

Editorial

Perfusion Data in Scientific Journals: Perfusion Standards of Reporting Trials

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A system to improve the standard of publication regarding the techniques and variables of extracorporeal support, and to enable the data used for publication to be available for future aggregation, analysis, and interpretation may help improve the science of perfusion. Frequently, statements such as “Standard cardiopulmonary bypass was utilized” or “Routine cardiopulmonary bypass was conducted” are inserted in the methods section of scientific papers. Previous literature has documented the impact of intraoperative care, including cardiopulmonary bypass, on clinical outcomes (1). However the details concerning the conduct of extracorporeal support are too scant (or missing) in most scientific papers to identify opportunities for improving the care provided to patients.

PERFSORT (Perfusion Standards of Reporting Trials) is based on the CONSORT (Consolidated Standards of Reporting Trials) statement (2) that is widely adopted by medical journals to standardize and increase the quality of research study submissions by alleviating the problems

arising from inadequate reporting of randomized controlled trials via guidance with enrollment, allocation, follow-up and analysis. PERFSORT is aimed for all scientific publications concerning the practice of perfusion, irrespective of the peer-reviewed journal.

PERFSORT has two tiers of data entry and consists of variables that are known to influence extracorporeal supports' influence on morbidity and outcome: Tier 1 data collected will include the following variables during the period of bypass: glucose (3,4), temperature (5–7), hematocrit (8–13), blood pressure (14,15), and lactate (16,17); Tier 2 data concerns perfusion related equipment and techniques recorded under the following headings: bypass equipment, prime fluids, cardioplegia, cardiopulmonary conditions, cell salvage, and aortic surgery.

To ease tier 1 data uploading, a free Excel spreadsheet is provided, which can be downloaded from PERFSORT that will auto populate tier 1 quality markers when uploaded. Raw perfusion related data is uploaded. This enables the tier 1 quality markers to be subsequently updated based on new research as the raw data is available to enable backward compatibility.

Data submitted to PERFSORT is de-identified by researchers prior to upload. No names of patients or other individuals or any risk factors or personal information is included in the dataset.

After data has been submitted to PERFSORT an automatic confirmatory e-mail is sent back to the author. The e-mail contains a compliance statement from PERFSORT with regard to the tier 1 and 2 data that was entered. In

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All authors are members of Perfusion Standards of Reporting Trials committee. Robert A. Baker and Donald S. Likosky are members of International Consortium of Evidence Based Perfusion committee. Ian Johnson is a member of SCGP committee.

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addition, a unique study number is provided to enable journal readers to retrieve perfusion data for that specific study. A typical PERFSORT statement to be pasted into the manuscript would be:

PERFSORT compliance statement. Study number: P00049. PERFSORT compliance version 1: Tier 1 Compliance: 100% (Blood pressure, Temperature, Hematocrit, Glucose, Lactate), Tier 2 Compliance—Equipment and bypass: 100%. For further details of perfusion data please go to <http://www.perfsort.net>.

Steps to submit data to PERFSORT include: registering with www.perfsort.net, which is free, login on to register new study or edit existing one, upload Tier 1 data, and fill in Tier 2 equipment and perfusion technique fields, save work when finished, and click lock study when finished updating study data. You will receive an automatic PERFSORT compliance e-mail. Copy and paste e-mailed compliance statement into perfusion part of your manuscript. Submit manuscript to journal. When paper is accepted for publication, mark PERFSORT submission as published via your user login. To retrieve data on an individual study, go to www.perfsort.net, click on study search tab, and enter study number, title, or author to retrieve PERFSORT data.

All databases uploaded by authors will be incorporated into a larger single database that will be used for research projects and meta analysis. These subsequent analysis will be restricted to only those having a complete PubMed Identifier. PERFSORT data for individual studies can be freely downloaded directly from the website by users with the need to contact the PERFSORT committee. Should users wish to have a copy of the whole PERFSORT database, researchers need to contact the organizing committee directly (this is purely to limit server traffic due to bandwidth issues).

The version of PERFSORT offered is version 1. We aim to listen to users and journals to improve subsequent versions. If you have any suggestions for improvements please contact us via the PERFSORT website. Please visit http://www.perfsort.net/study_detail.asp?id=51 to view an example dataset, and click on the download raw data at the bottom of the page to examine a copy of the PERFSORT Excel tier 1 data typically uploaded.

Generation of standards for reporting aspects of perfusion will undoubtedly improve the quality and relevance of new science concerning the practice of perfusion. Relevant, perfusion related information will be available to the community of professionals wishing to improve the science of perfusion and its translation into practice. An Internet link from the original scientific article to the original perfusion data should facilitate the synthesis of literature for the generation of practice guidelines.

PERFSORT is currently endorsed by International Consortium of Evidence Based Perfusion and Society of Clinical Perfusionists of Great Britain (SCPGP). Full instructions on using PERFSORT can be viewed at www.perfsort.net by clicking on the “Using Perfsort” tab.

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