Reviewer’s report

Title: Chemotherapy prescribing errors: an observational study on the role of information technology and computerized physician order entry systems

Version: 1 Date: 6 November 2013

Reviewer: Miriam Lainer

Reviewer’s report:

Comments to the author
I have the following comments and questions to the authors:
(Capital letters – suggestions for improvement from reviewer)

Minor Essential Revisions

Page 1 and 2:
Affiliation: the email addresses of the authors need the same format
I suggest to also uniformly describe the departments in English, explicitly for the author: Loris Zanier

ABSTRACT:
The abstract is understandable and summarizes the most relevant points

Page 3:
Methods: Put the first sentence in an easier way, such as: Up to three electronic prescriptions PER PATIENT RECORD who received....
key words: I suggest an additional very important key word which is missing: OUTPATIENT

TEXT:

Page 5:
In the ASHP (American Society of Health-System Pharmacists) 2002 guidelines on preventing chemotherapy medication errors, CPOE.....
I would suggest to either use the expression chemotherapy prescribing errors OR chemotherapy errors (I could not find this passage in the ASHP)

On the other hand, a qualitative study identified 22 situations in which the use of CPOE increased the probability of prescribing errors [6].
considering the word SITUATIONS: prescribe the situations with e.g. .... to better understand the citation, also the citation is too short.
Only prescriptions for cytotoxic chemotherapy regimens were eligible as these were judged the highest risk. (This sentence is not clear.)

Exclusion criteria were: (i) prescriptions WRITTEN by not fully qualified oncologists, i.e. supervised oncology trainees; (ii) prescriptions within A clinical trial.

Page 9:
near misses [16] and preventable adverse drug events (pADEs) [17] (Table 1).

Error analysis Records containing one or more prescribing errors were 79 out of 334 (PERCENTAGE! is missing)

Page10:
showed to lack mention of the administration route (n=101), (This sentence is not clear.)

The analysis by error type immediately revealed the presence of systematic errors resulting from errors in the dictionaries of the predefined chemotherapy protocols in the G2 CPOE system; these errors were often present in prescriptions which otherwise could have been error-free. - I would suggest simplifying this sentence for easier understanding

The majority of errors were deemed probably (33%) or definitely (65%) preventable. - so 2% were not preventable, is that correct?

In this perspective, 71% and 25% of errors were classified as minor and moderate, respectively, whereas 2% and 1% had at least the potential to produce major or catastrophic injuries, respectively.- I would suggest to delete the last word.

Page 11:
Possible explanations for such a difference include the use of different CPOE systems, variability in the definition of prescribing errors and also differences in study design and ways in which error rates are calculated.- I would suggest instead: ERROR CALCULATION

…..there were no major or catastrophic adverse DRUG events – I would suggest to use simple and throughout the document constant words and definitions

Page 12:
However, (DELETE word) standardization may be a potential source of systematic error. In our study, (DELETE comma) we have found situations in which the CPOE system not only introduced a priori errors but also facilitated

PAGE 13:
CURRENTLY, we are also working on an updated version of the CPOE system, in which all information functions are separated in two domains: the first is "a context area", with clinical data on patients' history, past and current treatments,
laboratory/radiological exams; in the second section, alerts will play a key role in the management of compelling information, as the system will detect the lack of crucial data and hold up the access to critical functions until the appropriate field is filled in.

Second, it has been suggested that comparing the frequency of medication errors among - what is first and was is second (of the first?)

There is an urgent need for a better definition of the detail with which events should be classified, .....correctives strategies; and for an error classification which could transform safety information collected from different systems into a shared learning model [37].(This sentence is not clear.)

Table 1:
I would suggest to make 2 tables, to give them a clear structure and to explain the source of the classification with the title of the 5 themes.

GENERAL: The actual clinical impact is not clear. It is only mentioned in the results section very shortly and with no reference, but not described in the discussion. This needs to be ameliorated and underlined with more details.

Discretionary Revisions

Page 10:
With regards to the actual clinical consequences of the identified errors, sixty-eight percent were classified as intercepted near misses. – This expression was found in one article (Rothschild et al., Medication safety in a psychiatric hospital, 2006, whereas in another article (Kessels-Habraken et al., Defining near misses, 2010) it is not found. Definitions are very broadly used, as you also stated in your article. For the reviewer “Near misses” is already conclusive for itself, so I would suggest to delete the word „intercepted“.

List of abbreviations:
ADE: Adverse Drug Event - I would suggest to use singular in all abbrev.

CONCLUSION:
The conclusion is short and concise, maybe a sentence like “Additional evaluation .... is needed and should be the focus of future studies....” could be added.

Level of interest: An article whose findings are important to those with closely related research interests

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