Prolonged use of a reminder sticker results in sustained improvement in documentation of resuscitation status

In a previous study reported in this Journal,¹ we showed that the short-term use of a reminder sticker at the time of the post-acute medical ward round was associated with a statistically significant improvement in rates of documentation of resuscitation status and appropriate prescription of venous thromboembolism (VTE) prophylaxis.

We aimed to investigate the effects of the prolonged use of this sticker.

The adult general medical service at Auckland City Hospital consists of four ward-based teams (Red, Black, Gold and White). The prolonged use of the sticker was audited on the Red and Black teams.

The sticker contained contact details of the medical team and reminders about documenting resuscitation status, prescribing VTE prophylaxis and retaining or removing intravenous (IV) cannulae.

Prior to the reintroduction of the sticker across all general medical teams the charts of 100 consecutive patients admitted Monday to Friday under both Red and Black teams were reviewed in the afternoon following the post-acute ward round.

Both teams were blinded to this review. The charts were audited for documentation of resuscitation status and the appropriate prescription of VTE prophylaxis (the VTE prophylaxis guideline for medical patients in the Auckland City Hospital RMO Handbook was used to adjudicate this).

We did not audit whether IV cannulae were necessary or unnecessary as we had previously shown that the use of a reminder sticker could improve the removal of unnecessary IV cannulae.²

At the time of the reintroduction of the sticker all medical teams received education highlighting the importance of completing the sticker. They were asked to complete the sticker and place it in the patient’s clinical notes at the time of the post-acute ward round. They were aware that sticker use would be audited at some time in the future but were not informed when this would occur. The sticker was then not formally discussed until after the intervention period audit.

The nursing staff responsible for general medical patients were asked to remove a patients IV cannula if the sticker requested this.

The sticker was reintroduced in June 2011. Four months later the charts of 100 consecutive patients admitted under both Red and Black teams were again audited as above and the same information was collected. The charts were also audited for presence and completeness of the sticker. The patients whose sticker stated “please remove intravenous cannula” were reviewed for the presence or absence of an IV cannula. Both teams were again blinded to this review.

The two tailed Fisher’s exact test was used to calculate univariate p values.

Ethical approval was granted by the Northern X Regional Ethics Committee.
Documentation of resuscitation status for the Red and Black team patients improved from 82.5% in the pre-intervention period to 95.5% in the intervention period (p<0.0001).

The prescription of appropriate VTE prophylaxis for the patients that were audited was not significantly different with rates of 29% in the pre-intervention period and 14% in the intervention period (p=0.08).

During the intervention period audit the sticker was present in 155 (78%) of the audited charts and was complete on 119 (77%) occasions. Of the 36 stickers that were incomplete, the following sections were not completed; resuscitation status, VTE prophylaxis and IV cannula removal (n=16), VTE prophylaxis and IV cannula removal (n=7), IV cannula removal (n=5), VTE prophylaxis (n=4), resuscitation status (n=3) and resuscitation status and VTE prophylaxis (n=1).

The sticker asked for the removal of an IV cannula in 32 (16%) patients. When reviewed, a median of 4.5 hours after the sticker had been placed, this cannula remained in situ in 15 (47%) patients.

The reintroduction of the reminder sticker was associated with a statistically significant improvement in the rate of documentation of resuscitation status after a prolonged duration of sticker use. There was no change in the appropriate prescription of VTE prophylaxis. The sticker may have resulted in the removal of a number of unnecessary IV cannulae and has the potential to result in the removal of further unnecessary IV cannulae if nursing staff respond to the sticker request more often.

We have shown a prolonged benefit of the sticker in terms of documentation of resuscitation status. Our initial concerns about sticker fatigue were unfounded at least for this aspect of the sticker.

During the period of the sticker use there was a trend towards a reduction in the number of audited patients who received appropriate VTE prophylaxis as adjudicated by the current ADHB RMO handbook guideline. This guideline is now felt by many physicians to be over inclusive. This impression may have been emphasized by a review article, published at the time of the intervention period audit, which found that heparin VTE prophylaxis in medical patients resulted in little or no net benefit. It could be argued that the sticker provided benefit by ensuring that the potential use of VTE prophylaxis was considered on the post acute ward round in 127/200 (64%) of audited patients.

IV cannulae remained in situ in 47% of patients whose sticker had asked for this to be removed despite a median of 4.5 hours between sticker placement and our review. The removal of unnecessary IV cannulae is reliant on nursing staff reading the patients notes, seeing the sticker and following the request. This adds an extra step to the process of IV cannulae removal which potentially reduces the proportion of unnecessary IV cannulae removed.

Options to potentially increase the removal of unnecessary IV cannula further include additional nursing education about the sticker, for the medical team to remove IV cannulae themselves once the sticker has raised this issue or for a more direct form of communication between the medical team and the nurse caring for the patient.
There were a number of potential limitations to this audit. Changes in personnel on the Red and Black teams between the pre-intervention and intervention periods were unavoidable due to regular rotation of registrars and house officers. Obviously the reminder sticker is only useful if it is used; regular reminders about its use and a plentiful supply of stickers are required.

Given the success of this audit we plan to continue with the use of the sticker. We have updated the sticker by adding a reminder to discuss smoking cessation with patients who smoke. Each rotation of registrars and house officers onto the general medical service will receive education about the use of the sticker as part of their orientation.

We have shown that, at least for documentation of resuscitation status, the reminder sticker has a prolonged benefit.

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References: