



Case Study

Women and teenagers most at risk of paracetamol overdose

Women and 15-19-year-olds are the most likely to suffer a paracetamol overdose, a comprehensive study using nearly 15,000 hospital records has found. The researchers suggest that improving general awareness and support for mental health initiatives could reduce the burden of these overdoses.

Siddharth Sood of the Department of Gastroenterology at Austin Health and his colleagues found that 71% of paracetamol overdoses recorded in Victoria between 2000 and 2007 occurred in women.

The results also indicated that teenagers were most at risk of overdose, with the majority of all people admitted to hospital aged between 15 and 19 years old.

Paracetamol is the most frequently used analgesic in Australia and is available without prescription. But paracetamol overdoses are the most common cause of acute liver failure in Australia and are a well-accepted indication that a patient might require a liver transplant. Overdoses therefore heavily impact the health service.

However, this analysis found that 15% of overdoses, equating to 2,149 cases, were accidental and potentially preventable. Siddharth and his colleagues suggest that improving general awareness of the potential for accidental overdoses –combined with additional support for mental health initiatives – could reduce a sizable part of what currently poses a large health-care burden.

Using data supplied by the Population Health Research Network, Siddharth and his team analysed 14,662 hospital admissions recorded between 2000 and 2007 – averaging 2,095 cases per year. The PHRN's Centre for Victorian Data Linkage linked hospital data with death data for the research team to analyse.

The group used this data to find that only 1.1% of cases were fatal, equating to 26 deaths directly attributable to paracetamol overdose across the seven-year time frame. They also saw the rate of overdoses fall from 46 cases per 100,000 in 2001 to 39 cases per 100,000 in 2006.

"This project would have been practically impossible for us to do this without the Public Health Research Network. We'd have had to contact dozens of hospitals and much of the data would have been missing," says Siddharth.

Siddharth is now the staff hepatologist at Royal Melbourne Hospital. His team is now focussing on the causes of accidental overdose. He hopes to also use PHRN data to study other self-harm activities and to try to identify risk factors such as drug use.

Austin Health/Victorian Research Data Linkages, Victorian Department of Health

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