

***Brief Hemorrhage Control Training for Nursing Staff:
A Rapid Approach for Training in the Time-Strapped Environment***

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Purpose: Stop the Bleed (STB) training is essential in recognizing and treating life threatening bleeding. The STB training as developed by the American College of Surgeons Committee on Trauma takes about one and half hours to complete. Survey of surgeon participants revealed that more than 90% believe this training is important and achievable with the lay public. The importance of recognizing and treating hemorrhage in hospital patients is as important, nonetheless it is a struggle to balance time and efficacy in updating nursing staff with similar training.

Resources: Nursing Educators for the integrated health network became designated providers for the Stop the Bleed (STB) program as developed by the American College of Surgeons Committee on Trauma (ACS COT) via the Bleedingcontrol.org website. An abbreviated slide deck/poster presentation was developed in keeping with the fidelity of STB. The design of the instruction was to demonstrate that a modified 5-minute training in combination with a hands-on skills station would be an effective and efficient method to update nursing staff on bleeding control methods. Combat Application Tourniquets and wound simulation limbs as recommended by ACS COT were utilized in the hands-on demonstration. A ten question pre and post-test was developed to garner knowledge before and after the training. Then a statistical analysis was completed, and a report obtained generated.

Description: This IRB approved prospective observational survey study was conducted with nurses in a pre-test/post-test format. The pilot program was conducted at two trauma centers in an integrated health network. Nurses from the Emergency Department, Adult intensive Care Unit, and trauma units at a level 1 and level 2 Trauma Centers underwent the training and examination. Participants were excluded if consent to participate in the pre-test or post-test or datasets were incomplete. The pretest was conducted prior to a competency skills fair, followed by completion of a five-minute didactic session with a hands-on skills station. At the end of the abbreviated training, nurses completed a post-test. Scores were compared, and statistical significance was calculated using a paired t-test.

Effectiveness: It was determined that post-test scores were found to be on average, 12.41 points higher (95% CI 8.80 – 16.02, $p < 0.0001$) than pre-test scores of $74.29 + 17.07$ and post-test scores of $86/70 + 13.52$. Improved scores were observed in 67% of participants ($n=75$). No score change was noted in 22% ($n=24$) and 11% performed worse on the post-test ($n=13$).

Lessons Learned: Lessons learned:

Staff nurses don't know what they don't know.

CAT Tourniquet application is not intuitive, it is a high risk low volume skill and should be included in ongoing competency evaluations on a continuing basis.

Staff nurses do recognize life threatening bleeding and know how to pack a wound and apply pressure.

Given the overall nursing shortage, the clinical time demands on nurses, this is an efficient and effective way to disseminate the education. The results of this research illustrate this method to be a timely and efficacious way to share this valuable information. It saves time and saves lives.

Conclusions: It was determined that post-test scores were found to be on average, 12.41 points higher (95% CI 8.80 – 16.02, $p < 0.0001$) than pre-test scores of $74.29 + 17.07$ and post-test scores of $86/70 + 13.52$. Improved scores were observed in 67% of participants ($n=75$). No score change was noted in 22% ($n=24$) and 11% performed worse on the post-test ($n=13$).

Benefit to Others: Recognizing and treating life threatening hemorrhage represents an opportunity for ongoing nursing education. Given the overall nursing shortage, the clinical time demands on nurses, an efficient and effective way to disseminate the education is paramount. The results of this research illustrate this method to be a timely and efficacious way to share this valuable information. It is believed this program can be easily replicated by hospital educators using the abbreviated STB program and tourniquet trainers for all clinical and non-clinical hospital staff.

Implementation by Others: Recognize the necessity to update and educate hospital staff in Stop the Bleed (STB).

Support nursing educators to become STB providers so they understand the core values and maintain fidelity of the STB program.

Develop an abbreviated time saving process to present STB education with didactic and hands-on demonstration.

Implement program and survey results.