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Key points

- Large obstetric general anaesthesia data set.
- Clear uptake of McGrath MAC Videolaryngoscope (MMVL), Nasal cannula and BIS use with the introduction of obstetric GA checklist.

Introduction

There is a higher incidence of difficult and failed intubation in obstetrics compared to the general population [1]. As part of our ongoing quality improvement project to improve the safety and success of airway management, we have applied a standardised intubation bundle in our approach to the induction of general anaesthesia in our tertiary obstetric unit. The bundle comprises the following measures: use of pre-oxygenation with nasal cannulae (NC), optimal positioning through ramping, bispectral index (BIS) monitoring and use of McGrath MAC videolaryngoscopy (MMVL) as the first line airway strategy for intubation. An intubation checklist was introduced in November 2020 to prompt adherence to each of these components.

Methods

Prospective data were collected by the intubating anaesthetist through an ongoing departmental audit following introduction of the checklist (December 2020 to December 2021) and the ODP teaching (January 2022 to November 2022) and compared to a previous period prior to checklist use (November 2018 to November 2019). Recorded data included adherence to the elements of the intubation checklist as well as the number of attempts and success of intubation.

Results

Data were collected from 649/827 (78.5%) intubations during the audit period. Use of all elements recommended in our standardised approach increased following introduction of the checklist and the ODP teaching (Figure 1): MMVL use increased from 59.9% to 93%, use of NC from 62.2% to 92% and that of BIS from 86.3% to 97%. Data on ramping and checklist use have only been collected since June and August 2021, respectively. Adherence to both remains high at 97% and 92%, respectively. First pass success of intubation has increased from 94% to 96.2%.

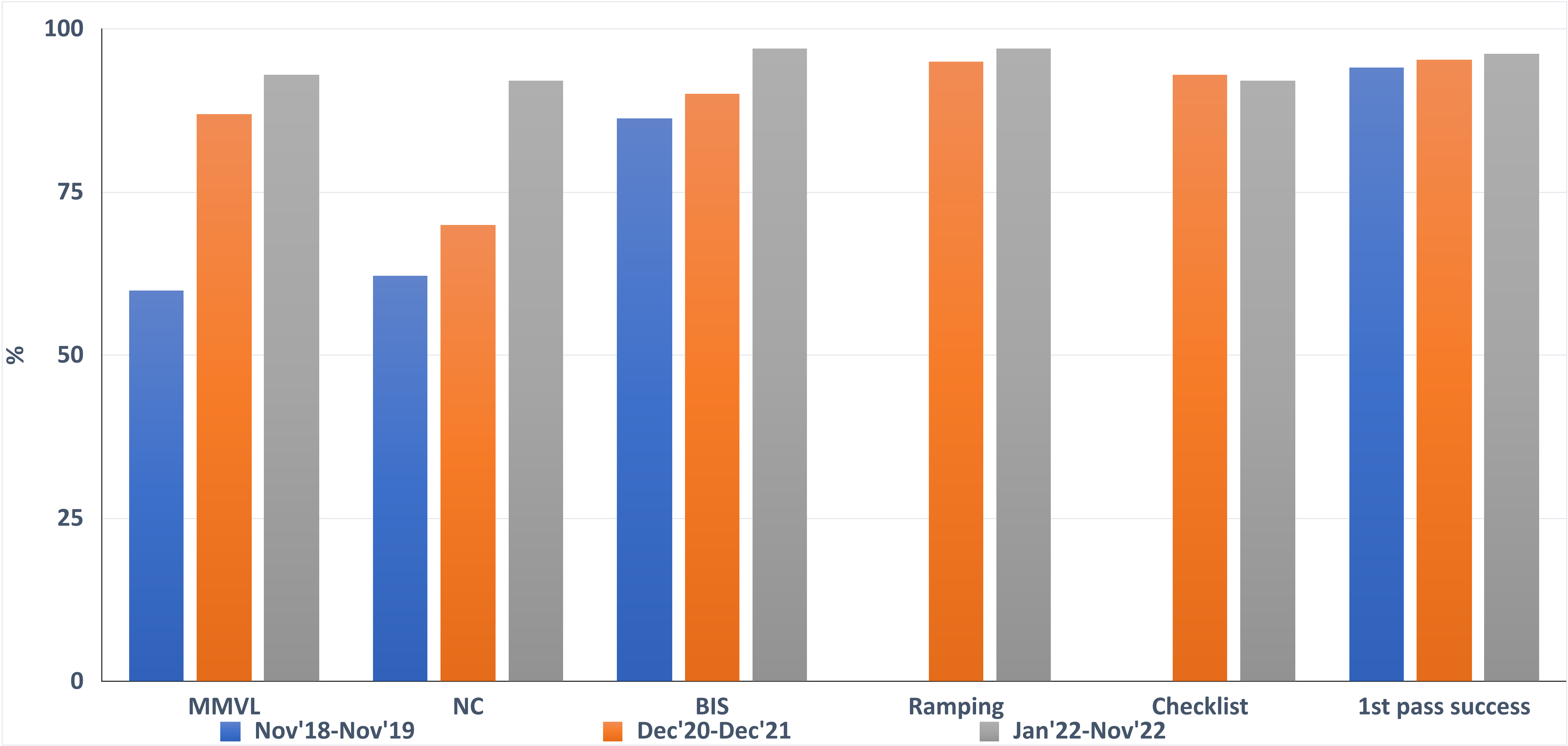


Figure 1: Compliance with elements of intubation checklist & first pass success of intubation

Discussion

The use of checklists can reduce human factor and situational variability, particularly in time-pressured and stressful situations; checklist use is recommended in NAP4 to improve teamwork, preparation and performance at induction [2]. We show that compliance with measures introduced to improve the safety of obstetric airway management has improved with the adoption of interventions to prompt and consolidate this standardised approach. This correlates with an improvement in successful first pass intubation in our unit.

1. Mushambi M, Kinsella S. Obstetric Anaesthetists' Association/Difficult Airway Society difficult and failed tracheal intubation guidelines – the way forward for the obstetric airway. *British Journal of Anaesthesia*. 2015; 115(6): 815-818.

2. Cook T, Woodall N, Frerk C. A national survey of the impact of NAP4 on airway management practice in United Kingdom hospitals: closing the safety gap in anaesthesia, intensive care and the emergency department. *British Journal of Anaesthesia*. 2016; 117(2): 182-190.