

Estimating the potential benefits of a patient safety quality improvement scheme on safer tracheostomy care introduced at scale in NHS hospitals in England:

Summary Report



Working in collaboration with:

*The***AHSN***Network*



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Additional Information:

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Summary

What was the problem?

Up to 30% of patients receiving tracheostomy care have been found to suffer from avoidable harms related to a lack of equipment, staff training, and limited infrastructure. In response to this, the Global Tracheostomy Collaborative developed several quality improvement strategies. Originally delivered to 20 hospitals in England, the strategies were found to improve several aspects of quality, safety and efficiency (including reduced length of stay, incident severity, and lower anxiety and depression for patients).

What was the solution being evaluated?

In 2020 NHS England rolled out several of the strategies to 180 hospitals, this was during the COVID-19 pandemic which resulted in the safety elements taking priority. Across the 180 hospitals three strategies were implemented which included: standardised tracheostomy care bundles, bedhead signs, and bedside and ward tracheostomy equipment.

What did we do?

No data was collected for the 180 hospitals to enable a direct evaluation of the impacts. Findings from the 20 original hospitals were used to understand the potential impacts of the strategies. Four measures were assessed: length of stay, days with a tracheostomy, days in intensive care, and days with a ventilator. Estimated impacts from the 20 pilot hospitals were generated that looked at how the measures varied before and after implementation. These were then applied to the 180 hospitals over the first year of implementation based on when the strategies were implemented and the predicted number of patients with a tracheostomy in each hospital.

What are the implications for the NHS and patients?

Reductions in length of stay were observed in the 20 pilot hospitals (reductions were observed in days with a tracheostomy, days in intensive care, and days with a ventilator but we cannot be confident that this was a statistically significant

difference). Applying these effects to the 180 hospitals implied that over the first 12 months of the quality improvement strategies there was, on average, a reduction in total hospital length of stay per tracheostomy admission of 33.02 days. Multiplied by the number of admissions requiring a tracheostomy over the 180 hospitals and taking into account the expected costs of length of stay would give an estimated notional saving of £1.92 million per hospital.

What are the limitations of the work?

The evaluation was limited in the opportunities to identify the impacts of quality improvement strategies on the 180 hospitals due to a lack of data in the 180 hospitals. Relying on estimated effects of the 20 pilot sites could lead to inaccurate measures of impact. In particular, there were concerns with data in the 20 pilot hospitals, with missing data in some instances, a lack of comparative data to understand what would have happened in hospitals in the absence of the strategies, and the timeframe for the 20 pilot sites being different to the 180 hospitals (most notably, the evaluation period for the 20 sites was prior to COVID-19). The 180 hospitals may also vary to the 20 pilot hospitals in ways that could not be accounted for in the analyses.

With these limitations in mind, the evaluation took a pragmatic approach to evaluate strategies to improve quality in tracheostomy care. The findings suggest there are likely to have been significant cost-savings due to reduced length of stay for patients having a tracheostomy. Reduced length of stay may also provide evidence of potential patient benefit. Future studies are required to understand whether this approach was a good approximation of the impacts, but this would require better recording of tracheostomy care in hospital data.

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The information in this report is correct at the time of printing.