Reviewer's report

Title:  Methods For Identifying Surgical Wound Infection After Discharge From Hospital: a systematic review

Version: 3  Date: 26 April 2006

Reviewer: Mary-Louise McLaws

Reviewer's report:

General
My original questions to the authors highlighted my frustration with this review and I still find this review applies an invalid expectation of an impossible task. This review has used the language and expectations of a systematic review, which is relevant for interventions but is not relevant for the aims of a PDS paper and while it purports to identify errors in the methodologies none of the papers concluded their methods were perfect. This review does little to assist the hospital epidemiologist or nurse practitioners answer practical and methodological questions for this very costly and difficult surveillance design. What these authors have done is to fail the papers on aims for which the original researchers never set out to answer and methodological shortfalls that are inherent in any PD design and all 5 papers admit to. The language of the items for review in table 3 are irrelevant to PDS.

Table 3 Item 1. Only one of the papers attempted to test a PDS on all procedures. This item is misleading and should be reworded "What surgical procedures were included". PDS may work better for some surgical procedures than others as SSI in some orthopaedic procedures can take up to 12-18 months to manifest and no IC department is going to follow-up this procedure routinely (expect the surgeon themselves). Some procedures should be followed while others should not those to follow should (i) have a high probability of finding the SSI and (ii) novel methods of identifying SSI through PDS may have been considered a priori more suitable than others.

Item 2 - authors were wrong in most of their classifications except for Sands.

Item 3 - the authors have second guessed the aims of the papers and have not given evidence for their classifications of the 5 papers.
Where the authors are classifying papers in the negative they should give evidence.
Item 4 should be restated in plain English and the issue here is quite the reverse - there needs to be a follow-up time long enough for infection to manifest. I disagree with the classification of "No or "unclear" for all 5 papers and in addition the authors omitted to classify Sands.

The authors also ignored my question about positive and negative predictive value but stuck with sensitivity and specificity which is answering the wrong questions - the reviewed papers should be asking of the test they use (ie electronic coding, nurses, surgeons etc) what is the likelihood that patients they categorise as having SSI being truly infected - that is PPV (especially as SSI is rare). The authors have continued to incorrectly state that sen and specificity are needed because of the influence of prevalence on PPV and NPV - this is one a very important reason why sens and specificity are useless.

My question 6 was ignored - surely this is an opportunity to identify from the papers which had a unique methodology/cheap/easy to perform etc rather than simply identifying shortfalls.

This paper is unhelpful in it current format. PDS is a very inaccurate science and testing the different methods against criteria for drug trial or studies attempting to identify causality is inappropriate and unhelpful. In-hospital surveillance is highly flawed and attempt only to catch as many SSI as possible - not every one (even then who is to say the doctor is incorrect in treating a patient as if infected that doesn't fit the definition?) so post discharge design is going to be even more difficult and flawed. What this review could have done was to accept that a new PDS methodology will not often be attempted and that the review could have guided the infection control practitioners to choice a less flawed one for particular surgical procedures and resources.

-----------------------------------------------

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)