

National Stop the Bleed Day: The impact of a social media campaign on the Stop the Bleed program

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BACKGROUND:	National Stop the Bleed Day (NSTBD) was created to increase public awareness of the official Stop-the-Bleed initiative and the Bleeding Control Basic course. The goal was to develop and employ an effective national social media strategy that would encourage and support efforts already in place to train the public in basic bleeding control techniques.
METHODS:	March 31, 2018, was designated as NSTBD. Analysis focused on a 2-week window centered on NSTBD. The number of courses offered, number of instructors registered and total number of students trained overall during this period was derived from the American College of Surgeons (ACS) website bleedingcontrol.org . Courses not registered with the ACS were not included. Data on overall website activity were also included for analysis.
RESULTS:	Forty-three states and 18 countries participated in NSTBD. During the study period, there were 1884 courses registered on bleedingcontrol.org . Comparatively, over a 4-month period from August to November 2017, the mean number of registered courses per month was 834. There were 34,699 students trained during the two-week study period as opposed to August to November 2017, the mean number of people trained per month was 9,626. In addition, 576 new B-Con instructors were certified during this time window. Additionally, the international coordinators reported 1500 students were trained during the study period. During this time, the ACS reported a significant increase in website activity. This included 10,530 new visitors, 12,772 visitors overall and 35,342 page views recorded during the study period.
CONCLUSION:	The NSTBD effort was successful in generating widespread interest for the Stop-the-Bleed initiative. The use of a targeted social media campaign in this context was successful in driving people to available training opportunities while also increasing awareness of the overall effort. While only in its early stages, the NSTBD concept is a good one and should be developed further in coming years. (<i>J Trauma Acute Care Surg.</i> 2019;87: S40–S43. Copyright © 2019 Wolters Kluwer Health, Inc. All rights reserved.)
LEVEL OF EVIDENCE:	Retrospective, Level V.
KEY WORDS:	Hemorrhage; prehospital; tourniquet; extremity; trauma.

Trauma is the leading cause of death in the United States for patients younger than 46 years.¹ More importantly, the 2016 report “A National Trauma Care System: Integrating Military and Civilian Trauma Systems to Achieve Zero Preventable Deaths After Injury” found as many as 20% of trauma deaths may be potentially preventable. The same report stressed the importance of improved trauma system integration, with the first important link being effective response from bystanders. This report, noted the impressive improvements made by the US

military in prehospital trauma care and the prevention of potentially survivable deaths in combat.^{2,3} In combat, mass implementation of commercial tourniquets has significantly contributed to decreasing death from extremity hemorrhage, with up to a 67% decrease in death from extremity hemorrhage.³ The introduction and implementation of hemostatic dressings for effective wound packing and hemorrhage control may also offer a mortality benefit.

The Hartford Consensus was published following the Sandy Hook shooting in Newtown, Connecticut. It outlined the need for an organized civilian training system to implement programs to treat hemorrhage during active shooter situations.⁴ Supported by a Presidential directive on National Preparedness, the Stop the Bleed initiative was created with stakeholders including the American College of Surgeons (ACS), Department of Defense, Department of Homeland Security, Health and Human Services' Assistant Secretary for Preparedness and Response, as well as support from the American College of Emergency Physicians, and a number of nongovernmental organizations and industry personnel. The Stop the Bleed campaign and Bleeding Control Basic (B-Con) course sought to empower bystanders to control traumatic hemorrhage prior to the arrival of medical personnel, which was shown in the military to increase survivability in preventable death situations.⁵

A group of military medics and providers began collaboration in 2013 on a Facebook page entitled “Next Generation

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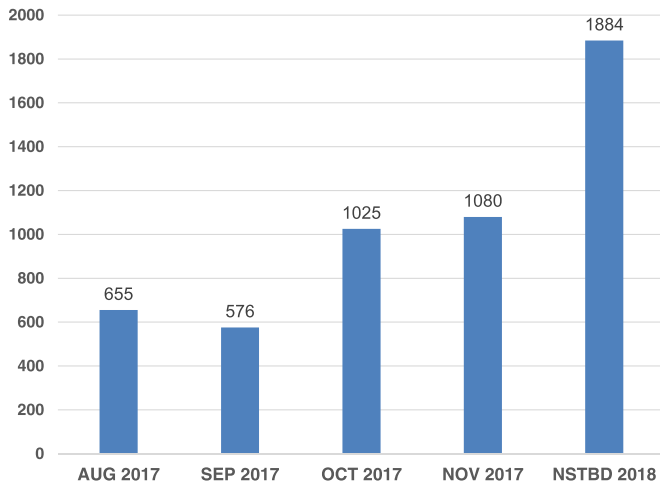


Figure 1. Registered Stop the Bleed Courses August to November 2017 and NSTBD 2018.

Combat Medic” (NGCM), with the goal to provide military medics and prehospital providers with Free Open Access Medical Education (FOAMed) resources. The early focus of the group was to disseminate information, host discussion, and provide an easily accessible interaction medium. To date, the NGCM follower base exceeds 43,000 as a forum for military and prehospital medicine. Similar efforts were developed for increased medical education and first responder outreach, including The Tourniquet Project (TTP) which worked to highlight cases where basic hemorrhage control techniques were credited with saving lives. To balance NGCM’s large military base, TTP had a large civilian base of followers.

The goal of the Stop the Bleed initiative is to train 200 million people in the United States. The administrators of NGCM and TTP felt there was a gap in the Stop the Bleed campaign’s goal of training 200 million and the current approach regarding civilian-targeted training. Weeks after discussions began as to how best to effectively reach out to nonmilitary bystanders, administrators from both sites watched with the rest of the world as the Las Vegas shooting unfolded on October 1, 2017. Within 12 hours of the Las Vegas shooting, the inaugural National Stop the Bleed Day (NSTBD) was launched. National Stop the Bleed Day was created to generate public awareness for the official Stop the Bleed program and the B-Con course. Its goals were aimed at leveraging social media to establish a network of regional coordinators who would work together to raise general public awareness about the Stop the Bleed initiative and to direct them to B-Con courses in their area. A seemingly arbitrary date of March 31, 2018 was chosen. As the initiative progressed, it became apparent that Saturday, March 31, 2018, was not an ideal date due to potential conflicts with religious holidays and major sporting events. However, the size of the event had grown too large, so the event dates were expanded to include 1 week before and 1 week after the designated NSTBD. To accomplish this effort, a key task was to establish a social media presence in order to attract instructors and students. The ACS was supportive and endorsed NSTBD by allowing the use of the ACS logo and making public announcements about NSTBD.

METHODS

March 31, 2018, was initially designated as NSTBD. It was later expanded to a 2-week period from March 26 to April 7, 2018, after coordinators realized conflicts of interest with religious holiday observance and national sporting events. This became the defined study period. The number of courses offered, number of instructors registered and total number of students trained overall during this period was derived from the ACS website bleedingcontrol.org. Courses that were not registered with the ACS were not included. Data on overall website activity were also included for analysis.

RESULTS

Forty-three states and 18 countries participated in NSTBD. During the study period, there were 1,884 courses registered on bleedingcontrol.org (Fig. 1). Comparatively, over a 4-month period from August to November, 2017, the mean number of registered courses per month was 834. There were 34,699 students trained during the two-week study period (Fig. 2) as opposed to August to November 2017, where the mean number of people trained per month was 9,626. 576 new B-Con instructors were certified during the study period and international coordinators reported 1,500 students received training outside the United States. It should be noted that these figures likely represent a small percentage of students trained in association with the NSTBD campaign as only students and courses registered on the website during this period were included for study.

With respect to website activity, the ACS reported a significant increase around NSTBD. This included 10,530 new visitors to the website, 12,772 visitors overall and 35,342 page views recorded during the study period.

DISCUSSION

Condensed planning and execution timelines coupled with greater-than-expected interest led to a self-identified shortfall in data tracking. This data represents an increase in Stop the Bleed interest during the NSTBD timeframe. The NSTBD sought to expand both the number of participants and instructors for the Stop the Bleed initiative. A number of national level decrees, position statements, governors’ proclamations and local

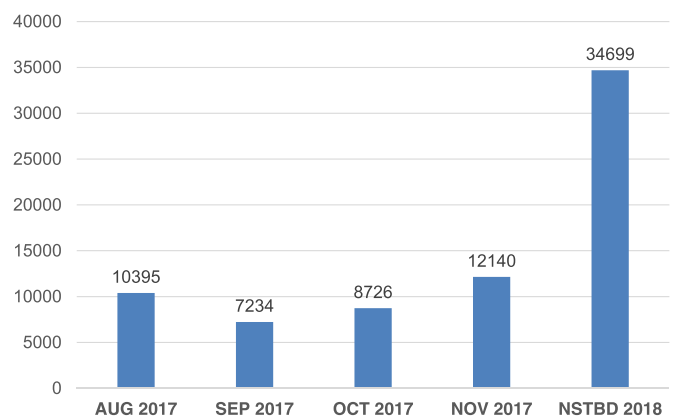


Figure 2. Overall class attendance August to November 2017 and NSTBD 2018.

business support agreements established, then solidified a volunteer training network to be utilized for years to come. The NSTBD board of directors took an early position to avoid either monetary or material support. The intent of this position was meant to curb any perception of illegitimate support or conflicts of interest.

An effort to engage media outlets to discuss NSTBD was essential for student recruitment. To help increase the social media effort, there needed to be national level sponsors outside the ACS to discuss NSTBD and its efforts. Due to the cost of providing Stop the Bleed courses, the NSTBD board leveraged national vendors (North American Rescue, LLC Greer, SC and Tactical Medical Solutions, Anderson, SC) to provide discounts on products and equipment used for the event. The NSTBD board was able to use the importance of the Stop the Bleed campaign to gain governmental and nongovernmental agency support. Many nongovernmental agencies provided discounts to instructors and students to purchase Stop the Bleed kits and various other bleeding control equipment. This growth of local and industry support established a pool of resources to be utilized in future campaigns. Many academic institutions also became involved, involving a large pool of students and staff as force multipliers in the effort to support this initiative.

The NSTBD effort was a low-cost communication and marketing effort in that funding was not collected or expended toward advertising at a national level on social media or any form of marketing. From the NSTBD board, the investment was less than \$150. At the local level, several coordinators engaged with local businesses and media outlets to provide voluntary advertising of the local training events. The NSTBD board members did not receive financial gain; however, we did ask vendors to provide free or discounted equipment to trainees. In the future, the coordination of donated funds to be directed toward public awareness campaigns through multiple media channels could have profound effects on interest and participation in Stop the Bleed events.

Social media can garner a love-hate relationship for many, but it is a reality of the way people communicate today. It is a powerful tool for educating and for empowering people to get involved with making a difference in our society. Lessons learned in FOAMED initiatives of TTP, NGCM, and Special Operations Medical Association Scientific Assembly were implemented in NSTBD by including original content such as unique interviews and podcasts as well as novel graphics (Fig. 3) and relevant studies were posted at specific times in order to optimize viewership and interaction. By researching and understanding current social media trends, NSTBD was able to capitalize on trending hashtags. This included creating the #NSTBD18 hashtag which is attached to over 1,000 posts on Instagram. As of this writing, the #stopthebleed hashtag has 16,000 posts and #FOAMED hashtag has almost 25,000 posts. While this may be a relatively small number when compared with other initiatives, the Stop the Bleed effort is a new endeavor and will only grow. FOAMED has previously demonstrated the potential to reach audiences previously not in tune with the latest evidence and what medicine has to offer.⁶

From an immediate responders' perspective, time to action is paramount.⁷ Death due to uncontrolled massive hemorrhage can happen in less than 5 minutes from time of injury.⁸ In most

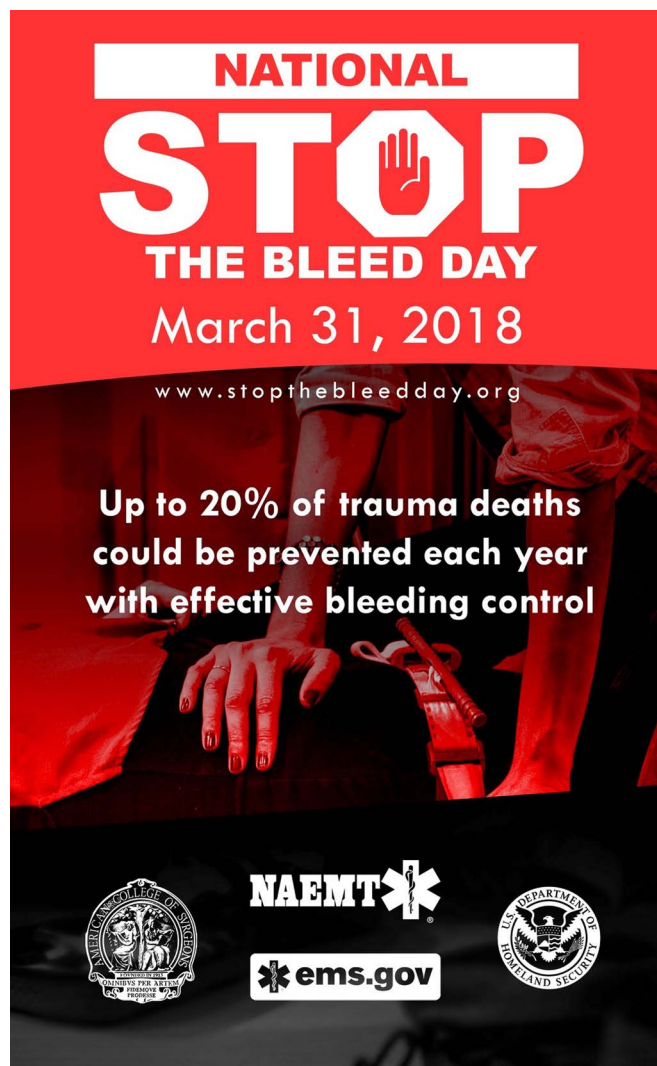


Figure 3. NSTBD poster.

cases, it is not feasible for first responders to arrive, establish zones and begin treating and evacuating the injured, especially if there is still an active threat. An aware and trained bystander with access either to a personal or publicly available trauma kit could potentially help prevent death in an active shooter event. Even with access to this equipment, initial training must be encouraged.

Previous studies have demonstrated that the bystander is capable and willing to apply a tourniquet after training.⁹ However, like all medical skills, this is rapidly perishable without maintenance. Ross et al. demonstrated tourniquets are not very intuitive for the bystander.¹⁰ Furthermore, other studies have demonstrated how difficult it can be to teach the bystander appropriate hemorrhage control techniques and how quickly the skills can degrade.^{11–13} This brings forth the issue of how will the medical professionals working closely with B-Con sustain their students' skills. The Stop the Bleed Education Consortium was formed in 2017 to address the lack of standardized approach and content-delivery mechanisms.¹⁴ The Stop the Bleed Education Consortium has since published recommendations for

moving forward with Stop the Bleed education.¹⁴ Along with a classroom-based course, it is also recommended that bystanders use a web-based course for initial training. It might be feasible that a web-based video could sustain a bystander's skills. Goolsby et al.¹⁵ demonstrated the addition of web-based training with Just-in-Time instruction can be effective method of teaching for hemorrhage control. The National Center for Disaster Medicine and Public Health released a website and app for web-based training. While it is not known whether web-based training could provide adequate training by itself, it is hard to imagine how it could be a hinderance as an addition to classroom "hands-on" training.

This report was limited by low participation in a voluntary survey that was distributed among the 4 state coordinators to determine training numbers and potential opportunities for improvement. Because the participation was low, there was not an opportunity to demonstrate statistically significant findings if present. Furthermore, registering courses on bleedingcontrol.org does not occur for every B-Con course, nor is post course reporting always completed.

The NSTBD effort was successful in generating widespread interest for the Stop the Bleed initiative. The use of a targeted social media campaign in this context was successful in driving people to available training opportunities while also increasing awareness of the overall effort. While only in its early stages, the NSTBD concept of utilizing social media to spread awareness and build local, national and worldwide networks for future use is a testament to the power of this communication strategy.

CONCLUSION

From its inception, the intent of this grassroots movement was to increase public awareness of the official Stop the Bleed campaign and the B-Con course. The goal was not to create a competing line of effort, rather to develop and employ an effective national social media strategy that would encourage and support efforts already in place to train the public in basic bleeding control techniques. Refining and applying the same strategy used to make NGCM successful for NSTBD may help empower bystanders with lifesaving knowledge. While the collected data was limited, we believe it demonstrates the power of a dedicated and coordinated social media campaign as a tool to advance and support important public health efforts such as the Stop the Bleed Campaign.

AUTHORSHIP

A.D.F. developed the concept, conducted literature review, collected data, and wrote the article. B.M.C. helped develop the concept, performed analysis, and wrote the article, performed a critical review of the article. P.M.D. contributed to the writing and performed a critical review of the article. J.L. contributed to the writing and performed a critical review of the article. J.D. collected data, contributed to the writing, and performed a critical review of the article. E.S. performed a critical review of the

article. D.T. contributed to the writing and performed a critical review of the article. P.L. performed a critical review of the article. J.F. performed a critical review of the article. H.R.M. contributed to the writing and performed a critical review of the article. M.L.G. performed a critical review of the article.

DISCLOSURE

The authors declare no conflicts of interest. Opinions or assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the Texas A&M College of Medicine, Department of the Air Force, the Department of the Army, or the Department of Defense.

REFERENCES

1. National Academies of Sciences, Berwick D, Downey A, Cornett E, eds. In: *Engineering, Medicine: Integrating Military and Civilian Trauma Systems to Achieve Zero Preventable Deaths After Injury*. Washington, DC: The National Academies Press; 2016. 530 p.
2. Eastridge BJ, Mabry RL, Seguin P, et al. Death on the battlefield (2001–2011): implications for the future of combat casualty care. *J Trauma Acute Care Surg*. 2012;73(6 Suppl 5):S431–S437.
3. Butler FK. Two decades of saving lives on the battlefield: tactical combat casualty care turns 20. *Mil Med*. 2017;182(3):e1563–e1568.
4. Jacobs LM, McSwain NE Jr., Rotondo MF, Wade D, Fabbri W, Eastman AL, Butler FK Jr., Sinclair J. Joint committee to create a National Policy to enhance survivability from mass casualty shooting E. Improving survival from active shooter events: the Hartford consensus. *J Trauma Acute Care Surg*. 2013;74(6):1399–1400.
5. Rasmussen TE, Baer DG, Goolsby C. The giving back: battlefield lesson to national preparedness. *J Trauma Acute Care Surg*. 2016;80(1):166–167.
6. Cadogan M. FOAM: *Life in the Fastlane*; 2019. Available from: <https://litfl.com/foam-free-open-access-medical-education/>.
7. Yost J. On scene response to the Las Vegas shooting. *Special Operations Medical Association Scientific Assembly*; Charlotte, NC: 2018.
8. Tjardes T, Luecking M. The platinum 5 min in TCCC: analysis of Junctional and extremity Hemorrhage scenarios with a mathematical model. *Mil Med*. 2018;183(5–6):e207–e215.
9. Ross EM, Redman TT, Mapp JG, Brown DJ, Tanaka K, Cooley CW, Kharod CU, Wampler DA. Stop the bleed: the effect of hemorrhage control education on laypersons' willingness to respond during a traumatic medical emergency. *Prehosp Disaster Med*. 2018;33(2):127–132.
10. Ross EM, Mapp JG, Redman TT, Brown DJ, Kharod CU, Wampler DA. The tourniquet gap: a pilot study of the intuitive placement of three tourniquet types by laypersons. *J Emerg Med*. 2018;54(3):307–314.
11. McCarty JC, Caterson EJ, Chaudhary MA, Herrera-Escobar JP, Hashmi ZG, Goldberg SA, Goolsby C, Lipsitz S, Haider AH, Goralnick E. Can they stop the bleed? Evaluation of tourniquet application by individuals with varying levels of prior self-reported training. *Injury*. 2019;50(1):10–15.
12. Dhillon NK, Dodd BA, Hotz H, Patel KA, Linaval NT, Margulies DR, Ley EJ, Barnparas G. What happens after a stop the bleed class? The contrast between theory and practice. *J Surg Educ*. 2019;76(2):446–452.
13. Lei R, Swartz MD, Harvin JA, Cotton BA, Holcomb JB, Wade CE, Adams SD. Stop the bleed training empowers learners to act to prevent unnecessary hemorrhagic death. *Am J Surg*. 2019;217(2):368–372.
14. Goolsby C, Jacobs L, Hunt RC, et al. Stop the bleed education consortium: education program content and delivery recommendations. *J Trauma Acute Care Surg*. 2018;84(1):205–210.
15. Goolsby CA, Strauss-Riggs K, Klimczak V, Gulley K, Rojas L, Godar C, Raiciulescu S, Kellermann AL, Kirsch TD. Brief, web-based education improves lay rescuer application of a tourniquet to control life-threatening bleeding. *AEM Educ Train*. 2018;2(2):154–161.