

# Poorly coordinated care doubled risk of drug and medical errors in seven countries

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Patients who received poorly co-ordinated care or were unable to afford basic medical costs were much more likely to report medication, treatment or care errors, according to an international study published in the July issue of IJCP, the *International Journal of Clinical Practice*.

Researchers from the USA and Australia used data from the Commonwealth Fund International Health Policy Survey to identify the key risk factors behind the [errors](#) reported by patients from Canada, USA, the Netherlands, UK, Germany, Australia and New Zealand. Eleven per cent of the 11,910 people surveyed said that they had experienced a medication or medical error in the last two years.

Poorly co-ordinated care increased the likelihood of medication and [medical errors](#) by 110% to 200% across the countries, with the highest levels in the Netherlands, followed by Germany and the UK. Cost-related barriers increased the likelihood of medication and medical errors by 50% to 160%, with the highest levels in the UK, followed by New Zealand and Australia.

Being hospitalised, having multiple chronic conditions and making greater use of healthcare services were also associated with the risk of errors.

"Medication errors are a serious safety concern, a major cause of adverse drug events and one of the most preventable causes of patient injury" says lead author Dr Christine Lu from Harvard Medical School

and Harvard Pilgrim Health Care Institute, Boston, USA.

"Previous research suggests that incidence rates are as high as 6.5% in adult inpatients and more than 27% in adult outpatients and that 5% to 8% per of hospital admissions are due to adverse drug events.

Medication errors can happen when they are prescribed, dispensed or administered and all countries need to find ways to reduce them, together with errors in medical treatment and care."

The study was based on data from a telephone survey carried out in 2007, using randomly selected numbers, but weighted to reflect the adult populations in each country. A multivariate analysis was carried out to calculate the odds ratios for the potential factors.

Key findings of the study included:

UK: 1,434 patients, average age 53, 61% female  
9% reported medication/medical errors. Of these, 23% reported poorly co-ordinated care (increasing the likelihood of error by 160%) and 21% reported cost-related barriers (increasing the likelihood of error by 160%).

USA: 2,500 patients, average age 52, 62% female  
13% reported medication/medical errors. Of these, 27% reported poorly co-ordinated care (increasing the likelihood of error by 140%) and 21% reported cost-related barriers (increasing the likelihood of error by 90%).

Canada: 3,003 patients, average age 50, 54% female  
10% reported medication/medical errors. Of these, 24% reported poorly co-ordinated care (increasing the likelihood of error by 150%) and 22% reported cost-related barriers (increasing the likelihood of error by 90%).

Australia: 1,009 patients, average age 51, 64% female  
13% reported medication/medical errors. Of these, 28% reported poorly co-ordinated care (increasing the likelihood of error by 110%) and 24% reported cost-related barriers (increasing the likelihood of error by 100%).

New Zealand: 1,000 patients, average age 49, 61% female  
11% reported medication/medical errors. Of these, 28% reported poorly co-ordinated care (increasing the likelihood of error by 160%) and 21% reported cost-related barriers (increasing the likelihood of error by 110%).

Germany: 1,407 patients, average age 46, 53% female  
9% reported medication/medical errors. Of these, 20% reported poorly co-ordinated care (increasing the likelihood of error by 160%) and 17% reported cost-related barriers (increasing the likelihood of error by 90%).

Netherlands: 1,557 patients, average age 55, 59% female  
12% reported medication/medical errors. Of these, 35% reported poorly co-ordinated care (increasing the likelihood of error by 200%) and 30% reported cost-related barriers (increasing the likelihood of error by 50%).

Other factors that increased the overall risk included:

- Seeing two or more specialists (Australia, Canada, USA, Netherlands)
- Being hospitalised in the last two years (Australia, Canada, USA, Netherlands)

- Paying two or more emergency room visits (Australia, New Zealand, USA, Germany, Netherlands)
- Having two or more chronic illnesses (Canada, UK, USA)
- Suffering from depression (USA, UK, Germany)
- Having diabetes or cancer (Canada)
- Being aged 18 to 29 rather than 65 plus (Canada, USA, Netherlands).

"The two key factors that determined medical errors were poor care coordination and cost-related barriers" says Dr Lu. "One interesting finding is that a notable proportion of patients reported cost-related barriers, even in countries where there is universal healthcare coverage.

"We believe that our findings provide important information for clinicians and policy makers alike and could help to reduce medical and [medication errors](#)."

**More information:** Determinants of patient-reported medication errors: a comparison among seven countries. Lu C Y and Roughead E. IJCP. 65.7, pp733-740. (July 2011). [DOI: 10.1111/j.1742-1241.2011.02671.x](#)

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