Reviewer’s report

Title: Pre-Hospital Treatment of Acute Poisonings in Oslo

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Reviewer: Nick Buckley

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This is an interesting paper giving a comprehensive overview of poisonings in Oslo. The most unique part of the study is the capturing of comprehensive outcome and exposure data on those not transferred to hospital.

Major criticisms

The main general concern is the reductionist approach to the exposure data – i.e. only one substance is recorded pre-hospital as responsible for the poisoning, and this determination of what is important may be made by an ambulance officer with minimal toxicological knowledge. Most studies indicate that a substantial proportion (usually a majority) of people take more than one substance. It is reassuring that no deaths were recorded against those triaged as primarily ingesting alcohol, but one can wonder to what extent these people had also ingested other drugs, and that failure to refer was inappropriate. How often did the hospital record differ from the ambulance record?

The second important concern with the methodology is the high number (385) of episodes where someone was transferred, but no record could be found at the receiving institution. It would be nice to have some idea of what one should assume happened to these people – did they die in transit, give a false name, abscond, or just give a name with a slightly different spelling – I can’t work it out. A related problem is seen in Figure 1 – more people turn up in hospital than are recorded as transferred. It would be good if there was some review of the hospital cases with regard to how they were transported to hospital – to see how accurate the ambulance records are (non-recording of ambulance data being one explanation) vs whether people are coming to hospital via other means (the alternative). The same applies to the outpatient clinic attendances. This has an implication for the overall accuracy of the estimates of incidence and safety.

Figure 1 could be better presented so that it is clearly a flow chart for how patients moved through the system – where they entered and exited and also clearly linked to outcome – currently it looks like 15 who left the scene of the ambulance died - but from the text this is the wrong conclusion.

Specific comments – minor issues

Statistics – “Where many p-values....” – This should be “As many p-values .........” and perhaps the revised cut-off for significance should be noted.

Ethics - It seems odd wording to state that Treatment was given “in accordance with the Helsinki Declaration” as this declaration covers medical research not
treatment – and treatment was not the focus of the research.

Results – The 5.4/1000 seems high – is this an incidence (episodes) or prevalence (people). Was postcode not recorded so that some better estimate of the true rate could be made.

The third paragraph with “(n=516, 69%)” etc... – all these would be much better expressed with a numerator- something like [429/640 (65%)]

Did any of those taking opioids and being not transferred take long acting opioids (e.g. methadone, morphine or oxycodone SR)

Table 4 – all these p values are pretty uninformative - odds ratios with 95%CI would be better – the same probably applies to tables 1 & 2 – asterisks could be used to indicate whether they were significant after Bonferroni correction was applied.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests: 

I declare that I have no competing interests