

## Care not documented is care not given: Devising the intubation procedure documentation tool

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Dear Editor,

Good clinical record keeping is a crucial component of good professional practice and all physicians are mandated by Irish Medical Council Guidelines to “keep accurate and up-to-date patient records”<sup>1</sup>. The National Audit Project (NAP-4) identified the intensive care setting as having the highest incidence of difficult and failed intubations in the hospital<sup>2</sup>. The **INTUBE** study reported an incidence of 45.2% for major adverse events occurring when intubating critically ill patients, with a cardiac arrest rate of 3.1%<sup>3</sup>.

We have developed an intubation procedure documentation tool to promote the complete and accurate documentation of airway intubation procedures in the ICU. The tool in the ICU electronic record prompts clinicians to document essential aspects of the procedure including: the indication for intubation; type of laryngoscopy; use of a bougie; grade of intubation; level of endotracheal tube fixation; size of endotracheal tube inserted; drugs administered to facilitate intubation; whether hemodynamic instability occurred and post-intubation chest X-ray order.

We conducted an audit of the documentation of airway intubation procedures in our ICU electronic charts before and after implementing the intubation procedure documentation tool. Cycle-1 reviewed data from July 2020 to July 2021, which included 115 intubations. Cycle-2 analysed six months of data from January to July 2022, which involved 105 intubations.

Our audit results demonstrate a noteworthy improvement in the completeness and accuracy of documentation of the intubation procedure following the introduction of the documentation tool. During Cycle-1 there were only records of the indication for intubation in 45 (42%) cases and the type of laryngoscopy (direct vs video) was documented in only 6 (5.7%) cases. In Cycle-2 the indication for intubation was documented in 108 (93.9%) cases and the type of laryngoscopy was recorded in 46 (40%) cases.

Haemodynamic instability was recorded in 46 (40%) cases during Cycle-2, while it was only noted in 23 (21.9%) cases during Cycle-1. We speculate that most likely some adverse events had occurred during Cycle-1 but not all the events were being recorded. The finding from Cycle-2 that 40% of intubations procedures were associated with haemodynamic instability is in keeping with the findings of the INTUBE study, where cardiovascular instability was reported in 42.6% of intubations in critically ill patients<sup>3</sup>.

Introduction of the documentation tool also increased documentation of other elements of the intubation procedure. While there were no records of bougie use during Cycle-1, 67 (58%) cases had records of bougie use during Cycle-2. Additionally, the number of intubation attempts and the grade of intubation was better documented in Cycle-2, with 43 cases (62.6%) having records of the number of intubation attempts and 43 cases (62.6%) having records of the grade of intubation.

Chest X-ray orders were recorded in 37 (32%) cases during Cycle-2, while no records were found during Cycle-1. Furthermore, endotracheal tube size was better documented during Cycle-2, with records found in 71 (61.7%) cases, compared to 48 (45.7%) cases during Cycle-1. The level of endotracheal tube fixation was recorded in 52 (45%) cases during Cycle-2, compared to 45 (42.8%) cases during Cycle-1.

In conclusion, our study aimed to address the challenge of incomplete and inaccurate documentation of airway intubation procedures in the ICU by developing and implementing an intubation procedure documentation tool. Our results demonstrate significant improvement in documentation practices, with improved completeness and accuracy of the various elements of the intubation procedure. Our findings should encourage healthcare providers that if better documentation tools are provided, an improvement in record-keeping for this critical procedure can be achieved.

**Declarations of Conflicts of Interest:**

None declared.

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