Use of a reminder sticker improves rates of documentation of resuscitation status and the appropriate prescription of venous thromboembolism prophylaxis

We aimed to investigate the effect of a reminder sticker, placed in the patient chart at the time of the post-acute ward round, on the documentation of resuscitation status and appropriate prescription of venous thromboembolism (VTE) prophylaxis in adult general medical patients at Auckland City Hospital.

The adult general medical service at Auckland City Hospital consists of four ward-based teams. The sticker was trialled on the Red team with the White team acting as the control group.

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

Before the introduction of the sticker the charts of 100 consecutive patients admitted Monday to Friday under both 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 intravenous cannulae were necessary or unnecessary as we had previously shown that the use of a reminder sticker could improve the removal of unnecessary intravenous cannulae.¹

Both teams then received a teaching session highlighting the importance of documenting resuscitation status and the appropriate prescription of VTE prophylaxis. The Red team also received education about placement and completion of the sticker. Both teams were aware of the sticker and that rates of documentation of resuscitation status and appropriate prescription of VTE prophylaxis would be audited.

The nurses responsible for the Red team patients were asked to remove a patient’s intravenous cannula if the sticker requested this.

The sticker was introduced in October 2009. One week later, the charts of 100 consecutive patients admitted under both teams were again audited as above and the same information was collected.

The Red team patients’ charts were also audited for presence and completeness of the sticker. The Red team patients whose sticker stated “please remove intravenous cannula” were reviewed for the presence or absence of an intravenous cannula.

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 team patients improved from 79% in the pre-intervention period to 99% in the intervention period (p<0.0001) whereas for the White team patients was unchanged at 92% in both periods (p=1).

Prescription of appropriate VTE prophylaxis for the Red team patients improved from 39% in the pre-intervention period to 73% in the intervention period (p<0.0001) whereas for the White team patients fell from 35% in the pre-intervention period to 9% in the intervention period (p<0.0001).

During the intervention period the sticker was present in 76 Red team patient charts and was complete on 63 (83%) occasions.

The sticker asked for the removal of an intravenous cannula in 21 patients. When reviewed, a median of five hours after the sticker had been placed, this cannula remained in situ in 9 (43%) patients.

The use of this reminder sticker was associated with a statistically significant improvement in rates of documentation of resuscitation status and appropriate prescription of VTE prophylaxis. The sticker may have resulted in the removal of a number of unnecessary intravenous cannulae and has the potential to result in the removal of further unnecessary intravenous cannulae if nursing staff respond to the sticker request more often.

Reminder stickers have been shown to be beneficial in a wide variety of areas of medical care including prescription of VTE prophylaxis, appropriate perioperative antibiotic prescribing, cancer screening in primary care and smoking cessation. There was an unexpected significant decrease in the rate of appropriate prescription of VTE prophylaxis in the White team during the intervention period. It is possible that the White team physicians views of VTE prophylaxis may have been influenced by an article addressing the benefit-hazard ratio of VTE prophylaxis in medical patients that was published between the pre-intervention and intervention periods.

With our study design, we felt that we were able to assess the true impact of the sticker. This audit has a number of limitations. We have only shown that this sticker is beneficial over a short period of time. It is uncertain as to whether this benefit will be maintained over a more prolonged period.

The removal of unnecessary intravenous cannulae is reliant on nursing staff reading and following the sticker request. There were unavoidable changes in the medical personnel of both the Red and White teams between the pre-intervention and intervention periods due to the regular rotation of registrars and house officers.

We plan to introduce this reminder sticker across the adult general medical service at Auckland City Hospital and to reaudit rates of documentation of resuscitation status and appropriate prescription of VTE prophylaxis after a more prolonged period of use.

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References:


