

Author: Leo Geeraerds

Co-Authors: Georgios Giannakopoulos, Lenworth Jacobs, Peter Pons

## **Civilian bystanders as immediate responders to life-threatening hemorrhage in trauma: introduction and dissemination of a teaching program in the Netherlands**

**Introduction:** Due to terrorist attacks, we are increasingly confronted with civilian victims sustaining military-type of injuries with life-threatening hemorrhage. Control of external bleeding is the most important life-saving measurement during the prehospital phase. The military principles of early hemorrhage control have been successfully translated to civilian prehospital care. However, to save more lives, bystanders at the scene should act as immediate responders to stop life-threatening external hemorrhage in victims of terrorist attacks and accidents.

**Materials & Methods:** After their training in the USA, surgeons from VUmc, Amsterdam introduced the non-profit *Stop the bleed-save a life* initiative and training course for civilians in the Netherlands with permission of the American College of Surgeons and Hartford Consensus (1). The course includes the immediate identification of life-threatening hemorrhage and bleeding control through direct pressure, tourniquet application and wound-packing with hemostatic gauzes. Proctored practical skills form the core of the course. Parallel, an instructor-course was initiated to disseminate the course. By affiliation of other Trauma/Acute Care Area Networks a national set-up of instructor courses was effectuated.

**Results:** Within 2 years, 6797 immediate responders (citizens, first-aid instructors, company first-aid instructors) present at public places were trained. Among this group, 776 followed the instructor-course. Instructors have free access to the educational material in order to facilitate dissemination of the course. The initiative *Stop de bloeding – red een leven* provides for a practical and informative website (2). Five other Trauma Area Networks have started to give instructor-courses. Purchase of *Bleeding control*-kits as well as wound-packing models and tourniquets for practice is facilitated. The initiative received formal support of the Dutch Society for Trauma Surgery.

**Conclusion:** The enthusiasm for the initiative and course is overwhelming. Ideally, the training program should be positioned within the curriculum of all medical and nursing students, first aid-training, company first aid training and first-aid training of police-officers and firefighters. Successful dissemination is effectuated through trauma surgeons, educationalists and officials of other Trauma/Acute Care Networks in The Netherlands. Trauma surgeons may take the lead to train civilians as immediate responders to life-threatening hemorrhage.

References:

(1) [www.bleedingcontrol.org](http://www.bleedingcontrol.org)

(2) [www.stopdebloedingredeenleven.nl](http://www.stopdebloedingredeenleven.nl)

## Bystanders trained to *stop the bleed*, The Netherlands



Trained individuals	2017	2018	Totals
<b>Instructor</b> (VUmc) As per Jan 1st, 2019	387	360	747
<b>Basic</b> (VUmc) As per Jan 1st, 2019	434	307 + 646 (NSTB-D)	1387
<b>Basic</b> (trained outside VUmc by VUmc trained instructors) As per Dec 28th 2018	923	3711	4634
<b>Instructor</b> (outside VUmc) As per Dec 28th 2018	-	29	29
			<b>6797</b>

NSTB-D: sponsored event: National Stop The Bleed- Day, March 31st 2018

STOP de BLOEDING - RED EEN LEVEN  
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