard J. International Journal of Family Medicine, Volume 2015
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4606097/

Paper III
Associations between GPs’ attitudes towards lipid-lowering drugs and risk and their patients’ adherence with statins – *a questionnaire- and register based study.* Barfoed BL, Paulsen MS, Christensen PM, Halvorsen PA, Jarbøl DE, Larsen ML, Munch MR, Søndergaard J, Nielsen JB. Family Practice, 2016 Apr;33(2):140-7
https://doi.org/10.1093/fampra/cmw005

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