SHORT REPORT

Record linkage of domestic assault victims between an emergency department and the police

Adrian Boyle, James Kirkbride, Peter Jones

Community surveys show that domestic violence is a common problem affecting about 5% of the population each year.1 Around 1% of emergency department visits in the UK are attributable to domestic assault.2,3 The British Home Office estimates that 2.9 million domestic assault injuries occur every year in the UK.1 It is not clear how many domestic assault victims who present to an emergency department also have their assault recorded as a crime by the police. We aimed to identify what proportion of cases presenting at the emergency department had their assault recorded by the police and what the completeness of these lists were.

METHODS
We compared confidential lists of recorded domestic assault victims from the Cambridgeshire and Essex constabularies with a list from the emergency department of Addenbrooke’s Hospital, Cambridge, over 2001. Cases were excluded from the study if the postcode fell outside the catchment area of the emergency department. The reliability of the cases at the emergency department was substantial ($k = 0.8$). Capture/recapture techniques were used to estimate the completeness of the lists.


d \text{Imputed estimate of the total number of cases} = \frac{\text{Cases appearing on the first list} \times \text{cases appearing on the second list}}{\text{Cases appearing on both lists}}

\text{Completeness of a list} = \frac{\text{Number appearing on either list}}{\text{Imputed estimate of the total number of cases}} \times 100

RESULTS
Fourteen cases appeared on both lists, including three men (table 1).

Cases appearing on both lists were matched on both sex and name. Other matching variables and combinations produced similar estimates. The mean index of deprivation (measured ecologically by postcode) and mean age (33 years) were practically similar in cases presenting to either or both agencies. Severity of injury at the hospital, as measured by admission to hospital, outpatient follow up, or discharge did not seem to predict recording by the police (table 1).

DISCUSSION
Our results show that most domestic assaults are not reported to either agency and that most domestic assaults presenting to the emergency department are not recorded as crimes by the police. The British Crime Survey found that 12% of victims of domestic violence would report their assault to the police and 10% would report their assault to medical staff, but is potentially compromised by recall bias.1 Our study shows similar estimates using a more efficient method. Ten per cent of domestic assaults recorded by the police result in conviction.4 This implies that less than 1% of domestic assault who present to an emergency department will lead to conviction, assuming there is no dependence.

There are a number of limitations to this study. Poor documentation in the emergency department in cases of domestic violence has been identified before.4 Other analyses included cases that were possibly attributable to domestic violence. Estimates from this were similar.

Record linkage techniques have been criticised, particularly when only two lists are examined.5 Positive dependence (that is, appearing on one list improves the chances of appearing on another list) between the lists is unlikely in this case as the number of matches is so low. Negative dependence is

<table>
<thead>
<tr>
<th>Table 1 Estimated completeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>All cases/n</td>
</tr>
<tr>
<td>ED/158</td>
</tr>
<tr>
<td>Police/263</td>
</tr>
<tr>
<td>Police and ED lists combined with duplicates excluded/407</td>
</tr>
</tbody>
</table>

What this paper adds
- Routine data can be used with record linkage techniques to estimate assault rates similar to surveys
- Most domestic assaults reported to emergency departments are not recorded as a crime by the police

Policy implications
Interventions for victims of domestic violence should be easily available at both police and emergency departments
theoretically possible, but it seems implausible that an emergency department and police would discourage a person from seeking help at another agency. Human populations are rarely closed, but our cross sectional approach should mitigate against that. Our sample is drawn from a single emergency department and the external validity may be questioned, although the consistency of our estimate with findings of other studies would argue otherwise. Our results did not generate prevalence data as the denominator population of the catchment area is uncertain, however significant proportions of patients attend emergency and police departments a substantial distance from their home residence, and an estimate of the completeness of the list is useful information.

ACKNOWLEDGEMENTS
Sarah Vowler advised on methodology.

Authors’ affiliations
A Boyle, J Kirkbride, P Jones, Department of Psychiatry, Addenbrooke’s Hospital, Cambridge, UK

Funding: Adrian Boyle holds a Health Service Research Fellowship. James Kirkbride is supported by Stanley Medical Research as a doctoral student.

Conflicts of interest: none declared.

Ethical approval: this project received ethical approval from the Cambridge Local Ethics Research Committee.

Correspondence to: Dr A Boyle, Department of Psychiatry, Box 189, Addenbrooke’s Hospital, Hills Road, Cambridge CB4 6DU, UK; boylea@doctors.org.uk

Accepted for publication 8 April 2005

REFERENCES

bmjupdates+

bmjupdates+ is a unique and free alerting service, designed to keep you up to date with the medical literature that is truly important to your practice. bmjupdates+ will alert you to important new research and will provide you with the best new evidence concerning important advances in health care, tailored to your medical interests and time demands.

Where does the information come from?
bmjupdates+ applies an expert critical appraisal filter to over 100 top medical journals. A panel of over 2000 physicians find the few ‘must read’ studies for each area of clinical interest.

Sign up to receive your tailored email alerts, searching access and more…

www.bmjupdates.com
Record linkage of domestic assault victims between an emergency department and the police
Adrian Boyle, James Kirkbride and Peter Jones

*J Epidemiol Community Health* 2005 59: 909-910
doi: 10.1136/jech.2004.028597

Updated information and services can be found at:
http://jech.bmj.com/content/59/10/909

These include:

**References**
This article cites 3 articles, 2 of which you can access for free at:
http://jech.bmj.com/content/59/10/909#BIBL

**Email alerting service**
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Topic Collections**
Articles on similar topics can be found in the following collections

- Domestic violence (49)
- Violence against women (49)
- Abuse (child, partner, elder) (38)

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/