



Anaesthetic medication administration errors are a significant threat to patient safety. In 2002, we began collecting data about the rate and nature of anaesthetic medication errors and implemented a variety of measures to reduce errors” Bowdle et al (2018).

Abstract:

BACKGROUND: Anaesthetic medication administration errors are a significant threat to patient safety. In 2002, we began collecting data about the rate and nature of anaesthetic medication errors and implemented a variety of measures to reduce errors.

METHODS: Facilitated self-reporting of errors was carried out in 2002-2003. Subsequently, a medication safety bundle including ‘smart’ infusion pumps were implemented. During 2014 facilitated self-reporting commenced again. A barcode-based medication safety system was then implemented and the facilitated self-reporting was continued through 2015.

RESULTS: During 2002-2003, a total of 11 709 paper forms were returned. There were 73 reports of errors (0.62% of anaesthetics) and 27 reports of intercepted errors (0.23%). During 2014, 14 572 computerised forms were completed. There were 57 reports of errors (0.39%) and 11 reports of intercepted errors (0.075%). Errors associated with medication infusions were reduced in comparison with those recorded in 2002-2003 ($P < 0.001$). The rate of syringe swap error was also reduced ($P = 0.001$). The reduction in error rate between 2002-2003 and 2014 was statistically significant ($P = 0.0076$ and $P = 0.001$ for errors and intercepted errors,

respectively). From December 2014 through December 2015, 24 264 computerised forms were completed after implementation of a barcode-based medication safety system. There were 56 reports of errors (0.23%) and six reports of intercepted errors (0.025%). Vial swap errors in 2014-2015 were significantly reduced compared with those in 2014 ($P=0.004$). The reduction in error rate after implementation of the barcode-based medication safety system was statistically significant ($P=0.0045$ and $P=0.021$ for errors and intercepted errors, respectively). CONCLUSIONS: Reforms intended to reduce medication errors were associated with substantial improvement.

You may also be interested in...

Review of doctors attitudes towards medication errors

Infusion safety intervention bundle to reduce intravenous medication administration errors

Medication errors involving the intravenous administration route

Reference:

Bowdle, T.A., Jelacic, S., Nair, B., Togashi, K., Caine, K., Bussey, L., Kruger, C., Grieve, R., Grieve, D., Webster, C.S. and Merry, A.F. (2018) Facilitated self-reported anaesthetic medication errors before and after implementation of a safety bundle and barcode-based safety system. *British Journal of Anaesthesia*. 121(6), p.1338-1345.

doi: 10.1016/j.bja.2018.09.004.

