Background
The combination of rocuronium with sugammadex reversal has many potential advantages over existing standard practice (neostigmine reversal). These include: avoidance of residual neuromuscular block when recovering from anaesthesia,\(^1\) increased safety in high risk patients from more complete return of neuromuscular function, and quicker return of spontaneous ventilation in "can’t intubate, can’t ventilate" scenarios.\(^2\)

However, there remain some concerns with the usage of rocuronium and sugammadex: the potential increased anaphylaxis rate with rocuronium\(^3\) and the high relative cost of sugammadex with little definitive evidence on cost-effectiveness.\(^4,5\)

Aims
1. To assess the usage of rocuronium and sugammadex in the Aberdeen Royal Infirmary Anaesthetic Department before and after the introduction of a departmental guideline on sugammadex usage
2. To educate and update our department with current evidence relating to these drugs

Methods
An electronic survey of the department in October 2014 sought information on the reason for, and frequency of, using rocuronium and sugammadex. A guideline detailing the indications for using sugammadex was distributed in April 2015. A second electronic survey was conducted in June 2015 asking the same questions on rocuronium and sugammadex usage with additional questions on the awareness of the guideline, the location of storage of sugammadex, and the estimated cost of sugammadex. The results were presented locally along with the results of a literature review.

Results
There were 60 respondents to the first survey and 56 to the second. After the guideline, rocuronium usage increased from 80% to 91%, and it was being used more frequently (Table 1). Sugammadex usage increased from 38% to 69% (Tables 2 and 3). A major barrier to sugammadex usage was its perceived cost. There was a wide range in the estimated cost of a 5ml vial of sugammadex, but the median was relatively accurate (actual cost £143.14, median estimate: £150.00). Finally, 80% were aware of the existence of the guideline and 85% were aware of where the sugammadex was stored.

Discussion and conclusion
Sugammadex has been shown to more rapidly reverse rocuronium induced neuromuscular blockade irrespective of depth of block\(^6\) and also to decrease residual paralysis in recovery in comparison to neostigmine with no increase in adverse events.\(^1,2,6\)

We have shown an increase in the effective usage of the rocuronium/sugammadex combination after the introduction of a guideline. By presenting and discussing these findings locally, we were able to increase awareness within our department of the potential benefits of using this combination of drugs. We have now further refined the guideline and are working on more accurately auditing the reasons for using sugammadex.

References

Table 1: How often do you use rocuronium?

Table 2: How often do you use sugammadex? (pre-guidelines)

Table 3: How often do you use sugammadex? (post guidelines)