



Hemorrhage Control

Emergency Care in Sports, Atlanta, GA
February 18-19, 2023

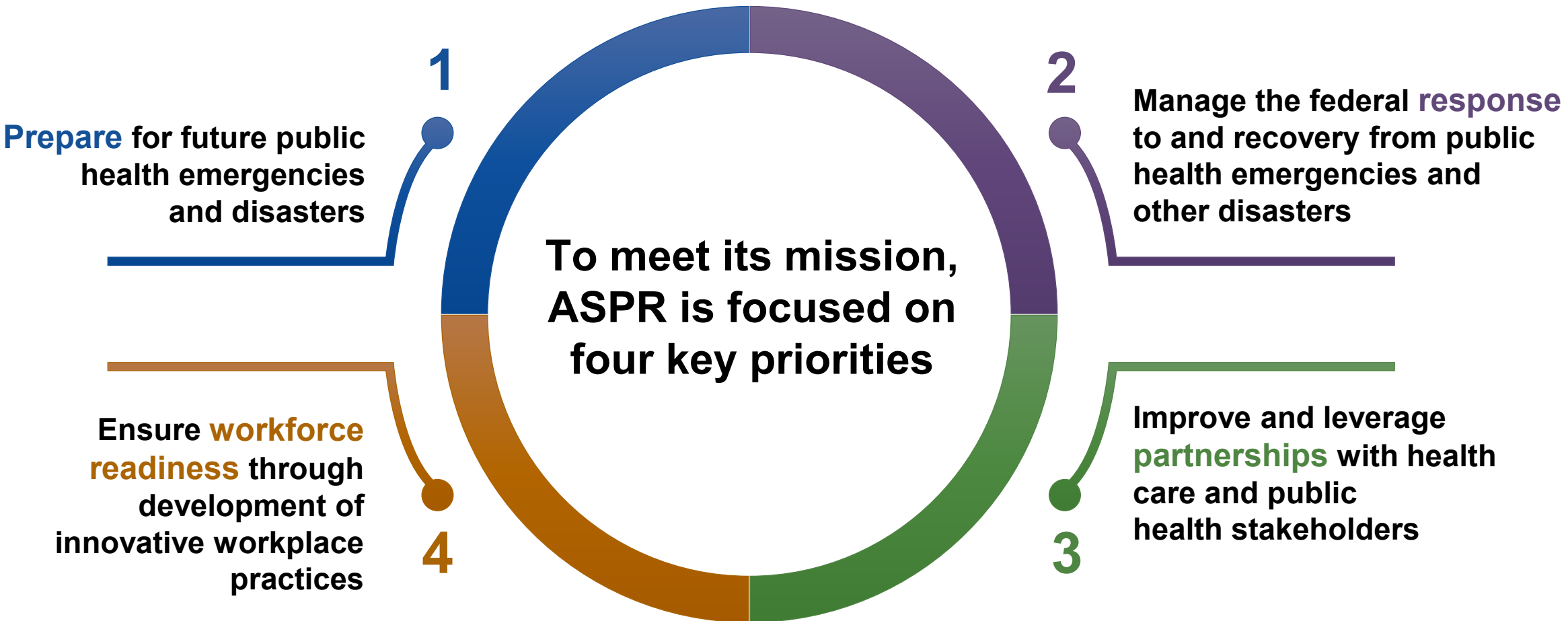
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Conflict of Interest Disclaimer

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ASPR Priorities



Hemorrhage Control

External life-threatening bleeding:
“Stop the Bleed”



Internal bleeding: Transport to hospital,
ideally trauma center



YOU ALREADY KNOW THIS!!!

External & Internal Hemorrhage Control: You Already Know This

STOP THE BLEED

Applying a Tourniquet

A wound on the leg or arm that won't stop bleeding is a good candidate for a tourniquet.

Step 1: Stop the bleeding. Now!
Expose the wound. Tear clothing away. Immediately apply firm, direct pressure to the wound using gloves, clean cloth, or cloth, hand, or knee—whatever it takes to slow or stop the hemorrhage. If the pressure does not stop the bleeding, and the dressing becomes soaked with blood, you will need to apply a tourniquet.

Step 2: Apply the Tourniquet
If the bleeding doesn't stop, place a tourniquet at least 2-3 inches from the wound. The tourniquet may be applied and secured over clothing.

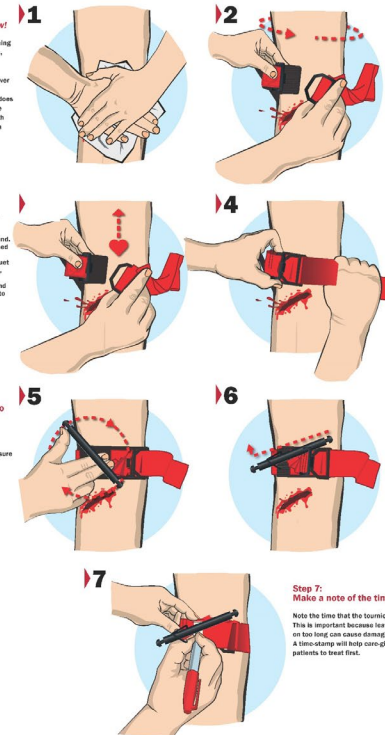
Step 3: Adjust the tourniquet.
Be sure the tourniquet is at least 2-3 inches from the wound. The tourniquet should be placed between the wound and the heart. Do not apply a tourniquet over a joint, such as an elbow, knee, wrist, or ankle. Joints protect blood passageways and prevent the pressure needed to stop an arterial bleed.


Step 4: Manually tighten the tourniquet
Clip the sides of the tourniquet together using the buckle and pull firmly on the end strap. Tighten it as much as you can.

Step 5: Use the windlass rod to further tighten the tourniquet.
Twist the windlass rod in one direction to increase the pressure and stop the bleeding.

Step 6: Secure the windlass rod.
Using the windlass clip, secure the rod so that it does not unwind. If there is a velcro strap, also use that to secure the windlass.

Step 7: Make a note of the time.
Note the time that the tourniquet was applied. This is important because leaving a tourniquet on too long can cause damage to the tissue. A time-obligation will help care-givers know when patients to treat first.





The "Stop the Bleed" campaign was initiated by a federal interagency working group convened by the White House National Security Council Staff. The purpose of the campaign is to build national readiness by ensuring awareness of basic actions to stop life-threatening bleeding following everyday emergencies and man-made and natural disasters. The Department of the Defense uses the "Stop the Bleed" logo and graphics.

STR_tourniquet_08-08-2019



Photo courtesy of ASPR

Your Roles



In the nation



A trained health care provider



Athletic trainer

- Your institution
- The teams
- The games, home and away



In your community



In other communities



Our Roles

Presidential Policy Directive 8: National Preparedness

THE WHITE HOUSE
WASHINGTON
March 30, 2011

PRESIDENTIAL POLICY DIRECTIVE/PPD-8

SUBJECT: National Preparedness

This directive is aimed at strengthening the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the Nation, including acts of terrorism, cyber attacks, pandemics, and catastrophic natural disasters. Our national preparedness is the shared responsibility of all levels of government, the private and nonprofit sectors, and individual citizens. Everyone can contribute to safeguarding the Nation from harm. As such, while this directive is intended to galvanize action by the Federal Government, it is also aimed at facilitating an integrated, all-of-Nation, capabilities-based approach to preparedness.

Therefore, I hereby direct the development of a national preparedness goal that identifies the core capabilities necessary for preparedness and a national preparedness system to guide activities that will enable the Nation to achieve the goal. The system will allow the Nation to track the progress of our ability to build and improve the capabilities necessary to prevent, protect against, mitigate the effects of, respond to, and recover from those threats that pose the greatest risk to the security of the Nation.

The Assistant to the President for Homeland Security and Counterterrorism shall coordinate the interagency development of an implementation plan for completing the national preparedness goal and national preparedness system. The implementation plan shall be submitted to me within 60 days from the date of this directive, and shall assign departmental responsibilities and delivery timelines for the development of the national planning frameworks and associated interagency operational plans described below.

National Preparedness Goal

Within 180 days from the date of this directive, the Secretary of Homeland Security shall develop and submit the national preparedness goal to me, through the Assistant to the President

- Our national preparedness is the shared responsibility of all levels of government, the private and nonprofit sectors, and individual citizens.
- Everyone can contribute to safeguarding the nation from harm.

Many Bleeding Patients: What We've Observed

1

Numbers exceed capability of
“controlling the scene”

2

Imprecise terms, e.g., “Disaster,”
“Mass Casualty”

3

Manmade & Natural

People Don't Stand By



People do not stand by



People are immediate responders

“When we arrived, people were either gone, dead, or alive” (EMS, Las Vegas)



The Number of Patients with Life-threatening Bleeding May Exceed the Number of Trained Responders



Patient Transport: 1 October Las Vegas Shooting

On Sunday, October 1, 2017, at 10:05 PM, a shooter opened fire on an outdoor Las Vegas concert venue with approximately 22,000 attendees



When EMS arrived, “People were either gone, dead, or alive” (EMS, Las Vegas)

Only 21% of patients were transported to hospitals by EMS



Patient Destination: 1 October Las Vegas Shooting

Hospital	Health System	Trauma Center	# Pts Treated	# Mortalities
University Medical Center	Public Hospital	Level 1	104	
Sunrise Hospital	HCA	Level 2	214	16 (10 DOA)
Dignity Health-St. Rose	Dignity Health	Level 3	79	
Desert Springs	Valley Health System		93	
Spring Valley	Universal Health System		52	10 DOA
Valley Hospital	Universal Health System		30	
Henderson Hospital	Valley Health System		25	
Summerlin Hospital	Valley Health System		10	
Centennial Hills Hospital	Universal Health System		5	

65% of Patients Transported to Level 1-3 Trauma Centers; 35% to Non-Trauma Centers

Stop the Bleed



- The general public will know the phrase “Stop the Bleed” and its associated logo
- **The general public will know how to stop life threatening bleeding**
- **The general public will have access to effective personal bleeding control kits**
- The general public will have access to effective public access bleeding control kits
- Every bleeding control kit will provide “just in time” audio and visual training

Preparing: The General Public Will Know How to Stop Life Threatening Bleeding

- ... randomized clinical trial of 465 laypersons was conducted at a professional sports stadium in Massachusetts with capacity for 66,000 people
- Laypersons can successfully perform tourniquet application after undergoing a 1-hour course¹

¹Goralnick E, Chaudhary MA, McCarty JC, et al. Effectiveness of Instructional Interventions for Hemorrhage Control Readiness for Laypersons in the Public Access and Tourniquet Training Study (PATTS): A Randomized Clinical Trial. JAMA Surg. 2018;153(9):791-799

Preparing: The General Public Will Know How to Stop Life Threatening Bleeding



CBS Code Black Stop the Bleed PSA

The script for the PSA had input from representatives of the National Security Council Staff convened Bystander Workgroup. Featuring the cast of *Code Black*, the PSA aired following the October, 12, 2016 episode, reaching 5.6 million viewers. The PSA is posted on CBS Cares, <https://www.dhs.gov/stopthebleed>, <http://www.bleedingcontrol.org>, and multiple other websites.

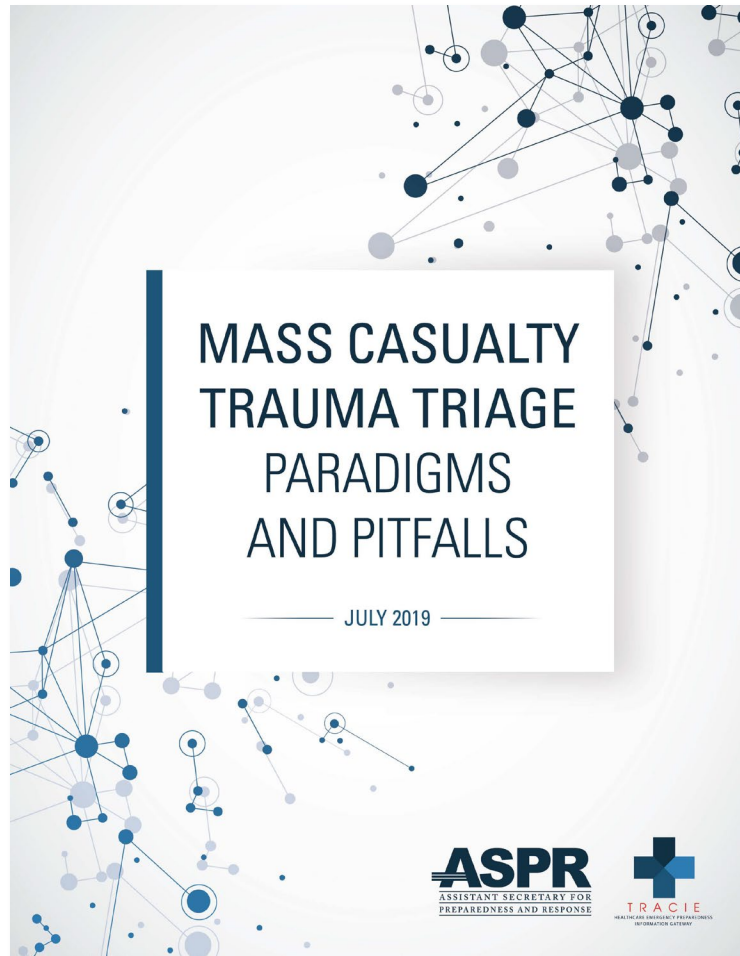
Preparing: The General Public Will Have Access to Effective Public Access Bleeding Control Kits



“... we recommend that planners at public venues consider equipping their sites with supplies to treat a minimum of 20 bleeding victims during an intentional mass casualty incident¹”

¹Goolsby C, Strauss-Riggs K, Rozenfeld M, et al. Equipping Public Spaces to Facilitate Rapid Point-of-Injury Hemorrhage Control After Mass Casualty. Am J Public Health. 2019;109(2):236-241.

Responding: Focus on Principles, Not Process



“...a primary issue specific to EMS was that agencies focused on a single process for conducting triage, which may not be appropriate in all situations”

The focus should be the *principles* of triage.

Responding: Principles



Doing the greatest good for the greatest number of patients with the resources available



Gaining rapid access to living casualties and evacuating them from the hazard area



Providing basic life-saving interventions as soon as it is safe to do so



Transporting the injured to an appropriate hospital as rapidly as possible

Responding: Help the Immediate Responders



How will I quickly show and tell them how to stop life threatening bleeding?



How will I answer, “Where should I take them?”

Hemorrhage Control

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