Reviewer's report

Title: Evaluation of drug administration errors in an teaching hospital

Version: 1 Date: 15 October 2011

Reviewer: Maisoon Ghaleb

Reviewer's report:

This study is interesting to read and have interesting findings as it adds to the European literature in terms of medication administration errors. However, I have the following comments:

Abstract
In the abstract, it is mentioned that “Administration has been less well studied” . This is actually understatement, administration errors have been researched extensively. May be the author mean it has been less well studied in France
In the result section of the abstract, the numbers do not match, it is mentioned there is a total of 430 errors, but when you add “312 wrong time errors and 113 errors of other types” it is 425 errors.
I am not sure what does N in ATC classification mean? And may be other will not know.

Introduction:
The authors mentioned in the abstract that administration errors less well studied, but they do not refer to this statement in the introduction, so either they remove it from abstract or add a sentence in the introduction.
In terms of references, the authors used old references, there are more recent studies and literature in terms of observation techniques.

Setting:
It was not clear how these four wards were selected. There need to be an explanation of why chose the four wards over the wards in the hospital

Study design
In relation to the following “for each observation round and unit, the nurses of the unit were randomized for identification”. There is a need to explain how the nurses were randomised, method of randomisation of the nurse to be observed. Does this mean that is each round in each unit, one nurse would be observed?
Emergency drugs, parenteral nutrition and drugs prescribed as needed were not included in the analysis? I think the authors mean it is excluded from the observations.
Can the authors give a justification for not including non-permanent staff in the study? It could be argued they are a source of errors as well.

Errors
The type of administration errors being studied was listed, however, there is a need to define what is meant by wrong administration technique error? And wrong preparation errors, these terms need to be defined, so the reader can understand what is meant.

Is it possible for one error to fit under more than one category? Can this be made clear in the text?

Results

This paragraph below needs to be more clearer. I had to read it a couple of times to make sense of the numbers.

“In total, we recorded 1501 TOE, 43 of which were “drug mixing” errors (solvent and drug) counted as a single TOE unit, as explained above (see Methods). At least one error was detected in 415 of the 1501 TOE (error rate = 27.6%), with 430 errors identified in total. For 13 administrations, 2 errors were observed and for one administration, 3 errors were observed. Of the 14 administrations with more than one error, 10 included a wrong time error (see details in the last column and footnotes of table 2). After exclusion of the 312 wrong time errors, 113 of the 1501 administrations (TOE) remained erroneous (415-312+10) corresponding to an error rate without wrong time error of 7.5%”.

In this sentence “43 of which were “drug mixing” errors (solvent and drug) counted as a single TOE unit”, what is mean a single TOE, were they separate from the rest of TOEs,

In the results, it is not mentioned how many observations were related to unit dose preparations and how many related to medication taken from secure cabinets.

It would be useful to have that data, to allow reader to know how many observations or administrations were related to each.

Discussion

Well written introduction. However, what is the implication of this study in the hospital in terms, are you proposing any solutions to reduce these errors from happening.

Conclusions

The authors mention that further studies is needed, but not giving where and what is the purpose of doing further studies, what will be the aim?

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests