

ANNUAL REPORT OF REGIONAL MONITORING CENTRES,  
MEDICINES AND HEALTHCARE PRODUCTS REGULATORY AGENCY

**WEST MIDLANDS CENTRE FOR ADVERSE DRUG REACTION REPORTING**

**2005**

**1. Centre Staff**

Director - Dr R E Ferner  
Honorary Consultant Physician - Dr N J Langford  
Specialist Registrars - Dr J J Coleman, Dr V J Karthikeyan, Dr J Bateman  
Administrative Co-ordinator - Mr C Anton  
ADR Pharmacist - Mr A R Cox  
Research Officer - Miss S E McDowell  
Clerical Officer - Ms R Khatun (since November)

**2. Summary**

There was a slight decrease in the number of reports received during the year but reports from pharmacists increased.

**3. Number of reports received**

3.1 Table 1 shows the number of reports received in 2005 and the previous five years for comparison. In this table, and all subsequent ones. (Figures in parentheses refer to all the reports from the Region including those which go direct to the MHRA)

Table 1

| Year  | Total number of reports received | Change on previous year |
|-------|----------------------------------|-------------------------|
|       | CSMWM (all WM reports)           |                         |
| 2005  | 1259 (1498)                      | -4% (-10%)              |
| 2004  | 1318 (1661)                      | +6% (+12%)              |
| 2003  | 1245 (1488)                      | +34% (+31%)             |
| 2002  | 926 (1135)                       | -30% (-29%)             |
| 2001  | 1317 (1588)                      | +1% (+2%)               |
| 2000* | 1309 (1553)                      | +0% (+1%)               |

\* discounting meningitis C reports

3.2 Table 2 shows the number of reports received from Primary care doctors (GPs and doctors at child health, mental health clinics, etc which are managed by primary care trusts).

Table 2

| Year | Total No of reports received from GPs | Percentage of total reports | Change on previous year |
|------|---------------------------------------|-----------------------------|-------------------------|
|      | CSMWM (all WM reports)                |                             |                         |
| 2005 | 333 (463)                             | 26% (31%)                   | -11% (-21%)             |
| 2004 | 373 (587)                             | 28% (35%)                   | 0% (+19%)               |
| 2003 | 372 (492)                             | 30% (33%)                   | -14% (-7%)              |
| 2002 | 435 (527)                             | 47% (46%)                   | -39% (-40%)             |
| 2001 | 716 (873)                             | 54% (55%)                   | -31% (-30%)             |
| 2000 | 1032 (1249)                           | 39% (40%)                   | +44%                    |

3.3 Table 3 shows the number of reports received from hospital doctors.

Table 3

| Year | Total No of reports received from hospital doctors | Percentage of total reports | Change on previous year |
|------|--|-----------------------------|-------------------------|
|      | CSMWM (all WM reports)                             |                             |                         |
| 2005 | 424 (476)  | 34% (32%)                   | -12% (-11%)             |
| 2004 | 484 (535)  | 37% (32%)                   | +23% (+19%)             |
| 2003 | 393 (450)  | 32% (30%)                   | +35% (+27%)             |
| 2002 | 292 (354)  | 32% (31%)                   | -14% (-10%)             |
| 2001 | 341 (395)  | 26% (25%)                   | -9% (-9%)               |
| 2000 | 376 (434)  | 14%                         | +4%                     |

3.4 Table 4 shows the number of reports received from hospital pharmacists. This is the highest number of reports received from hospital pharmacists in any year.

Table 4

| Year | Total received from hospital pharmacists | Percentage of total reports | Change on previous year |
|------|--|-----------------------------|-------------------------|
|      | CSMWM (all WM reports)                   |                             |                         |
| 2005 | 266 (276)                                | 21% (18%)                   | +17% (+15%)             |
| 2004 | 227 (240)                                | 17% (15%)                   | +10% (+13%)             |
| 2003 | 206 (212)                                | 17% (14%)                   | +161% (+152%)           |
| 2002 | 79 (84)                                  | 9% (7%)                     | -11% (-13%)             |
| 2001 | 89 (97)                                  | 7% (6%)                     | -16%                    |
| 2000 | 106 (125)                                | 4% (4%)                     | +16%                    |

3.5 Table 5 shows the number of reports received from community pharmacists. This is the highest number of reports received from community pharmacists in any year.

Table 5

| Year | Total received from community pharmacists | Percentage of total reports | Change on previous year |
|------|---|-----------------------------|-------------------------|
|      | CSMWM (all WM reports)                    |                             |                         |
| 2005 | 54 (61)                                   | 4% (4%)                     | +8% (-3%)               |
| 2004 | 50 (63)                                   | 4% (4%)                     | +43% (+37%)             |
| 2003 | 35 (46)                                   | 3% (3%)                     | -13% (-13%)             |
| 2002 | 40 (53)                                   | 4% (5%)                     | 0% (+13%)               |
| 2001 | 40 (47)                                   | 3% (3%)                     | +60%                    |
| 2000 | 25 (32)                                   | 1% (1%)                     | +56%                    |

3.6 Table 6 shows the number of reports received from hospital nurses.

Table 6

| Year | Total received from hospital nurses | Percentage of total reports | Change on previous year |
|------|-------------------------------------|-----------------------------|-------------------------|
|      | CSMWM (all WM reports)              |                             |                         |
| 2005 | 69 (78)                             | 5% (5%)                     | -7% (-10%)              |
| 2004 | 74 (87)                             | 6% (5%)                     | +1% (+12%)              |
| 2003 | 73 (78)                             | 6% (5%)                     | +387%                   |
| 2002 | 15                                  | 2%                          |                         |
| 2001 | 24                                  | 2%                          |                         |
| 2000 | 7                                   |                             |                         |

3.7 Table 7 shows the number of reports received from practice nurses and health visitors

Table 7

| Year | Total received from practice nurses/ / health visitors | Percentage of total reports | Change on previous year |
|------|--|-----------------------------|-------------------------|
|      | CSMWM (all WM reports)                                 |                             |                         |
| 2005 | 81 (94)  | 6% (6%)                     | -13% (-23%)             |
| 2004 | 93 (122)   | 7% (7%)                     | -37% (-26%)             |
| 2003 | 148 (165)  | 12% (11%)                   | +174%                   |
| 2002 | 54   | 6%                          | -27%                    |
| 2001 | 74   | 6%                          |                         |
| 2000 | 885  | 33%                         |                         |

Nurse reporting varied markedly within the region. The map shows the reports from practice and school nurses and health visitors during 2005.

3.8 Table 8 shows the number of reports received from other sources

Table 8

| Type of reporter          | Total received CSMWM (all WM reports) |
|---------------------------|---------------------------------------|
| Coroner                   | 1 (1)                                 |
| Dentist                   | 5 (6)                                 |
| Other health professional | 6 (21)                                |
| Patient                   | 1 (1)                                 |
| Not ascertainable         | 3 (4)                                 |

The disparity between PCTs remains and is illustrated below. The upper and lower control limits (solid lines) approximate to the 95% confidence intervals. The regional mean is marked by the dashed line.

The large disparity in reporting between hospital trusts persists and is illustrated in the map below. The area of the circle corresponds to the reporting rate per 10 000 FCEs for each of the acute trusts in the Region.

#### 4. Serious reaction reports

4.1 We received 734 (58%) reports which were classified as serious by the ADROIT medical dictionary. The data are shown in Table 9. There were 33 (4%) reports with a fatal outcome.

Table 9

| Year | Total No of serious reports received | Percentage of total reports | Change on previous year |
|------|--------------------------------------|-----------------------------|-------------------------|
|      |                                      |                             |                         |
| 2005 | 734 (859)                            | 58% (57%)                   | -8% (-11%)              |
| 2004 | 797 (963)                            | 60% (58%)                   | +17% (+20%)             |
| 2003 | 681 (803)                            | 55% (54%)                   | +40%                    |
| 2002 | 485                                  | 52%                         | -27%                    |
| 2001 | 665                                  | 50%                         | -23%                    |
| 2000 | 856                                  | 32%                         | +44%                    |

4.2 The number of reports of serious reactions from GPs is shown in Table 10.

Table 10

| Year | Total No of serious reports received | As percentage of GP reports |
|------|--------------------------------------|-----------------------------|
|      | CSMWM (all WM reports)               |                             |
| 2005 | 164 (233)                            | 49% (50%)                   |
| 2004 | 198 (301)                            | 53% (51%)                   |
| 2003 | 179 (234)                            | 48% (48%)                   |
| 2002 | 200                                  | 46%                         |
| 2001 | 318                                  | 44%                         |
| 2000 | 303                                  | 29%                         |

4.3 The number of reports of serious reactions from hospital doctors is shown in Table 11.

Table 11

| Year | Total No of serious reports received | As percentage of hospital doctor reports |
|------|--------------------------------------|--|
|      | CSMWM (all WM reports)               |  |
| 2005 | 285 (315)                            | 67% (66%)                                |
| 2004 | 328 (355)                            | 68% (66%)                                |
| 2003 | 235 (271)                            | 60% (60%)                                |
| 2002 | 194                                  | 66%                                      |
| 2001 | 216                                  | 63%                                      |
| 2000 | 223                                  | 60%                                      |

4.4 The number of reports of serious reactions received from hospital pharmacists is shown in Table 12.

Table 12

| Year | Total No of serious reports received | As percentage of hospital pharmacist reports |
|------|--------------------------------------|--|
|      | CSMWM (all WM reports)               |  |
| 2005 | 214 (222)                            | 80% (80%)                                    |
| 2004 | 186 (196)                            | 82% (82%)                                    |
| 2003 | 155 (160)                            | 75% (75%)                                    |
| 2002 | 61                                   | 77%  |
| 2001 | 67                                   | 63%  |
| 2000 | 72                                   | 60%  |

4.5 The number of reports of serious reactions received from community pharmacists is shown in Table 13.

Table 13

| Year | Total No of serious reports received | As percentage of hospital pharmacist reports |
|------|--------------------------------------|--|
|      | CSMWM (all WM reports)               |  |
| 2005 | 15 (17)                              | 28% (28%)                                    |
| 2004 | 18 (23)                              | 36% (37%)                                    |
| 2003 | 12 (16)                              | 34% (35%)                                    |
| 2002 | 10                                   | 25%  |
| 2001 | 15                                   | 38%  |
| 2000 | 10                                   | 40%  |

- 4.6 The number of reports of serious reactions reported by hospital nurses is shown in Table 14.

Table 14

| Year | Total No of serious reports received | As percentage of hospital nurse reports |
|------|--------------------------------------|---|
|      | CSMWM (all WM reports)               |   |
| 2005 | 32 (37)                              | 46% (47%)                               |
| 2004 | 30 (35)                              | 41% (40%)                               |
| 2003 | 35 (37)                              | 48% (47%)                               |
| 2002 | 7                                    | 47%                                     |

- 4.7 The number of reports of serious reactions reported by practice nurses and health visitors is shown in Table 15.

Table 15

| Year | Total No of serious reports received | As percentage of nurse reports |
|------|--------------------------------------|--------------------------------|
|      | CSMWM (all WM reports)               |                                |
| 2005 | 21 (24)                              | 26% (26%)                      |
| 2004 | 28 (36)                              | 30% (30%)                      |
| 2003 | 56 (60)                              | 38% (37%)                      |
| 2002 | 13                                   | 24%                            |

## 5. Reports of black triangle drugs

- 5.1 A total of 349 (28%) reports of black triangle drugs were received. The data are shown in Table 16.

Table 16

| Year | Total No of ▼ reports received | Percentage of total reports | Change on previous year |
|------|--------------------------------|-----------------------------|-------------------------|
|      | CSMWM (all WM reports)         |                             |                         |
| 2005 | 349 (453)                      | 28% (30%)                   | -6% (-10%)              |
| 2004 | 372 (501)                      | 28% (30%)                   | -12% (0%)               |
| 2003 | 421 (503)                      | 34% (34%)                   | +25%                    |
| 2002 | 338                            | 37%                         | -45%                    |
| 2001 | 613                            | 47%                         | -70%                    |
| 2000 | 1996                           | 75%                         | +246%                   |

5.2 The number of reports of reactions to ▼ drugs from GPs is shown in Table 17.

Table 17

| Year | Total No of ▼ reports received | As percentage of GP reports |
|------|--------------------------------|-----------------------------|
|      | CSMWM (all WM reports)         |                             |
| 2005 | 124 (186)                      | 37% (40%)                   |
| 2004 | 129 (208)                      | 35% (35%)                   |
| 2003 | 141 (181)                      | 38% (37%)                   |
| 2002 | 195                            | 45%                         |
| 2001 | 419                            | 44%                         |
| 2000 | 721                            | 29%                         |

5.3 The number of reports of reactions to ▼ drugs from hospital doctors is shown in Table 18.

Table 18

| Year | Total No of ▼ reports received | As percentage of hospital doctor reports |
|------|--------------------------------|--|
|      | CSMWM (all WM reports)         |  |
| 2005 | 111 (135)                      | 26% (28%)                                |
| 2004 | 133 (152)                      | 27% (29%)                                |
| 2003 | 107 (129)                      | 27% (28%)                                |
| 2002 | 71                             | 24%                                      |
| 2001 | 88                             | 26%                                      |
| 2000 | 158                            | 42%                                      |

5.4 The number of reports of reactions to ▼ drugs from hospital pharmacists is shown in Table 19.

Table 19

| Year | Total No of ▼ reports received | As percentage of hospital pharmacist reports |
|------|--------------------------------|--|
|      | CSMWM (all WM reports)         |  |
| 2005 | 26 (29)                        | 10% (11%)                                    |
| 2004 | 22 (25)                        | 10% (10%)                                    |
| 2003 | 34 (36)                        | 17% (17%)                                    |
| 2002 | 21                             | 27%  |
| 2001 | 22                             | 25%  |
| 2000 | 34                             | 32%  |

5.5 The number of reports of reactions to ▼ drugs from community pharmacists is shown in Table 20.

Table 20

| Year | Total No of ▼ reports received | As percentage of community pharmacist reports |
|------|--------------------------------|---|
|      | CSMWM (all WM reports)         |   |
| 2005 | 21 (24)                        | 39% (39%)                                     |
| 2004 | 13 (16)                        | 26% (25%)                                     |
| 2003 | 15 (18)                        | 43% (39%)                                     |
| 2002 | 13                             | 33%   |
| 2001 | 17                             | 43%   |
| 2000 | 11                             | 44%   |

5.6 The number of reports of reactions to ▼ drugs reported by hospital nurses is shown in Table 21.

Table 21

| Year | Total No of ▼ reports received | As percentage of hospital nurse reports |
|------|--------------------------------|---|
|      | CSMWM (all WM reports)         |   |
| 2005 | 21 (24)                        | 30% (31%)                               |
| 2004 | 30 (40)                        | 41% (46%)                               |
| 2003 | 24 (27)                        | 33% (35%)                               |
| 2002 | 35                             | 30%                                     |

5.7 The number of reports of reactions to ▼ drugs reported by practice nurses and health visitors is shown in Table 22.

Table 22

| Year | Total No of ▼<br>reports<br>received | As percentage<br>of nurse reports |
|------|--------------------------------------|-----------------------------------|
|      | CSMWM (all WM reports)               |                                   |
| 2005 | 44 (49)                              | 54% (52%)                         |
| 2004 | 43 (56)                              | 46% (46%)                         |
| 2003 | 97 (102)                             | 66% (62%)                         |
| 2002 | 22                                   | 16%                               |

## 6. Most commonly reported drugs

The 10 drugs most often mentioned in reports received by CSM West Midlands are listed in Table 23, and Table 24 includes the reports which go direct to the MHRA (but excluding any clozapine reports sent via the Clozaril Monitoring Scheme).

Table 23

| Drug substance                                     | Place     | 2005      | 2004 | Place |
|--|-----------|-----------|------|-------|
| aspirin  | <b>1</b>  | <b>50</b> | 44   | 1     |
| diclofenac   | <b>2</b>  | <b>30</b> | 23   | 4     |
| etanercept ▼                                       | <b>3</b>  | <b>28</b> | 23   | 4     |
| pregabalin ▼                                       | <b>4</b>  | <b>26</b> | 6    | 66    |
| warfarin   | <b>5</b>  | <b>22</b> | 8    | 44    |
| adalimumab ▼                                       | <b>5</b>  | <b>22</b> | 6    | 66    |
| infliximab ▼                                       | <b>7</b>  | <b>19</b> | 32   | 3     |
| diphtheria, tetanus and<br>poliomyelitis vaccine ▼ | <b>7</b>  | <b>19</b> | 17   | 15    |
| duloxetine ▼                                       | <b>9</b>  | <b>18</b> | 5    | 81    |
| ibuprofen  | <b>10</b> | <b>17</b> | 11   | 32    |

Simvastatin, bendroflumethiazide, BCG vaccine, rosiglitazone, rosuvastatin and etoricoxib have dropped out of the top 10.

Table 24

| Drug substance                                    | Place | 2005 | 2004 | Place |
|---|-------|------|------|-------|
| aspirin   | 1     | 50   | 44   | 1     |
| pregabalin▼                                       | 2     | 38   | 9    | 55    |
| etanercept▼                                       | 3     | 33   | 31   | 4     |
| diclofenac  | 4     | 31   | 25   | 11    |
| duloxetine▼                                       | 5     | 27   | 7    | 72    |
| warfarin  | 6     | 24   | 8    | 63    |
| adalimumab▼                                       | 6     | 24   | 10   | 49    |
| infliximab▼                                       | 8     | 23   | 38   | 3     |
| diphtheria, tetanus and<br>poliomyelitis vaccine▼ | 9     | 22   | 17   | 22    |
| simvastatin                                       | 10    | 20   | 40   | 2     |

BCG vaccine, etoricoxib, celecoxib, rosuvastatin, bupropion and rosiglitazone have dropped out of the top 10

These top 10 drugs accounted for 19% of all WM reports for 2004 (20% in 2005, 26% in 2003, 26% in 2002, 39% in 2001, 67% in 2000).

## 7. Follow-up of reports

7.1 We requested follow-up information from 125 reporters and to date have had 73 replies. The data are given in Table 25.

Table 25

| Year | Total No of reports followed-up | As percentage of reports | Follow-up response rate |
|------|---------------------------------|--------------------------|-------------------------|
| 2005 | 124                             | 10%                      | 32%*                    |
| 2004 | 125                             | 9%                       | 58%                     |
| 2003 | 114                             | 9%                       | 52%                     |
| 2002 | 143                             | 15%                      | 62%                     |
| 2001 | 171                             | 13%                      | 69%                     |
| 2000 | 237                             | 9%                       | 27%                     |
| 1999 | 191                             | 15%                      | 40%                     |

\* information to date

8. A total of 193 (15%) reporters requested, and were sent, detailed information from us and the data are given in Table 27. This compares with 19%, 27% in 2003, 27% in 2002, 32% in 2001, 25% in 2000, 29% in 1999.

9. Information on the type of card received is shown in Table 28

Table 28

|                | Number of reports | percentage |
|----------------|-------------------|------------|
| BNF (or copy)  | 991               | 79%        |
| AR20 (or copy) | 251               | 20%        |
| Other          | 18                | 1%         |

The distribution of the reports which go direct to the MHRA is shown in Table 29. There was a large decrease in the number of GP electronic reports received because the MHRA IT problems have been resolved.

Table 29

|               | Number of reports | Percentage of RMC reports | Change on previous year |
|---------------|-------------------|---------------------------|-------------------------|
| Paper         | 158               | 11%                       | -4%                     |
| GP electronic | 37                | 2%                        | +545%                   |
| HIV           | 1                 |                           |                         |
| Internet      | 43                | 3%                        | +76%                    |
| Total         | 239               | 16%                       | +48%                    |

10. We have published 1 edition of *re:Action* (issue 32), our occasional bulletin, since the last annual RMC meeting covering:

We have produced six editions of the *Adverse Drug Reaction Bulletin*.

A number of publications of adverse reactions and related issues have appeared during the year:

We continue to educate reporters throughout the region and elsewhere about the Yellow Card Scheme and the importance of reporting adverse drug reactions. Lectures and talks were given to:

- OSCE and Safe prescribing, University of Birmingham ongoing
- Warfarin a temperamental partner, Department of General Practice, University of Birmingham ongoing
- Sandwell and West Birmingham NHS Trust specialist nurses
- Regional palliative care nurses
- A multi-disciplinary study day at Burton Hospital
- Nurses from Coventry PCT
- Update in Medical Toxicology, Cardiff
- South West Clinical Pharmacology Group, Oxford
- International Society of Pharmacovigilance annual meeting in Manila in October 2005.

We taught undergraduate pharmacy students at Aston University, undergraduate and postgraduate medical and dental students at Birmingham University, and pharmacists on the Keele Diploma in Hospital Pharmacy, and participated in the Regional MRCP course.

We ran a study day on ADRs in Diabetes at Warwick University.

We ran a multi-disciplinary study day at City Hospital in April 2005.

We also regularly update the Medicines Information pharmacists of the West Midlands and Trent regions on trends in reporting.

Our website at <http://www.csmwm.org> received over 250,000 hits during 2005. We have developed resources for the website including a guide to the pronunciation of drug names and a pharmacovigilance timeline showing the history of pharmacovigilance.

11. We continue, as a Centre, to take an interest in errors in the use of medicines and are researching into an analysis of error rates throughout the prescribing and dispensing process

CA, REF February 2005

## Appendix 1

### DOES INFORMING GPs ABOUT COMMON ADVERSE DRUG REACTIONS (ADRS) INFLUENCE ADR REPORTING RATES?

Anton C, Cox AR, Ferner RE

#### Introduction and Aim

Many prescribers are unsure about when to report ADRs to the MHRA, and many never complete a Yellow Card during their career.<sup>1</sup> Additionally, the reporting rate of GPs in the UK has halved in the last five years.

We investigated whether educating GPs about the most common serious reactions, by sending them factsheets had any influence on their subsequent reporting.

#### Method

We identified from our Regional Monitoring Centre database of ADRs the five most common serious reactions (using the MHRA's definition of severity), and produced concise factsheets (about 500 words) on each, describing the reaction, risk factors, and strategies for avoidance.

In 2002 we received reports from 312 individual GPs out of 3157 GPs in the West Midlands region. We randomly selected 198 of the 2845 non-reporting GPs (Group A) and sent them a factsheet each month for 5 months from December 2003. In a second arm of the study we sent factsheets to a randomly selected sample of those reporters (Group B) who reported one of the relevant ADRs ("factsheet reactions") to us to see if this influenced re-reporting rates.

#### Results

During the first six months of 2004 we received 9 reports from 8 of the Group A GPs (4%) who received the factsheets, and 1 from a comparison random sample of 198 GPs (0.5%) (non-reporters in 2002) who did not receive the factsheets. There were 34 reporters in Group B and 6 of these (18%) reported a further reaction subsequent to receiving a factsheet. Seventy-seven other reporters reported a "factsheet reaction" but did not receive a factsheet and only ten of these (13%) have reported a subsequent reaction.

#### Discussion

GPs who received the factsheets (Group A) had a higher reporting rate, compared with a group who did not receive the factsheets [ $P = 0.022$ , Fisher's exact test]. Only about 10% of GPs will report an ADR in any given year; educating non-reporting GPs seems to raise them towards the mean reporting rate. There are insufficient data yet to determine whether factsheets influence re-reporting rates and this arm of the study is ongoing. The factsheets will need updating regularly, but this should be relatively easy. This is a potentially fruitful method of increasing reporting rate from GPs.

#### References

1. Eur J Clin Pharmacol. 1997; 52: 423-7.