

RGH Pharmacy E-Bulletin

Volume 20 (11): January 23, 2006

A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

Editor: Assoc. Prof. Chris Alderman, University of South Australia – Director of Pharmacy, RGH

© Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia 5041

Naranjo ADR Probability Scale

Clinicians often seek to determine whether an adverse event observed during the course of patient care is likely to be as a result of an adverse reaction to a drug. Although it is usually difficult to ascribe “cause and effect” definitely, careful analysis may help to elucidate the nature of possible adverse drug reactions. One approach that is recognised internationally is the use of the Naranjo ADR Probability Scale.

The use of the scale involves answering a series of questions about the adverse event, and then calculating a final score that provides some indication of the overall probability that the adverse event represents an adverse reaction to a drug.

1. Are there previous conclusive reports on this reaction?
Yes (+1) No (0) Don't know (0)
2. Did the adverse event appear after the suspected drug was administered?
Yes (+2) No (-1) Don't know (0)
3. Did the adverse reaction improve when the drug was discontinued, or a specific antagonist was administered?
Yes (+1) No (0) Don't know (0)
4. Did the adverse reaction reappear when the drug was readministered?
Yes (+2) No (-1) Don't know (0)
5. Are there alternative causes (other than the drug) that could on their own have caused the reaction?
Yes (-1) No (+2) Don't know (0)
6. Did the reaction reappear when a placebo was given?
Yes (-1) No (+1) Don't know (0)
7. Was the drug detected in the blood (or other fluids) in concentrations known to be toxic?
Yes (+1) No (0) Don't know (0)
8. Was the reaction more severe when the dose increased, or less severe when dose was decreased?
Yes (+1) No (0) Don't know (0)
9. Did the patient have a similar reaction to the same or similar drug in any previous exposure?
Yes (+1) No (0) Don't know (0)
10. Was the adverse event confirmed by any objective evidence?
Yes (+1) No (0) Don't know (0)

The final score allows some basis for an objective assessment of the likelihood that an ADR may have occurred:

- > 9 = highly probable
- > 5 - 8 = probable
- > 1 - 4 = possible
- ≤ 0 = doubtful

The widespread use of the Naranjo ADR Probability Scale around the world, in particular by journals assessing manuscripts submitted for publication as case reports, suggest that although no perfect solution exists for clinicians seeking to assess the likelihood of ADRs, the scale does provide some structured basis for assessment in a standardised and relatively reproducible format.

Reference available upon request.

Acknowledgment – This E-Bulletin is based on work by Chris Alderman, Clinical Pharmacist, RGH

FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
Information in this E-Bulletin is derived from critical analysis of available evidence – individual clinical circumstances should be considered when making treatment decisions. You are welcome to forward this E-bulletin by email to others you might feel would be interested, or to print the E-Bulletin for wider distribution. Reproduction of this material is permissible for purposes of individual study or research.