Drug Safety 2004; 27 (9): 687-688
0114-5916/04/0009-0687/$31.00/0

Semi-Intensive Versus Intensive Monitoring of Adverse Drug Reactions in a Hospital

The number of adverse drug reactions (ADRs) reported by spontaneous reporting in hospitals is usually far lower than the true incidence of adverse reactions.[1] There are many reasons for this underreporting, but the two most commonly described reasons are uncertainty on the part of the doctor as to whether the reaction was caused by a drug and insufficient time for reporting.[2,3] In the Clinical Hospital Centre 'Kragujevac', in Serbia and Montenegro, a university hospital with 1252 beds and around 300 000 patient-days annually, spontaneous reporting of ADRs started in 1996 when the Department of Clinical Pharmacology organised a hospital-wide educational campaign among the clinicians on ADR reporting. However, the annual number of spontaneous reports was low (figure 1).

In order to increase the number of ADR reports the Department of Clinical Pharmacology organised intensive monitoring of ADRs in 1998. During each working day in 1998 a clinical pharmacologist visited all clinical departments of the hospital and discussed with clinicians in charge any possible ADRs that had occurred during the previous 24 hours (or over the weekend). This took almost 2 working hours each day, and results at the end of the year were frustrating. Only 15 ADRs were registered and reported; however, each had a high Naranjo[4] score (≥9). The cost for each ADR reported (including only the direct costs of physician working hours) was $US116. Due to the high cost, the Department of Clinical Pharmacology abandoned intensive monitoring for further 4 years. Several new educational campaigns among clinicians did not result in an increase in the reporting rate of ADRs.

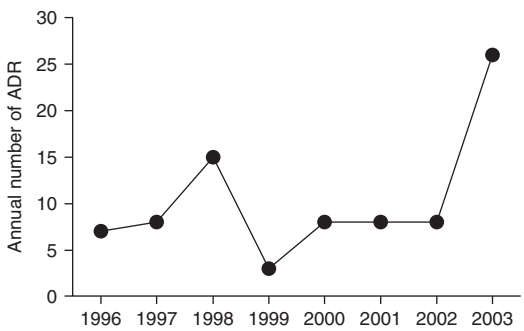

Fig. 1. The annual number of reported adverse drug reactions (ADRs) in Clinical Hospital Centre, Kragujevac, Serbia and Montenegro, for the period 1996–2003.

In 2003, the Department of Clinical Pharmacology began a new system for the semi-intensive monitoring of ADRs. Instead of using the services of a clinical pharmacologist, a nurse from the Department of Clinical Pharmacology visited all clinical departments of the hospital every working day and discussed with chief nurses of the departments any possible ADRs that had occurred during the previous 24 hours (or over the weekend). If an ADR was suspected, the nurse would call a clinical pharmacologist to come and evaluate the case. The time a nurse spent each day visiting clinical departments was on average 1.5 working hours. Using this method, 26 ADRs were reported in 2003 (figure 1) with high a Naranjo score (≥9), having a direct cost per one ADR of $US27 (nurse's working hours plus consultation time with a clinical pharmacologist).

Therefore, the semi-intensive monitoring proved to be cost-effective in our hospital, leading to a significant increase in the total number of reported ADRs. This strategy could be useful for other hospitals of a similar size.

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