



Prevalence and Outcomes of Adverse Medicines Events in the Australia Community

Tessa Morgan¹, Margaret Williamson¹, Kay Stewart², Joanne Barnes³, Marie Pirota⁴
 1. National Prescribing Service, 2. Monash University, 3. The University of Auckland, 4. The University of Melbourne.



Objective

To investigate the prevalence, risk factors and outcomes of self-reported adverse medicines events (AMEs) among people 50 and over, living in the community.

Background

Medicines use is a very common health-related action taken by Australians living in the community.

Australian data from general practice reports 10% of patients have experienced an AME in the last six months, while 5.6% of adults admitted to hospital due to an AME.

There is currently no Australian population data on the prevalence and outcomes of AMEs.

Methods

As part of the National Census of Medicines Use research project, a random sample of 4500 Australians, aged 50 years and older was drawn from the Australian electoral roll and stratified by state/territory.

Four waves of postings; June 2009 - February 2010

Participants received an invitation postcard then a piloted self-complete questionnaire, if participants did not respond they were sent a reminder postcard and then a reminder questionnaire.

Questions about AMEs in the past year focussed on the following areas:

- Occurrence & symptoms
- Risk factors; socio-demographic & medicines
- Outcomes: Communication with health professionals, health professional advice & patient actions

Definition of AME: *'side effects, unwanted reactions or other problems from medicines use'*

Analysis was conducted using SPSS 18 for Windows.

Post-stratification weights were applied using Australian Bureau of Statistics (ABS) population estimates for age and sex (2009)

Results

- 1576 questionnaires were completed and returned. The response rate accounting for exclusions was 37.1%.

Prevalence of adverse medication events

- 18.9% (n=189) of participants who indicated they had used medicines reported experiencing an AME in past 12 months.

Types of adverse medication events

- More serious AMEs including; allergic reactions, hallucinations, gastro bleeding, short-term memory loss and uncontrollable shaking.

Demographic risk factors

- Respondents reporting an AME, were more likely to be younger than those not reporting an ADE, this difference was not significant
- Participants taking 5 or more medicines were more likely to report an AME (15.4% vs 21.7%; p=0.041).

Medications involved in adverse medication events (Table 1)

- 42 different medicine classes were reported
- Antihypertensive agents were the most commonly associated medicines class
- Complementary medicines were implicated in 4.2% of cases.

Outcomes (Figure 1)

Communication with health professionals

- Of participants who reported experiencing an AME, most (76.2%) reported they talked to their doctor about the problem.
- Participants aged 65 years and older were significantly more likely to talk to their doctor than younger participants (87.7% vs 67.3%; p=0.003).

Response of health professionals and participant

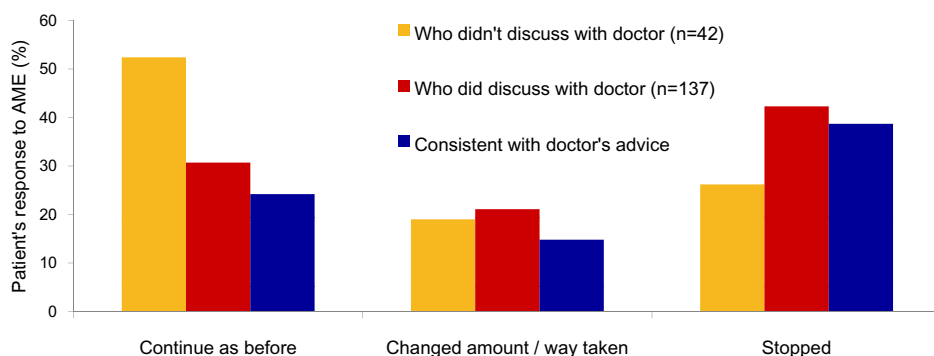
- The most common outcome of an AME was that the participant ceased the using of the medication (38.1%).
- The most common advice from doctors was to:
 - stop the medicine and recommend a replacement medicines (30%),
 - to continue the medicine exactly as before (27%)
 - to change the amount or way the medicine was taken (19%)

Table 1: Medicine classes associated with AME and communication with doctors, Australians 50+, 2009-10 (n=189)

Medicine classes*	Number of associated AMEs n (%)	% who used the medicine in past month	Most common symptom reported† (%)	% who talked to their doctor about AME
Antihypertensive agents	34 (18)	43.1	Cough (37), Dizziness (26)	89
Hypolipidaemic agents	16 (9)	31.9	Muscular aches & pains (32)	64
Nonsteroidal anti-inflammatory agents	14 (7)	16.7	Dizziness (25), Nausea/vomiting (23)	93
Hyperacidity, reflux and ulcers	9 (5)	23.9	Stomach cramp/indigestion (50), Dry mouth (24)	100
Beta-adrenergic blocking agents	7 (4)	12.0	Sexual problems (36), Dizziness (21)	100
Complementary medicines	8 (4)	51.4	Constipation (53), Loose bowel motions (24), Nausea/vomiting (24)	37
All medicines	189 (100)	92.9	Dizziness (12), Nausea/vomiting (9), Stomach cramp/indigestion (8), Muscular aches & pains (7)	76

* Medicine was not stated or not known to participant in 8.9% of cases. † Multiple responses possible

Figure 1: Reported response of participant to AME, Australians 50+, 2009-10



Conclusions

- A significant proportion of medicines user experienced an AMEs(19%) Many events are serious enough for consumer to stop taking the medicine.
- While most people discuss problems with doctors, this varies with the medicine involved.
- It is important that necessary support and accurate information is available to assist people in making optimal decisions about their medicines when problems occur.
- Limitations of this study include possible recall bias and errors associated with self reporting.

