

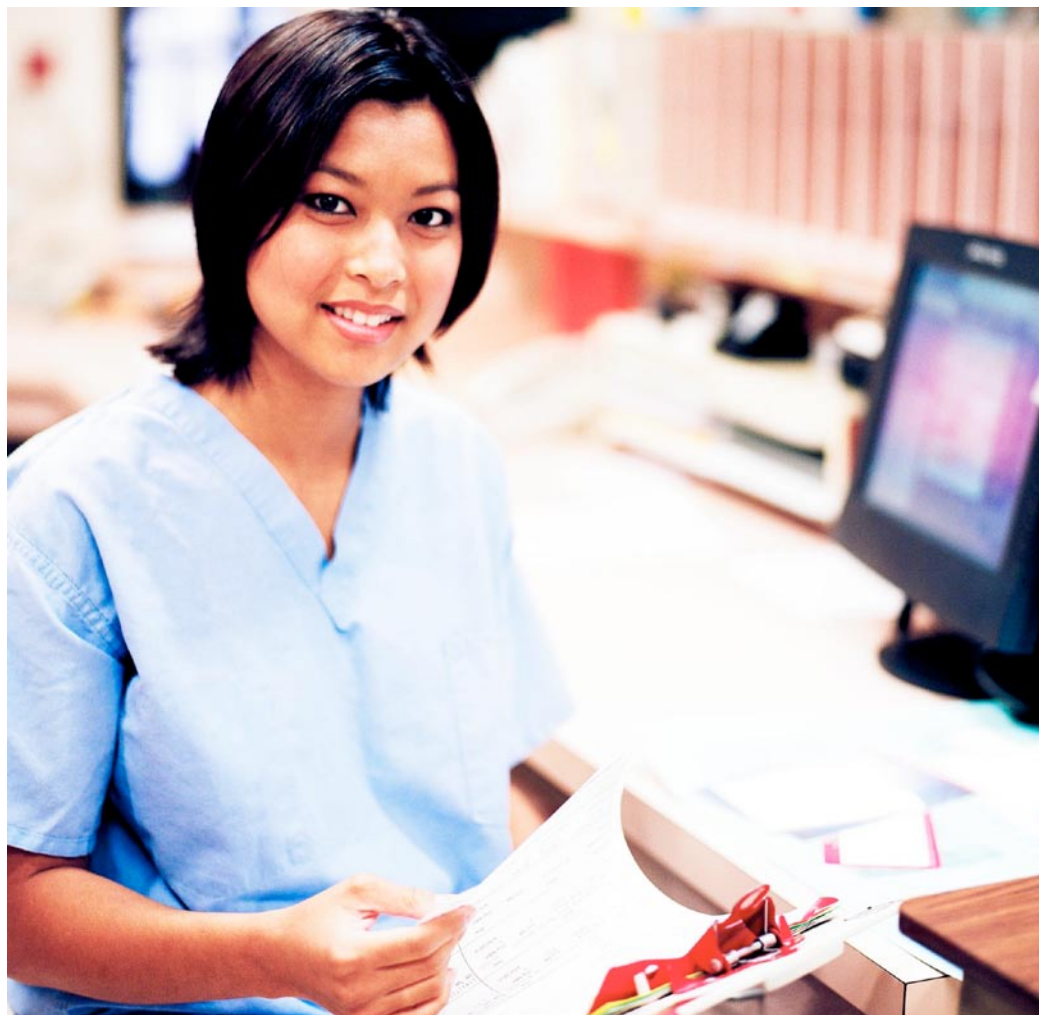
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# Quality of external cause of injury data in hospital records: What do clinical coders think?



Researchers at the National Centre for Classification in Health, the National Injury Surveillance Unit, and Injury Prevention and Control Australia are currently conducting a three-year research project funded by the Australian Research Council to investigate the quality of external cause data in hospital records.

This project involves five phases including a detailed secondary data analysis of national hospital morbidity data, a survey of clinical coders and injury researchers, a hospital

record review, and an educational program focusing on requirements for better quality external cause of injury data, which will be targeted at clinical coders, clinicians and injury researchers.

The survey of clinical coders, which was conducted in April/May 2006, sought to identify factors affecting external cause coding, coders' views regarding the reasons for a lack of utilisation and specificity of current external cause codes, in addition to any problems experienced with coding data for which codes are unavailable and ►►

codes which are ambiguous. The levels of support and resources for coders for external cause coding were also explored. Valuable information and feedback was gathered from coders across Australia from this survey which will be used to inform the update and revision process of the external cause chapter of ICD-10-AM, and this article presents some of the major findings to date.

## Participants

The survey was conducted via a web-based questionnaire, with e-mail and paper versions to allow surveys to be posted or e-mailed to clinical coders where access to the internet was limited. Four hundred and two coders Australia-wide participated in the questionnaire giving an overall response rate of around 40% of the estimated total coder workforce.

The average age of the coders was 41 years (range 21–65 years) with 62% working full-time and 37% working part-time (1% worked casually). A total of 169 coders had experienced two or more different modes of coder training, and the most common form of coding education was an undergraduate university course (45% of respondents).

## Support and resources

Coders indicated which resources they had access to, and which resources they used, to assist them in the coding of external cause information. The most common resource accessible to coders was coding books, with 76% stating that they had access to coding books. Figure 1 outlines the number of coders who had access to different resources and the proportions of coders who used and didn't use these resources.

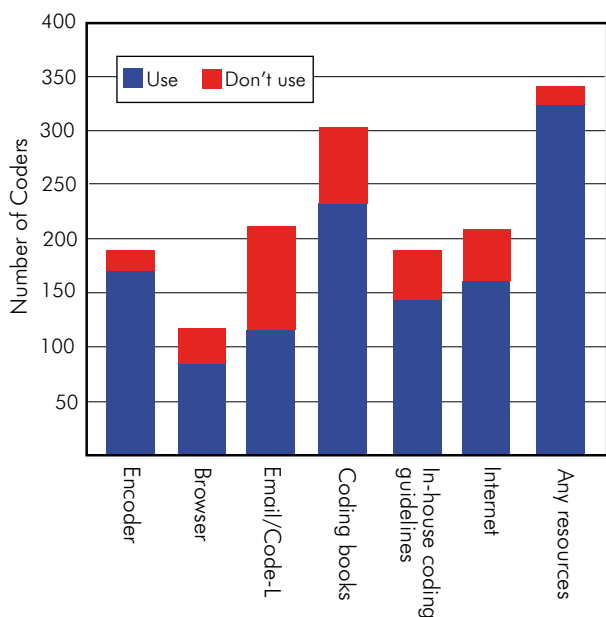


Figure 1: Resources used by coders to code external cause information

Coders were asked from whom they sought help if they had difficulty coding external causes. The most common source of help was other coders, with 87% of coders stating that they consult other coders if required. Almost 60% of coders indicated that they seek help from the NCCH query database, while just 35% of coders sought help from their State coding committee, and only 16% of coders sought help from Code-L. Around 50% of coders indicated they had no or low levels of support from clinical staff to clarify external cause information or access to specific external cause coding training.

## Quality of source documentation for external causes

Participants reported that the highest quality external cause documentation came from ambulance reports, which were rated as a good source of information by over half of the respondents (see Figure 2). In contrast, almost half of the respondents stated that discharge summaries were a poor source of information for external causes. These findings were similar for both place of occurrence and activity information.

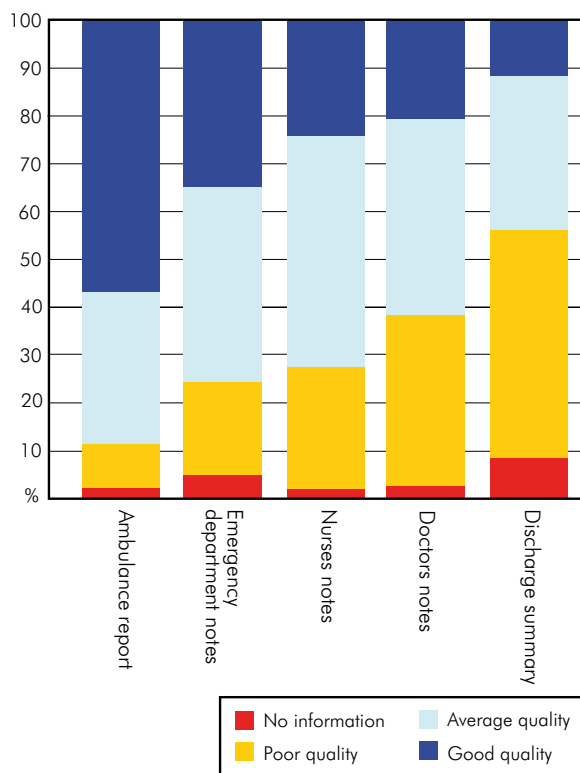
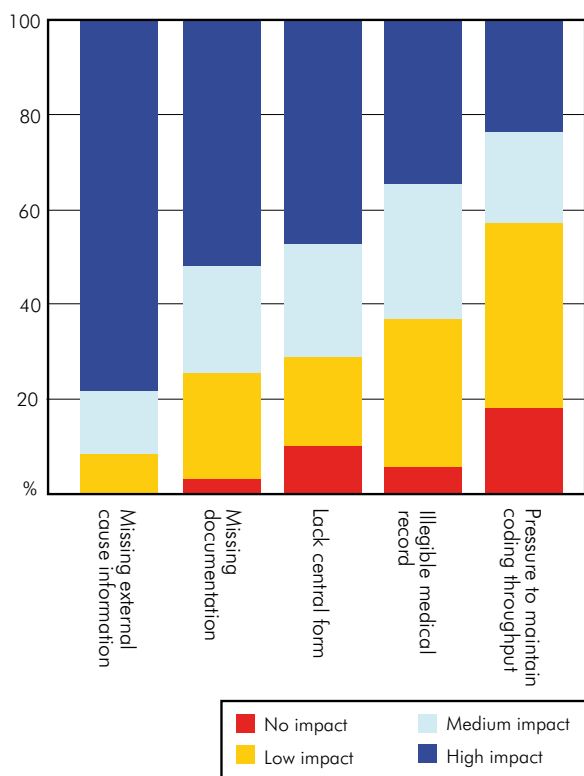


Figure 2: Quality of external cause information in different documentation sources

## Factors influencing coding of external causes

When assessing the factors that influence a coder's ability to code external cause effectively, coders rated missing or ambiguous external cause information and

missing documentation as the factors with the greatest impact for external cause coding in general, and also for assignment of place and activity (see Figure 3).



**Figure 3: Impact of factors affecting quality of external cause coding**

## Coder satisfaction with external cause codes

Coders reported their level of satisfaction with ICD-10-AM by code blocks in terms of the ease of finding the ICD-10-AM index entries, the number of codes available and the specificity of the codes available. Coders reported lower levels of satisfaction with the Complications of Surgical and Medical Care code blocks compared to all other code blocks when considering index entries, number and specificity of codes. Between 20 and 30% of coders reported low satisfaction with this code block and very few coders were highly satisfied with the block. Coders were also considerably dissatisfied with the number and specificity of codes for place and activity, with 25–30% of coders reporting low satisfaction with these codes.

## Medico-legal issues

While around 60% of coders reported that drug and alcohol involvement is often or always documented in medical records, only 27% of coders reported that perpetrator of assault information is often or always documented where relevant. Almost 29% of coders reported that perpetrator of assault information is rarely or never documented in medical records. Over 36% of coders stated that intent is rarely or never documented for transport incidents.

## Value of external cause information

Coders ranked from least to most important a range of factors relating to their perceived value of external cause information. The most important reason for coding external cause information (according to almost 60% of coders) was for research, followed by informing policy (54% ranked as most important) and injury prevention (51% ranked as most important). The least important reason for external cause information was for resourcing/casemix, with over 22% of coders rating this as the least important factor.

## Improving external cause coding

Coders were asked to what extent external cause coding quality could be improved through various different measures. Over 85% of coders considered improving the quality of documentation in the emergency department would have a high impact on the quality of coded data. Seventy-eight percent of coders considered that the introduction of a structured form for external cause information would have a high impact.

Approximately 14% of coders provided additional comments regarding ways to improve external cause coding, with the main suggestions being to:

- educate clinical staff on the need for documentation about the causes of injuries
- improve the classification system to better capture data about common causes of injuries
- improve documentation from clinical staff
- standardise all data sources (such as ambulance and emergency department data), and
- introduce a central form where all external cause information is recorded.

## Areas of classification where more or improved codes are considered necessary

Around 30% of coders provided the comments in response to the question regarding areas of classification that need improvement or augmentation. Almost a quarter of these responses pertained to improvements to the activity codes, with coders indicating difficulty coding activities beyond sports or working for an income. While coders noted that there is considerable detail available for the coding of sporting activities, difficulty is experienced with coding leisure-style activities, differentiating between sports and leisure activities, coding of activities pertaining to children playing, and capturing details regarding activities pertaining to daily living.

Around 16% of responses related to improvements to the Complications of Surgical and Medical Care codes, with the lack of specificity of codes for medical

and surgical complications problematic. Difficulties are experienced using the Table of Drugs and Chemicals, and the coding of adverse events due to herbal medicines was flagged as an area requiring attention.

Approximately 12% of coders highlighted the coding of accidental falls as particularly problematic. A lack of clinical documentation regarding the cause of the fall limits coders' ability to assign more specific falls codes. Coders also highlighted the need for a falls code to identify if the cause of the fall was a medical condition, such as a fall associated with syncope, collapse or seizure.

Several other areas for improvement were highlighted by coders in relation to the external cause classification, including:

- Improved capture of food substances involved in allergic reactions to food
- Improving the codes to capture when a person injures themselves through intentionally striking an object or a person
- Revisions of the ICD-10-AM index to remove non-Australian terms and improve the indexing of place and activity terms

- Increasing the specificity of place of occurrence codes, particularly to capture specific parts of the home beyond the driveway.

## Further information

Thank you to all coders who participated in the survey. If you require further information about this project, please contact Dr Kirsten McKenzie (ph 07 3138 9753, e-mail k.mckenzie@qut.edu.au).

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