Introduction: The Stop the Bleed (STB) campaign was created through the work of the Hartford Consensus to reduce preventable deaths due to bleeding. (1) Severe bleeding can result in death in as little as five minutes, well before medical assistance is available. The use of tourniquets as well as hemostatic dressings as soon after injury as possible is lifesaving. Thus bystanders, trained in bleeding control (BC) techniques, are uniquely positioned to save life. The work of the Hartford Consensus was in part in response to by mass shootings (MS), and more specifically the school shooting at Sandy Hook Elementary on December 14, 2012.

School and university shootings have appropriately become of greater concern to the public as of late with over 300 shootings having occurred since the events at Sandy Hook. St. Louis students, from kindergarteners to graduates students, are broadly at risk. Our schools and campuses currently do not have any formally required bleeding control training nor equipment in place throughout the region. In addition to our regional concerns within schools and campuses, the burden of gun violence (GV) is disproportionately represented in the daily loss of life among black urban youth. Homicide, overwhelmingly due to GV, is the leading cause of death for black males age 15 to 34. Similarly, there is no formal BC campaign in place within urban centers, churches, and schools in St. Louis.

While the impact of firearm injury is devastating, there are many other injuries for which bleeding control techniques could save lives. Injury is the leading cause of death in people age 1-44. (2) It is estimated that nearly 20% of deaths related to traumatic injuries are in fact preventable. While immediate bystander bleeding control and tourniquet application has been shown to greatly reduce mortality in the military setting (23% vs 3% with the initiation of individual bleeding control equipment as standard issue) (3) this impact has also been shown to impact civilian survival. A recent study showed a six-fold mortality reduction in patients presenting with compressible extremity trauma when a tourniquet was placed by a bystander in the field (4). Thus teaching the public BC, as well as making BC equipment widely available represents an opportunity to decrease mortality related to trauma across a wide spectrum of injury. The specific impact of in-person BC training for laypersons was recently demonstrated by the Public Access and Tourniquet Training Study (PATTS) to be the most effective way to train the public to stop life threatening bleeding, when compared to other teaching methods (5).

Washington University in St. Louis is thus poised for impact in two vastly different ways. On the one hand, the campus is vulnerable to the threat of GV as well as traumatic injury from within and in relationship to the GV which is gripping the city even in the areas directly surrounding the campus. In addition traumatic injury represents the number one risk to the young people on campus. On the other hand, a well trained and equipped campus would be poised to enjoy a greater sense of safety, but would also be in position to engage schools and high risk groups with this life-saving training. Washington University – Stop the Bleed (WU-STB) is an initiative created to train and equip three discreet groups: high risk communities for GV, schools,
and the Washington University Medical and Danforth Campus. These efforts will position WU-STB to perform large scale training sessions to disseminate this lifesaving campaign throughout the St. Louis Region, by creating expertise in BC training as well a large body of BC 1.0 instructors.

This effort is housed within the Department of Surgery, Acute and Critical Care Surgery (ACCS) Section with partnership with several groups including the injury prevention center within the Barnes Jewish Hospital, the student Surgery and Emergency Medicine Interest Groups (SIG, EMIG), the undergraduate Emergency Medical Service group, and the section of Emergency Medicine. This partnership allows for the creation of a significant pool of instructors, ample material for training, academic collaboration and cost-effective equipping of the target groups. In addition, WU-STB seeks region wide collaboration with other injury prevention efforts occurring at Mercy Hospital, St. Louis University Hospital, St. Louis Children’s Hospital, and multiple area emergency medical service providers, having already held many large scale courses training.

WU-STB has been founded on the principal that all who will be trained will be equipped and all who are equipped will be trained. Optimal ability to perform BC techniques requires the presence of a BC Kit, which consist of a combat application tourniquet, hemostatic gauze, gloves, and compressive dressings. While these are commercially available at a cost averaging $60-70/kit, WU-STB is able to provide the kits a significantly less cost, at $25 per kit. This is facilitated by the individual purchase of the kit components and the stipulation that course participants construct BC kits themselves. Thus the WU-STB training paradigm consists of both BC 1.0 instruction as well as time and material for participants to construct a BC kit on their own. This overarching effort is not unlike the process of improving the public’s knowledge of Cardiopulmonary Resuscitation (CPR) and the public availability of Automatic External Defibrillators (AEDs). It can be said that STB is the CPR of the 21st century. Bleeding Control training, however, comes at far less significant time requirement and equipment cost.

Through community engagement and public partnership, WU-STB seeks to reduce the impact of GV and Injury through timely, effective bleeding control, leading St. Louis and Missouri to safer schools, homes and streets. As studies have shown first responder treatment of severe bleeding is truly life-saving, this training and equipping will absolutely impact the health of the St. Louis region.

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REFERENCES


