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Daily sedation interruption versus no daily sedation interruption for critically ill adult patients requiring invasive mechanical ventilation (Review)

Lisa Burry and co-investigators Louise Rose, Iain McCullagh, Dean Fergusson, Niall D. Ferguson and Sangeeta Mehta received a CSHP Foundation Research Grant of \$3,500 in 2010 for this research project.

Q: How did the concept/idea for your research project come about?

A: Sedation practices were changing greatly in the ICU, and one of the physicians I work with started a randomized trial on sedation. She encouraged me to get involved by leading a systematic review. We conducted a systematic review and meta-analysis with the Cochrane collaboration to determine the efficacy and safety of performing daily sedation interruption in critically ill patients.

Q: How will the results of your research project be used?

A: We did not find strong evidence that daily sedation interruption (DSI) alters the duration of mechanical ventilation, mortality, length of ICU or hospital stay, adverse event rates, drug consumption, or quality of life for critically ill adults receiving mechanical ventilation compared to sedation strategies that do not include DSI. Our findings have been released worldwide through the Cochrane collaboration and are being incorporated into the 2016 Pain-Agitation-Delirium (PAD) Guidelines from the Society of Critical Care Medicine.

Q: What impact will your research have on hospital pharmacy?

A: This work has changed the way in which ICU patients are sedated. Current PAD Guidelines suggest use of DSI or a sedation protocol for critically ill patients, and our findings will be incorporated into the 2016 update. Hospital pharmacists use this work to guide the sedation administration strategies used in the ICU.

Q: How will your research impact patient care?

A: Daily sedation interruption will likely be used less often in general mechanically ventilated ICU patients as our results show there is no benefit for daily interruption (and there is increased workload shown by some of our other research).

Q: What role, if any, did the research grant play in supporting your professional career?

A: As a junior researcher I needed statistical support and the assistance of a trained information specialist (librarian trained in systematic reviews). Without the funds it is unlikely that I could have gotten the help I needed to complete the work.

Q: Why should healthcare professionals, key decision makers and the general public pay attention to the research done by pharmacists?

A: Pharmacists, with support and training, can lead drug and drug safety research that can influence clinical outcomes. Pharmacists offer a unique perspective that other professions cannot offer in terms of drug safety.

Q: Why is an organization like the CSHP Foundation important to hospital pharmacists?

A: There are very few funding agencies that allow pharmacists to be a primary researcher on a grant. The CSHP Foundation allowed me to have a leadership role on a research project that I would have not otherwise had.

Publication: The results of this work were published in The Cochrane Library 2014, Issue 7.
(<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009176.pub2/abstract>)

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