

Media release

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HORIZON 2020 research

Reducing polypharmacy for patients with multiple illnesses without detriment

The European research consortium OPERAM has today published in the British Medical Journal the results of a major trial jointly funded by the European research programme Horizon 2020 and the Swiss Government led by a research team at Inselspital, Bern University Hospital and the University of Bern. The topic is the reduction of the number of medications in elderly people with multiple concurrent illnesses, so-called ‘multimorbidity’. For the first time, it was possible to demonstrate for this group of patients that omitting unnecessary, possibly even harmful medications has no negative effect on health status.

Multiple illnesses or multimorbidity usually engenders a high number of prescribed medications or ‘polypharmacy’ in older patients. This can lead to overmedication, incorrect medication and associated hospital admissions. Medication (type, number and quantity of medications) in older persons with multiple illnesses can be optimized by discontinuing unnecessary medications, shortening the duration of treatment or by using lower doses where appropriate. The multinational OPERAM trial led by the Department of General Internal Medicine, Inselspital, Bern University Hospital, with 3 other major medical centres participating in Utrecht, Brussels and Cork investigated whether unnecessary or potentially harmful medications can be omitted or reduced in elderly multimorbid patients without a negative impact on health status, and whether such improved medication leads to a reduction in hospital admissions.

Reduction of polypharmacy possible in multimorbid patients

The most important finding of the OPERAM trial is that the number and duration of medications administered can be reduced successfully in older patients with multimorbidity, without detriment to their health status. From the adjustment of medication, no statistically significant reduction in hospital admissions could be shown.

A prescribing optimization method, based on the STOPP and START prescribing criteria and supported by a newly designed software, was used in the intervention arm of the trial by the teams of physicians and pharmacists to help identify incorrect or excessive medication prescriptions. The teams made recommendations to the attending physicians aimed at optimizing older patients’ medication. Unnecessary and potentially harmful medications were found in 86% of the patients in the trial. Dr. med. Manuel R. Blum, first author of the trial publication, explains: “Recommendations

were made for an average of 2.75 inappropriate medications per patient, and this was implemented in approximately two-thirds of cases.”

The overall leader of the OPERAM trial, Prof. Dr. med. Nicolas Rodondi, made these comments on the trial results: “For the first time, we were able to show in a multicentre, randomized trial that polypharmacy can be successfully reduced in multimorbid patients, without patients experiencing worsening of their health status. Unfortunately, not all recommendations were implemented. We propose that more intensive counselling of older patients and their attending physicians could improve adherence to medication recommendations and ultimately reduce hospital admissions.”

Largest European trial on medication for patients with multiple illnesses

OPERAM was a randomized, multicentre clinical trial funded within the framework of the HORIZON 2020 European Research Program. A total of nine partners participated, with the Department of General Internal Medicine at Inselspital, Bern University Hospital as the overall lead. The trial recruited more than 2000 individuals over 70 years of age who had at least three chronic conditions requiring five or more daily medications. The patients participating in the trial were randomly divided into two equally sized groups i.e. targeted medication optimization (intervention) or without medication optimization (control). In the group with optimization, drug treatment was improved in 62% of patients. On average, one medication per patient was reduced without any deterioration in health status.

Summary and outlook

The OPERAM trial demonstrates that 9 out of 10 elderly multimorbid patients receive unnecessary or inappropriate medication and that standardized evaluation by an interdisciplinary team can improve the situation. Prof. Dr. med. Thomas Geiser, Director of Teaching and Research at Insel Gruppe, summarizes the findings as follows: “OPERAM has shown how efficient and effective European collaborative research can become when it is well networked and works at a very high scientific level. Work in the clinic will sustainably benefit from OPERAM.”

Experts:

- **Prof. Dr. med. Nicolas Rodondi**, Chief Physician at the Department of General Internal Medicine, Inselspital, Bern University Hospital and Director of the Institute of Primary Health Care (BIHAM), University of Bern
- **Dr. med. Manuel R. Blum**, Department of General Internal Medicine, Inselspital, Bern University Hospital and researcher in the Institute of Primary Health Care (BIHAM), University of Bern

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Links:

- Original publication: DOI: 10.1136/bmj.n1585
Manuel R. Blum, Bastiaan T. G. M. Sallevelt, Anne Spinewine et al.: Optimizing Therapy to Prevent Avoidable Hospital Admissions in Multimorbid Older Patients: the OPERAM Cluster Randomized Clinical Trial; BMJ n1585, 2021

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