

Short Animations as an Educational Tool on Critical Care

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Background

Compliance with a VAP care bundle is an important part of critical care nursing and the topic for many quality improvement projects. Education is often the 'go-to' intervention for such projects but, when knowledge is adequate but compliance remains low, this may present a problem. In a "high awareness, low compliance situation", perceived barriers to compliance including lack of time, skills, guidance and forgetfulness may play a role.

Situation

Nursing staff scored well (96.49%) in a pre-intervention questionnaire of knowledge of elements of the VAP bundle (Table 1). This indicated high awareness amongst nursing staff.

Table 1

Element	Number of respondents who answered correctly (n=19)	Percentage
Head of bed angle.	19	100
Daily Sedation Interruptions	19	100
Cuff Pressure.	17	89.5
Sub-glottic Suction	17	89.5
Oral Chlorhexidine	19	100
Toothbrushing	19	100

Aims

To assess the impact of a series of short animations on nursing compliance with the VAP bundle.

Methods

Staff nurses produced short Powtoon animations revising key elements of the VAP bundle and released one a week across a private Facebook group which staff had previously been invited to join. The videos were no more than 60 seconds long and designed to be light-hearted in their approach.

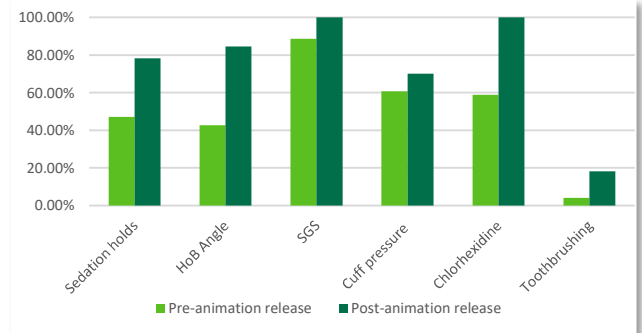
A 'spot check' audit was carried out over a five week period to measure compliance with head of bed elevation. A documentation audit was carried out over a seven week period to audit documentation of sedation interruption, cuff pressure checks, sub-glottic suction and oral care.

Example Animation



Results

Graph 1



The audits suggested significantly improved compliance with daily sedation interruption, Head of bed angle >30 degrees, and four times daily application of oral chlorhexidine (Table 2 and 3). All audited elements of the bundle showed a positive trend in compliance following release of the corresponding animation. A crude analysis of compliance against all audited elements of the bundle before and after the release of their respective animations showed significant improvement from 49.27% to 79.38% (Fisher's exact two-tailed p<0.001).

Table 2

Element Measured	Pre-animation release	Post-animation release	P-Value
Percentage daily sedation holds.	47.1%	78.2%	p=0.0295
Head of bed >30°.	42.6%	84.6%	p<0.001
2 hourly subglottic suctioning.	88.6%	100%	p=0.1384
4 hourly cuff pressure checks.	60.7%	70%	p=0.6103
6 hourly chlorhexidine.	58.8%	100%	p=0.0065
Twice daily toothbrushing.	3.96%	18.18%	p=0.1061
All elements	49.27%	79.38%	p<0.001

Table 3

Element Measured	Mean Pre	Mean Post	Mean Difference (95% CI)	P value
Head of bed angle	18.33°	31.32°	12.99° (9.10 to 16.88)	<0.0001
Times cuff pressure checked in 24 hours.	5.65	6.45	0.8 (1.61 to -0.02)	0.0547
Times chlorhexidine administration documented in 24 hours.	2.98	4.00	1.02 (1.97 to 0.07)	0.0353
Times toothbrushing documented in 24 hours.	0.24	0.64	0.4 (0.74 to 0.05)	0.0234

Conclusion

Short animations produced by key stakeholders and released across social media act can improve compliance with a care bundle in a high awareness, low compliance situation.