Reviewer’s report

Title: Assessing the effectiveness of Dialkylcarbamoylchloride (DACC) coated post-operative dressings versus standard care in the prevention of Surgical Site Infection in clean or clean-contaminated, vascular surgery (the DRESSINg trial): study protocol for a pilot feasibility randomised controlled trial.

Version: 0 Date: 23 Jul 2018

Reviewer: Lawrence Mbuagbaw

Reviewer's report:

The investigators describe a pilot trial to measure the effectiveness of dialkyl carbamolychloride (DACC) coated post operative dressings to prevent surgical site infection in vascular surgery. I have the following comments.

The title is long and repetitive. "Randomized controlled trial" is mentioned twice.

In the abstract, it is not clear how this is a pilot study. No pilot or feasibility measures are mentioned.

Please provide a reference for "SSI's occur in at least 5% [2] of patients and have a significant impact on patient morbidity, mortality and have subsequent time and cost implications".

Please provide a reference for "DACC coated dressings are available on the open market in both the United Kingdom via the NHS supply chain, and the United States of America."

Write NHS in full at first use.

In the methods section a hypothesis is reported (The main hypothesis is that post-operative wound dressing with a DACC-coated dressing reduces the rate of surgical site infection) which is contrary to the philosophy of pilot studies. They are not meant to test effectiveness of interventions.

Please provide a justification for the inclusion/ exclusion criteria. For example the reason for this one is not obvious: "Patients undergoing carotid endarterectomy".

Feasibility outcomes are stated in the outcomes section. For a pilot study, these are the main outcomes and should therefore be part of the objectives.

The first feasibility outcome is problematic. The use of data from pilot studies may give misleading estimates for sample size estimation. Caution is advised.

A few abbreviations are not defined at first use: ASEPSI, CDC, EQ-5D-3L, ICH, GCP. Also provide references for them.
The sample size approach is good. It should be stated upfront that you have chosen a fraction of the sample size for the larger trial.

Please provide a reference for SPSS.

Please list the confounding variables of interest.

State how the data from this trial will inform a larger trial: How are you going to (cautiously) use the data from this trial to compute sample size estimates for a larger trial?

What criteria will you use to determine that a larger trial is feasible?

In the analysis plan, SSI is stated as the primary outcome. This shouldn't be the case for a feasibility study.

No mention is made of how the feasibility criteria will be analysed or what thresholds will be used.

The trial registration does not have any feasibility outcomes: https://clinicaltrials.gov/ct2/show/NCT02992951

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An article whose findings are important to those with closely related research interests

**Quality of written English**
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