[Int J Pharm Pract.](http://www.ncbi.nlm.nih.gov/pubmed/clipboard) 2012 Aug;20(4):238-48. doi: 10.1111/j.2042-7174.2012.00188.x. Epub 2012 Feb 2.

# A clinical knowledge measurement tool to assess the ability of community pharmacists to detect drug-related problems.

[Williams M](http://www.ncbi.nlm.nih.gov/pubmed?term=Williams%20M%5BAuthor%5D&cauthor=true&cauthor_uid=22775520), [Peterson GM](http://www.ncbi.nlm.nih.gov/pubmed?term=Peterson%20GM%5BAuthor%5D&cauthor=true&cauthor_uid=22775520), [Tenni PC](http://www.ncbi.nlm.nih.gov/pubmed?term=Tenni%20PC%5BAuthor%5D&cauthor=true&cauthor_uid=22775520), [Bindoff IK](http://www.ncbi.nlm.nih.gov/pubmed?term=Bindoff%20IK%5BAuthor%5D&cauthor=true&cauthor_uid=22775520).

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### Abstract

#### INTRODUCTION:

Drug-related problems (DRPs) are associated with significant morbidity and mortality, with most DRPs thought to be preventable. Community pharmacists can detect and either prevent or resolve many of these DRPs. A survey-based clinical knowledge measurement tool was designed and validated to estimate a community pharmacist's clinical knowledge and ability to detect and appropriately resolve DRPs.

#### METHODS:

Nine clinical cases with seven multiple-choice statements (63 statements in total) were constructed, based on scenarios that were found to occur frequently in Australian community pharmacies. The statements aimed to assess a pharmacist's ability to identify, gather relevant information about and make appropriate recommendations to resolve, a DRP. The survey was pilot tested with 18 academics at three Australian pharmacy schools, resulting in the removal of 23 statements. The survey was then administered to undergraduate pharmacy students (28 fourth-year, 41 third-year and 42 first-year students) and to 433 Australian community pharmacists who were participating in an intervention documentation trial. The pharmacists' resultant survey scores were correlated against their actual rate of documenting clinical interventions.

#### RESULTS:

The tool had relatively good internal consistency. Significant differences were seen between the three groups of students (P < 0.01). Community pharmacists with additional clinical qualifications had a significantly higher score than other participating pharmacists (P < 0.01). A moderate, but significant, correlation was seen between the pharmacists' survey score and their clinical intervention rate in practice during the trial (P < 0.01).

#### CONCLUSION:

The clinical knowledge measurement tool appeared to estimate a pharmacist's ability to detect and resolve DRPs within the community pharmacy environment.

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