

Does taking multiple medicines increase your risk of being admitted to hospital?

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Patients with a single illness who take many drugs have an increased risk of being admitted to hospital, but for patients with multiple conditions, taking many medicines is now associated with a near-normal risk of admission. This is the key finding of work published in the *British Journal of Clinical Pharmacology*. Doctors call the situation where people take many drugs 'polypharmacy', a state of affairs that is becoming increasingly common in part because we have more elderly people and also a rising number of people are being diagnosed with multiple health conditions.

"The commonly-held assumption that polypharmacy is always hazardous and represents poor care is misleading. Our work shows that we need more sophisticated approaches to assessing the appropriateness of each patient's set of medicines," says lead author Dr Rupert Payne who works at the Cambridge Centre for Health Services Research.

Working with colleagues in Nottingham and Glasgow, Dr Payne analysed Scottish NHS primary care data for 180,815 adults with long-term clinical conditions. They identified the numbers of regular medications each person was taking and linked this to whether or not the person was admitted to hospital in the following year. They found that for [patients](#) with only a single [medical condition](#) taking 10 or more medications was associated with a more than three-fold increase in the chance of having an unplanned hospitalisation compared to patients who took only one to three medicines. However, patients with six or more medical conditions who used 10 or more medications only increased

their chance of admission by 1.5 times compared to the group taking one to three medicines.

"This work is highly relevant to the development and assessment of prescribing skills in general practice where the majority of long-term clinical care is undertaken and where doctors often prescribe drugs for long periods of time. It is particularly important at times when doctors are caring for older patients and those with multiple medical [conditions](#) in whom multiple medications are often used," says Dr Payne.

Dr Payne says that previous studies have missed the different effect that polypharmacy has in different people because they used overly simplistic approaches when looking at the effect of taking many drugs at once. He points out that their new work demonstrates the need for more sophisticated and nuanced approaches when measuring the impact of [polypharmacy](#) in future clinical research.

More information: Payne et al. Is polypharmacy always hazardous? A retrospective cohort analysis using linked electronic health records from primary and secondary care; *British Journal of Clinical Pharmacology* 2013; [DOI: 10.1111/bcp.12292](https://doi.org/10.1111/bcp.12292)

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