Reviewer’s report

Title: Improving antibiotic prescribing for adults with community acquired pneumonia: does a computerised decision support system achieve more than academic detailing alone? a time series analysis

Version: 1 Date: 4 March 2008

Reviewer: Bryony Dean Franklin

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Improving antibiotic prescribing for adults with community acquired pneumonia: does a computerised decision support system achieve more than academic detailing alone? – a time series analysis

Major Compulsory Revisions

Abstract

1. In the methods section, please explain what the three time periods relate to.
2. In the results section, the way that the results are stated (baseline period compared with the academic detailing period) suggests that concordant therapy was higher in the baseline period. This needs rewording.

Introduction

1. There is a section for objectives, which then presents the aims. The study should have a general aim plus one or more specific objectives. This section should be reworded.
2. The information on design, setting, participants and intervention would normally be presented as sub-sections of the methods, rather than introduction. What is currently presented as “methods” is actually only the data collection methods.

Intervention

1. It is stated that a “new guideline” was introduced at the beginning of the CDS period. However it is not clear whether this contained different recommendations to those previously, or whether it was the same recommendations but presented in a different manner. This must be clarified.
2. Information on the timeline (ie which months and years) of the various stages is needed in this section, rather than at the end of the methods section.

Methods

1. It is stated that a random sample of medical notes were cross checked with a second clinician. Please state how many you aimed to include in this sample.
Was the second clinician another nurse, or a doctor?

2. Please state whether or not ethical committee approval was required / obtained.

Statistical methods

1. The title refers to a time series analysis – but this is not explicitly referred to in this section. I assume this relates to the monthly analysis. However, it would be much clearer if this were made explicit.

Results

1. For patients who required ICU, it is stated that the likelihood of recommended antibiotics increased over time. However the results are not statistically significant. This should be stated explicitly.

2. Similarly, the results relating to allergies were not statistically significant.

Discussion

1. The time periods for each data collection period differ – the first spanned an entire calendar year, whereas the second two are only part years. How do these periods relate to rotation of medical staff through the department, and might this have affected the results? Some comment is needed.

2. A further limitation is the inclusion of patients who received additional antibiotics as appropriate, provided they also received the approved drugs. The use of unnecessary antibiotics contributes to antibiotic resistance – some justification or explanation of this decision is needed.

3. Comparison with previous work in this area is needed. For example, we recently reviewed the literature in this area: Shebl NA, Franklin BD and Barber N (2007). Clinical decision support systems and antibiotic use. Pharmacy World and Science. 29: 342-349

Minor Essential Revisions

Abstract

1. Final line of first paragraph – “clinician’s” should be “clinicians’ “ (assuming the authors are talking about more than one clinician)

2. A new paragraph is needed for the conclusion.

Intervention

1. it is not clear what is meant by [TG] in the first sentence

2. In the academic detailing period, which colleagues were targeted by the academic detailing? Were these only medical staff, or also pharmacists and nursing staff? This is not clear at present.

Methods
1. Please give SARS in full for readers who may not be familiar with the abbreviation.

Outcome measures

1. The last sentence of this section does not relate to outcome measures – it would be more appropriate in the section describing the intervention.

Statistical methods

1. Please reference the methods used to calculate the desired sample size.

Results

1. It would be helpful to indicate the tests used to calculate each of the p values in tables 1 and 2.
2. For table 3, please indicate which denominator was used to calculate the percentages. Is this patients, or antibiotics?
3. In figure 2, it is not clear which lines are broken and which are solid

Discretionary Revisions

Abstract

1. In the methods section, it would be helpful to state the number of data points in the time series analysis
2. The conclusion should also refer to the impact of academic detailing

Intervention

1. It would be helpful to explain what the CURB abbreviation stands for

Bryony Dean Franklin
4 March 2008

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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