

Evaluating the impact of pre-prepared neonatal intubation premedication kits on a level 3 neonatal unit, (Project NIK).

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Background

In January 2018, neonatal intubation premedication kits containing atropine, suxamethonium and fentanyl were introduced alongside the implementation of dose-banding for these medicines according to patient’s weight, irrespective of the patient’s gestation.

A button on the electronic prescribing system was created which automatically populates the drug chart with doses based on the patient’s weight.

Seven kits are made by the Pharmacy Technical Services Unit each week.

Aim

To assess the staff perceived impact of pre-prepared intubation drug kits with associated dose-banding of the medication.

Method

Three months after the kits were implemented, a survey was sent to all nursing and medical staff to establish their thoughts on the intubation process before and after the introduction of pre-made intubation drug kits.

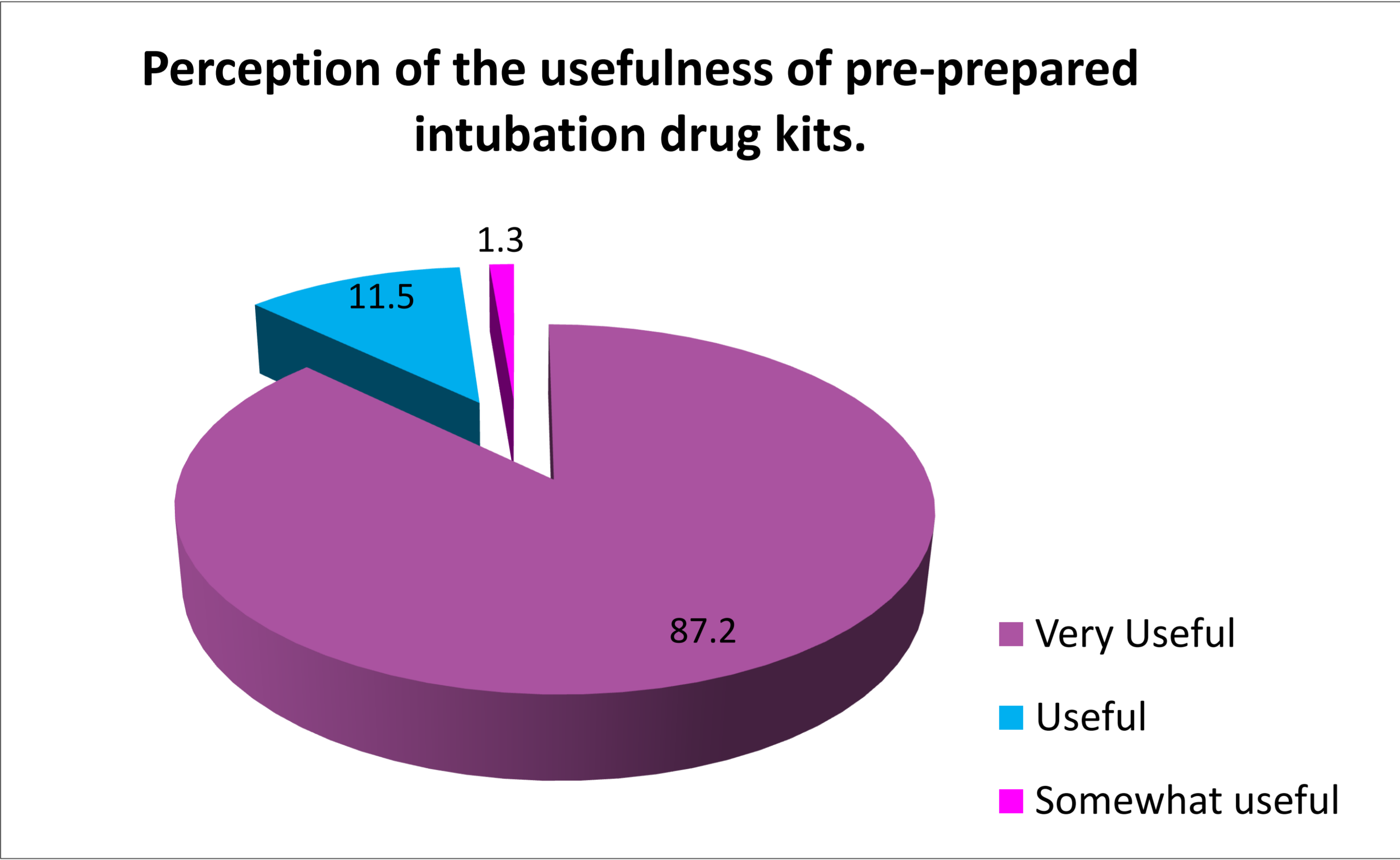
Results

78 staff responded, 45.5% were doctors and 54.5% were nursing staff. The response rate was 53.8%.

78% of respondents reported being part of a difficult intubation over the last 5 years with 10.6% reporting the time taken to draw up intubation drugs as a problem.

After introducing intubation drug kits, irrespective of whether the respondent was a doctor or member of nursing staff, the perception was that the kits made the process easier; quicker; reduced risk of error and helped provide better patient care. 95% agreed using pre-prepared kits was easier than drawing up the drugs just prior to intubation.

97.4% reported the doses used were effective in sedating and paralysing the baby prior to intubation, 2.6% commented that they were somewhat effective but that in one occasion the paralysis had not been optimal, however they questioned whether the cannula had been functioning properly.



Complications with the use of premade intubation drugs	%
None	92
Run out of kits	4
Incorrect documentation in CD register	2.7
Nurses looking at an old guideline when checking doses	1.3

Discussion and Conclusions

The implementation of ready to use intubation drug kits has made the process of preparing for an intubation easier and quicker for all involved in the process. Having the dose banding set up on the electronic prescribing system has reduced the chance of prescribing errors and the pre-filled kits have reduced the chances of calculation errors during drug preparation.

When the kits run out there are instructions in the guideline detailing how to make the required concentrations. Three weeks out of twenty-five saw all the kits being used, average usage is four intubation kits per week.

As a result of this study standardised teaching videos were introduced from the beginning of July 18. Further simulations have been completed to ensure that all staff follow a standardised process.

Next steps are to ensure that the documentation in the CD register includes all necessary information without any need for amendments. To overcome this, a stamp is being designed to use in the book each time a patient requires a kit, thereby providing a prompt for the nurses.