

PEER REVIEW HISTORY

BMJ Paediatrics Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Pressure related flow rates through various intravenous devices: implications for continuous renal replacement therapy delivery in very small children
AUTHORS	Stevens-Harris, Isabella; Raffaj, Dusan; Davies, Patrick

VERSION 1 - REVIEW

REVIEWER	Bunchman, Tim
REVIEW RETURNED	24-Mar-2017

GENERAL COMMENTS	Gravity flow system looking at maximal flow rates based upon relative pressures, interesting but not a correct model the correct model it to take what has been done then move to a machine (CRRT) and repeat each experiment with each line with the access in a "bucket" of milk (low resistant patient) and turn up and down the "blood flow rate" of the machine until that is done with a machine it will not be valid
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VERSION 1 – AUTHOR RESPONSE

We have taken your comments on board, and have redone our experiment using equine blood through a working haemofiltration machine, including the same filter which would be used in these very small patients.

The comments you made are:

* Animal blood could be used

o We have indeed used animal blood

* How do you know that the milk will clog it up unless you try it

o We used animal blood instead of milk as this will be biologically closer to human blood.

* Access resistance is effected by filter resistance so having an intact system is paramount

o We used an intact haemofiltration system.

We have tracked all our changes in the submitted document. The abstract, method, results, discussion, and conclusion have been heavily edited to include the extra data.

We feel this has significantly increased our experimental validity, and we have obtained much more data which we believe it would be important to share with the medical community.

VERSION 2 – REVIEW

REVIEWER	Bunchman, Tim
REVIEW RETURNED	24-May-2017

GENERAL COMMENTS	the authors have addressed the concerns of the reviewers
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VERSION 2 – AUTHOR RESPONSE