

OP08.4

Associations between organisational determinants of implementation effectiveness and spirometry utilisation in general practice

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Background & Aim: Measurement of lung function preferably by spirometry is essential for diagnosing chronic airflow limitation. In spite of this, under-utilisation of spirometry in the diagnosis of both asthma and COPD has been a consistent finding across countries in recent years and a substantial variation between practices exists. National guidelines targeted general practice have been developed, but the variation in spirometry utilisation indicates that substantial barriers to successful implementation remain. It is important to investigate potential explanations for this variation, and the organisational context is recognised as being of vital importance in that respect. We therefore aim to investigate associations between organisational determinants of implementation effectiveness and adherence to guidelines regarding spirometry utilisation. **Method:** In December 2013, a national cross-sectional survey assessing organisational determinants of implementation effectiveness was distributed electronically to 3440 Danish GPs. These data were linked to data from a national register-based cohort including patients redeeming first-time prescriptions for medication targeting obstructive lung disease. Information on the patients' sociodemographic status and whether or not they had spirometry performed in relation to medication redemption was extracted from the registers. We used multilevel mixed-effects logit models to investigate associations while adjusting for relevant confounders regarding patient and practice characteristics.

Results: A total of 1580 GPs (46.4%) responded to the questionnaire and around 40,000 first-time users were identified and linked to a specific general practice. Analyses are ongoing and final results will be presented at the conference. However, preliminary results indicate that organisational determinants in the form of meetings and standardisations are associated with spirometry utilisation in general practice and that the effects vary between practice forms.

Conclusion: It appears that some of the practice variation in spirometry utilisation can be explained by specific organisational determinants. These findings have important implications for future quality improvement initiatives in general practice.