Author's response to reviews

Title: Barriers and enablers to implementing antenatal magnesium sulphate for fetal neuroprotection guidelines: a qualitative study using the Theoretical Domains Framework

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The Editor

BMC Pregnancy and Childbirth

To The Editors-in-Chief

Re: Manuscript submission

Title: Barriers and enablers to implementing antenatal magnesium sulphate for fetal neuroprotection guidelines: a study using the Theoretical Domains Framework

Authors: Bain E, Bubner T, Ashwood P, Van Ryswyk E, Simmonds L, Reid S, Middleton P, Crowther CA

Please find attached the above titled manuscript for consideration of publication in BMC Pregnancy and Childbirth, as recommended by Anne Sales, Editor-In-Chief of Implementation Science in her email dated 27/12/2014.

We have now included line numbers in the manuscript as requested by the editorial office in an email dated 09/01/2014.

In 2010 Australian and New Zealand clinical practice guidelines recommended giving mothers antenatal magnesium sulphate prior to imminent, very early birth (at less than 30 weeks’ gestation), for neuroprotection of the fetus, infant and child. Our manuscript describes a qualitative study (utilising the Theoretical Domains Framework) undertaken within the context of The WISH Project, which aims to bi-nationally improve and monitor use of this therapy to reduce the risk of very preterm babies dying or having cerebral palsy in light of the recent guidelines recommendations.

Our study identifies barriers and enablers to the uptake of antenatal magnesium sulphate as perceived by obstetric and neonatal health professionals in South Australia. Relating these barriers and enablers to the Theoretical Domains Framework provides guidance for the design and modification of future multifaceted implementation strategies to ensure optimal uptake of this neuroprotective therapy for very preterm infants. The successful implementation of antenatal magnesium sulphate for fetal neuroprotection in Australia and New Zealand should lead to over 20 per 1000 fewer preterm babies dying or suffering the long-term consequences of cerebral palsy.

Publication of this study in BMC Pregnancy and Childbirth will facilitate wide dissemination to a broad audience of clinicians, researchers and consumers, including individuals/organisations involved in the promoting the uptake of research findings into routine care in clinical contexts, through rapid publication and online, open access.

Each author fulfils the requirements for authorship, and potential non-financial competing interests have been outlined in the manuscript: “CAC was the principal investigator for the Australasian Collaborative Trial of Magnesium Sulphate (ACTOMgSO4). CAC and PM are authors of the Cochrane review ‘Magnesium sulphate for women at risk of preterm birth for neuroprotection of the fetus.’ CAC, PM and TB
were members of the Guideline Development Panel, for the NHMRC endorsed ‘Antenatal magnesium sulphate prior to preterm birth for neuroprotection of the fetus, infant and child: National clinical practice guidelines.’ The authors declare that they have no other competing interests.”

We thank you for consideration of our manuscript for publication in BMC Pregnancy and Childbirth, and we look forward to your reply.

Emily Bain

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