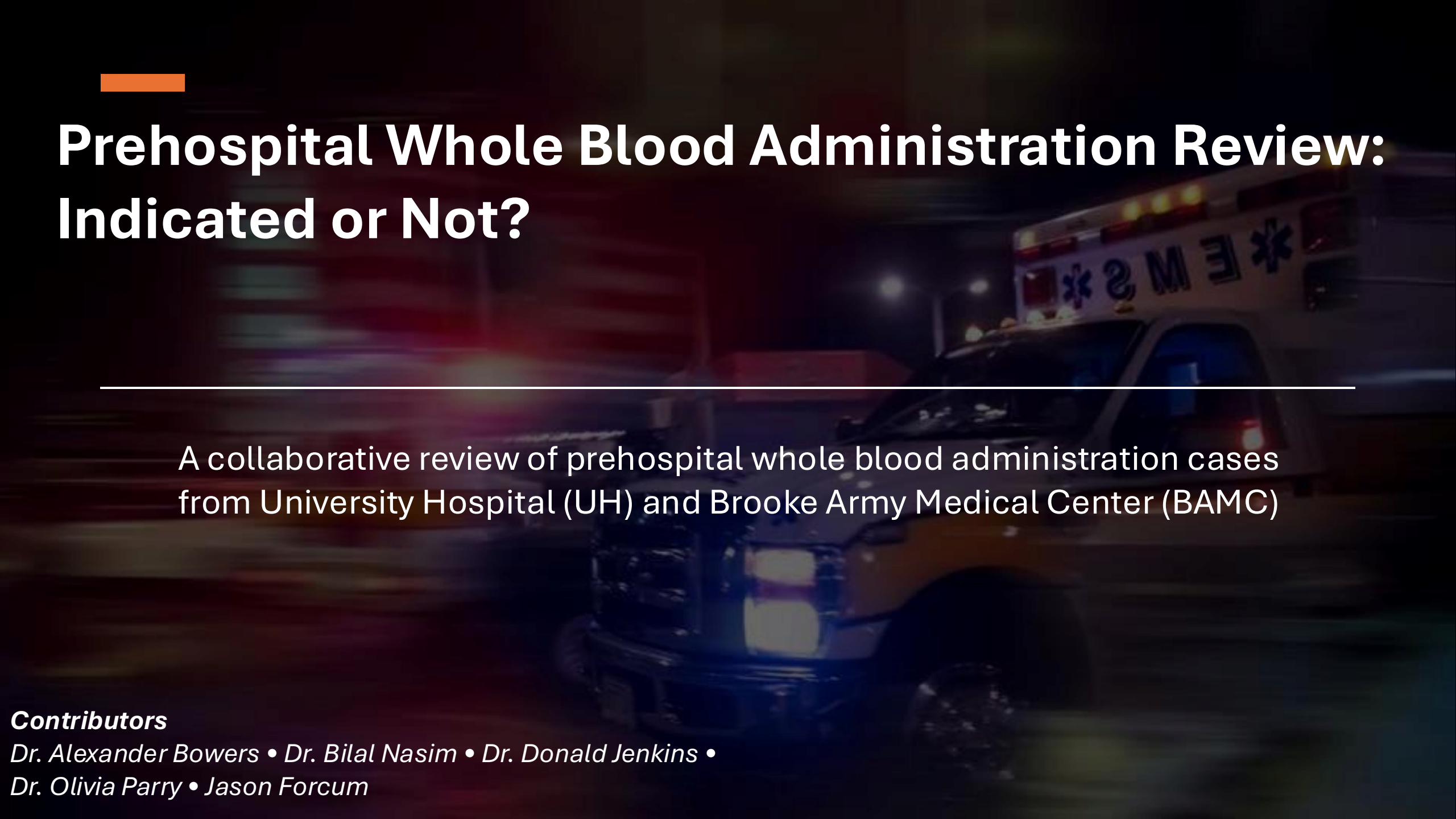




Prehospital Whole Blood Administration Review: Indicated or Not?

A collaborative review of prehospital whole blood administration cases from University Hospital (UH) and Brooke Army Medical Center (BAMC)

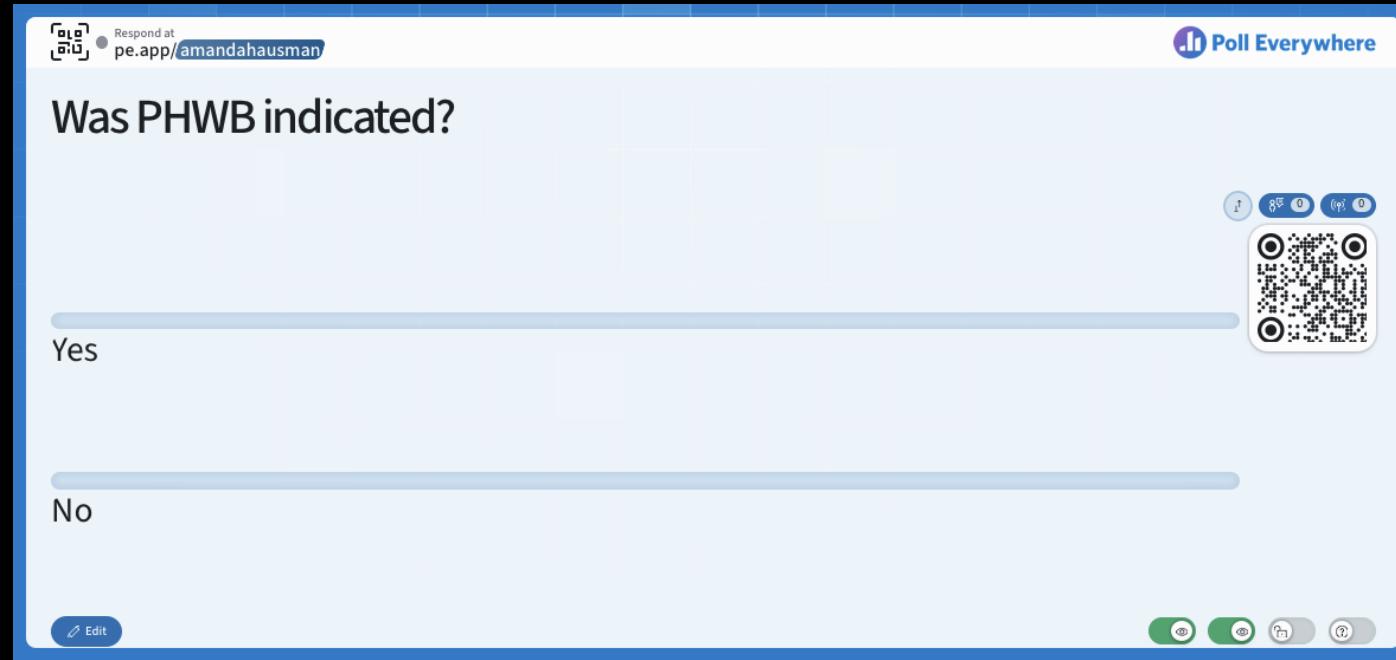
Contributors

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SCAN HERE to
Participate

UH 20217211



Respond at
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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit

- GSW L shoulder, axilla and L knee
- Initial VS (0029): BP 75/43 mmHg, HR 85 bpm, EtCO2 23
 - Repeat (0035): BP 112/64 mmHg, HR 97
 - Transfusion started at 0037
 - 0043: BP 127/60 mmHg, HR 107
- Given 0.5U WB by SAFD (IV dislodged PTA)
- Initial hospital VS: BP 124/72 mmHg, HR 102

UH 22082492

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit

- Laceration R hand with knife for 1.5 hours of bleeding prior to EMS arrival
- Initial VS (2314): BP 82/53 mmHg, HR 84, EtCO2 31 mmHg
 - Repeat VS 2321: BP 81/52 mmHg, HR 92
 - WB given at 2339
- Normotensive on arrival to hospital

UH 22078806

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Was PHWB indicated?

Edit



- Multiple stab wounds to R thigh, torso and cheek. Shock index (BP 107/57, HR 110). Evidence of blood-soaked clothing. Received 1U WB by SAFD.
- UH VS: BP 108/52 mmHg, HR 102
- Stab wound to chest extra thoracic; R thigh stab wound only involving soft tissue

UH 22062301

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Was PHWB indicated?

Yes

No

Edit



- Dog bite to R hand with evidence of 2L blood on ground at scene. + Shock index and narrow pulse pressure (21). HR 154, BP 96/68. Given 1U WB after advised to do so by trauma surgeon at UH after getting “second opinion”. Transport time was 2 hours 15 minutes due to detours on road and patient refused air transport.
- UH VS: BP 164/94, HR 101

UH 22113569

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Was PHWB indicated?

Yes

No

Edit



- GSW x 2 to L thigh with hypotension (BP 65/46, HR 71). Given 1u WB in the field. Tourniquet applied but ongoing bleeding required second tourniquet. Received 2 additional units of WB in TRU.
- UH VS: BP 94/68, HR 104, repeat VS BP 88/50, HR 86
- Neurovascular exam normal on assessment
- Wounds washed and packed

UH 70938138

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- 33 yr old male s/p stab wound, GCS of 15. Hypotensive in the field. Stab wounds to zone II penetrating wound to the LT lateral neck and LT shoulder. Face laceration. + UDS. RT ankle pain. Whole blood given in the field for mechanism and hypotension (BP 94/38, repeat BP 64/49, HR 123).
- Initial vitals 102/62, HR 102, RR 20, SpO2 96%

UH 71041247

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Was PHWB indicated?

Yes

No

Edit



- 38 y/o female s/p assault with knife. EMS report patient sleeping when she was stabbed several times with a butcher knife. (-) LOC. Patient arrived GCS 15 and hypotensive. Pt hypotensive on arrival, got 1/2 U WB PTA. Received one more unit WB in TRU. Calcium IV 2gm given with improvement in BP.
- Initial EMS VS: BP 110/52, HR 105, worsened to BP 81/40, HR 104 after which blood given
- Hospital VS: BP 98/60, HR 116
- SW to face, L shoulder, R thoracic area to right of midline & R thigh

UH 22129991

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- Stab wounds to cervical spine, initial EMS vitals HR 165, SBP 110 en route so got a unit of whole blood en route Hospital VS: BP 108/72, HR 156
- Given 2 additional units of WB in TRU

UH 70578205

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Was PHWB indicated?

Yes

No

Edit

Poll Everywhere

- 32 y/o male s/p GSW to lateral right thigh. EMS reports patient holstering his 9 mm handgun when gun discharged striking his right lateral thigh. EMS report patient hypotensive on scene with systolic in 50s. Patient given 1-unit whole blood en route.
- Patient arrived GCS 15 and HDN with a chief complaint of right leg pain.
- Hemodynamic status recovered in TRU

UH 70989269

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Poll Everywhere

Was PHWB indicated?

Edit



- Patient is s/p a laceration to the L wrist intentional self-harm via a knife, found down by family with unk time of injury and about 1-1.5 L of blood on floor. EMS gave 1 unit whole blood and TQ applied to LUE. BP: 98/35HR: 133
- Initial hospital VS: BP 90/60,
- Hemodynamic status normalized.

UH 71010225

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- 49 y/o male s/p stabbing to LLE, left calf. Deep laceration. WB given en route for shock index BP 87/54 HR 99. 1 Unit initiated by EMS.
- Arrived with BP: 76/40 HR: 119 with IO in RLE. 2nd unit WB given in TRU, Hemodynamics normalized

UH 70106012

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- The patient is 47 y M s/p GSW to the RT thigh after chasing other man with a knife. Patient reportedly got into an altercation and was shot from an unknown distance by unknown caliber gun and then thrown into a ditch. Hypotensive on scene to 70s/50s, given 1U whole blood en route, Hemostatic gauze applied on scene.
- Arrived Initial hospital VS: BP 98/58, HR 104 GCS 15, HDN. Exit wound visible on contralateral gluteal surface.

UH 70982675

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Was PHWB indicated?

Yes

No

Edit



- 51 y.o. male s/p SW to the chest approximately 30 minutes prior to arrival. GCS 15 HR 125 SBP 91 en route with penetrating injury so received one unit whole blood.
- The patient arrived to the TRU as a Priority 1-alpha via ground ambulance from the scene. Initial hospital VS: BP 110/82, HR 95 Hemodynamics normalized

UH 20631084

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- 28 y/o male s/p assault with 5 stab wounds to left posterior neck and scalp. Patient received 1 units of whole blood and was given 2G TXA due to mechanism and shock index HR 109 SBP 95. There was unknown LOC.
- The patient arrived to the TRU as a Priority 1-alpha via ground ambulance from the scene. Initial hospital VS: BP 100/62, HR 117, Given 1 additional unit WB

UH 70974809

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- 31 y/o male s/p fall through stairs into glass doors. Sustained 2 cuts to lower right extremity. Unresponsive and diaphoretic BP: 80/50 when EMS arrived. Tourniquet placed at 21:24. Given 1 u whole blood enroute.
- Initial hospital VS: BP 102/64, HR 81, Tourniquet removed with venous bleeding that from muscle belly that stopped with pressure. Consulted orthopedics given decreased sensation to hand with intact motor. Imaging negative, LCDC consult.

UH 20512999

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- 48 y/o female with self inflicted lacerations to left arm. Hypotensive en route 79/55 with HR of 77, bleeding so got one unit WB en route.
- Initial SBP 112 HR 98 venous injuries only, negative imaging, lacerations repaired in TRU.

UH 70749367

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- 25 y/o male s/p GSW with a handgun to right posterior thigh at Ingram Park mall parking lot and shots were fired from vehicle that approached patient. Met shock index with SBP 120 and HR 170 en route with penetrating injury so received one unit WB.
- Initial hospital VS: BP 124/87, HR 124 Wound washed out and was hemostatic, imaging negative.

UH 71354110



The screenshot shows a mobile application interface for a poll. At the top, it says "Respond at pe.app/amandahausman". The poll question is "Was PHWB indicated?". There are two response options: "Yes" and "No", each with a horizontal progress bar. On the right side, there is a QR code and some icons. At the bottom, there is an "Edit" button and some status icons.

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit

- 25 y/o M attempted to enter his own house, broke a window, and suffered 2 lacerations to the right forearm with muscle belly involvement. Patient found at home with significant blood loss. Systolic in the 60s on route. Emesis x1. 1 unit whole blood given, TXA given, and Rocephin given PTA.
- Patient arrived intoxicated, SBP 112 and HR 98.

BAMC Case 1

- 33 y/o M GSW L thigh, standing on arrival with PD tourniquet
- ~15 minutes of agitation and refusal of treatment
- Scene: BP 85/55, HR 123
- 1 unit WB given
- ED: BP 122/76, HR 108, RR 18, GCS 15

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



BAMC Case 2

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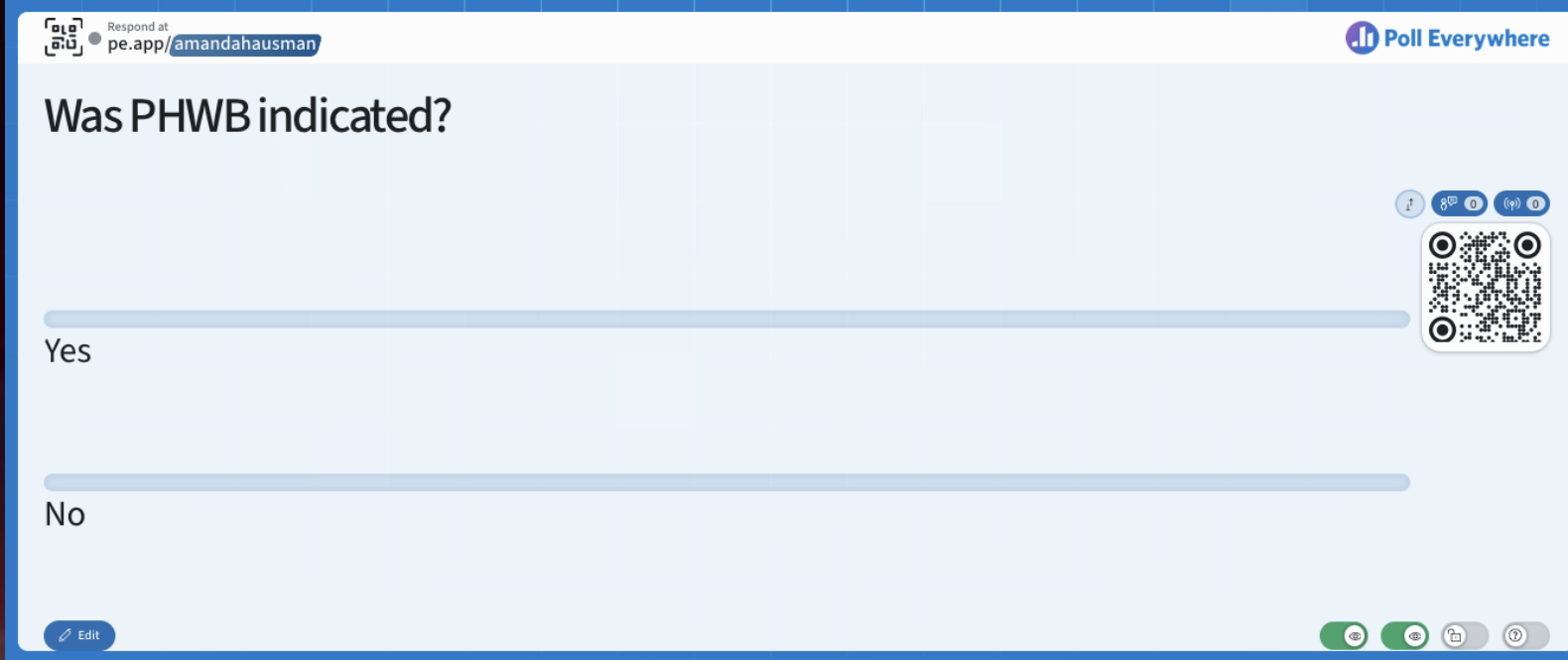
Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



- 48 y/o M assault with blunt objects, EMS called several hours after incident
- Pt with multiple areas of bruising face/abdomen
- Scene: BP 54/UTA, HR 80, RR 24, GCS 13
- 1 unit WB given
- ED: BP 82/58, HR 83, RR 23, GCS 15

BAMC Case 3

- 83 y/o M grinder vs LLE
- ~500ml blood on ground, bleeding requiring 2 tourniquets to be placed. Pt pale and confused.
- Scene: BP 134/70, HR 83, RR 23m, GCS 13
- 1 unit WB given
- ED: BP 160/80, HR 77, RR 25, GCS 13

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



BAMC Case 4

- 21 y/o F 5ft fall from horse
- BP 130/72, HR 120, RR 32, GCS 15 at scene
- A few minutes before arrival to ED: BP 118/68, HR 86, RR 17, GCS 15
 - Slow to respond, color change to ashen
 - 1 unit WB started
- ED: BP 130/78, HR 98, GCS 15

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Poll Everywhere

Was PHWB indicated?

Yes

No

Edit



BAMC Case 5

- 38 y/o F found down after about an hour after laceration to LLE
- Pale/cool/diaphoretic skin, lethargic and confused. Pt placed zip tie as tourniquet
- BP 70/30, HR 138, RR 30, GCS 13
- 1 unit WB given
- Arrived BP 101/73, HR 76, GCS 15

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Poll Everywhere

Was PHWB indicated?

Yes

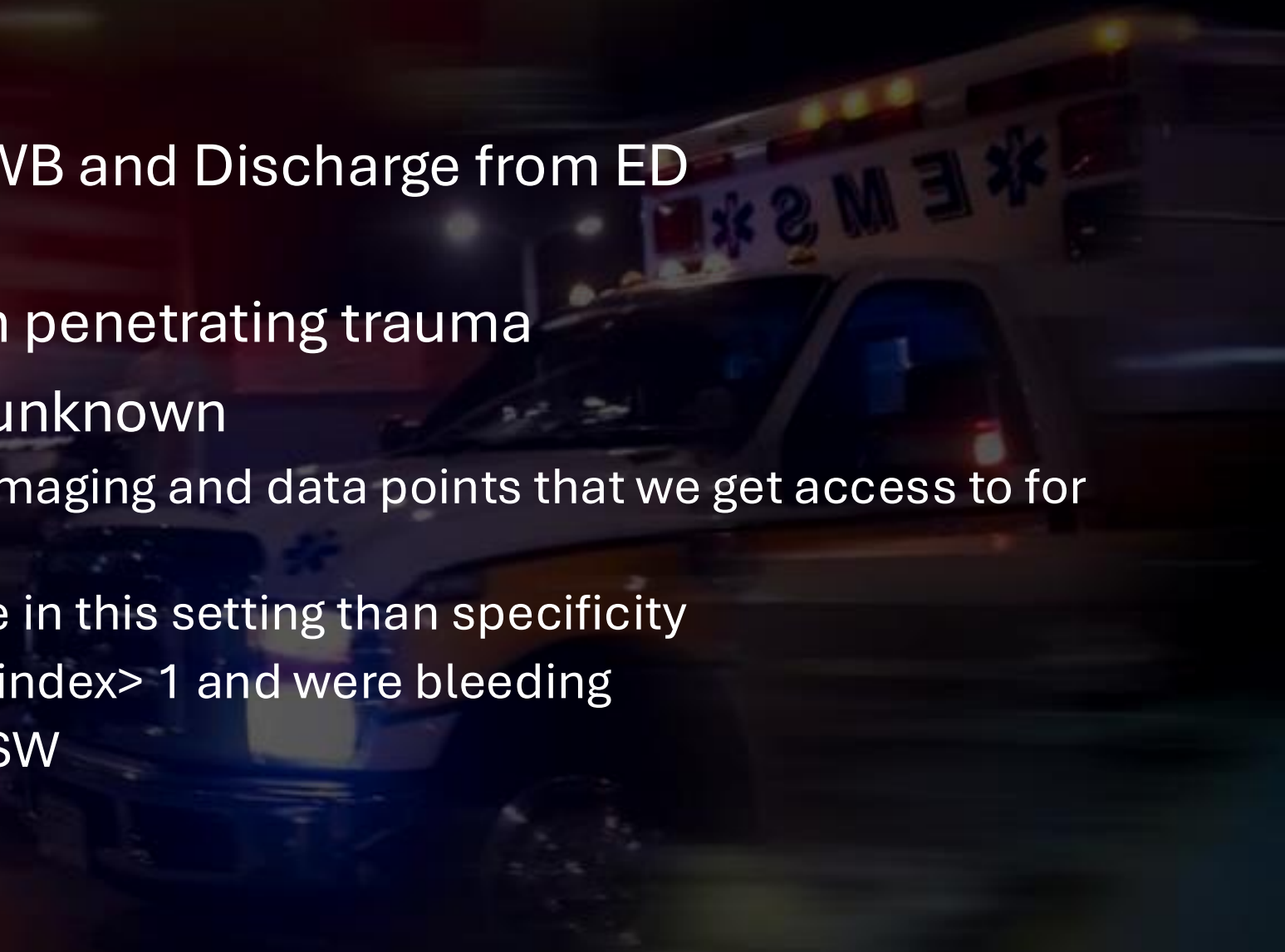
No

Edit



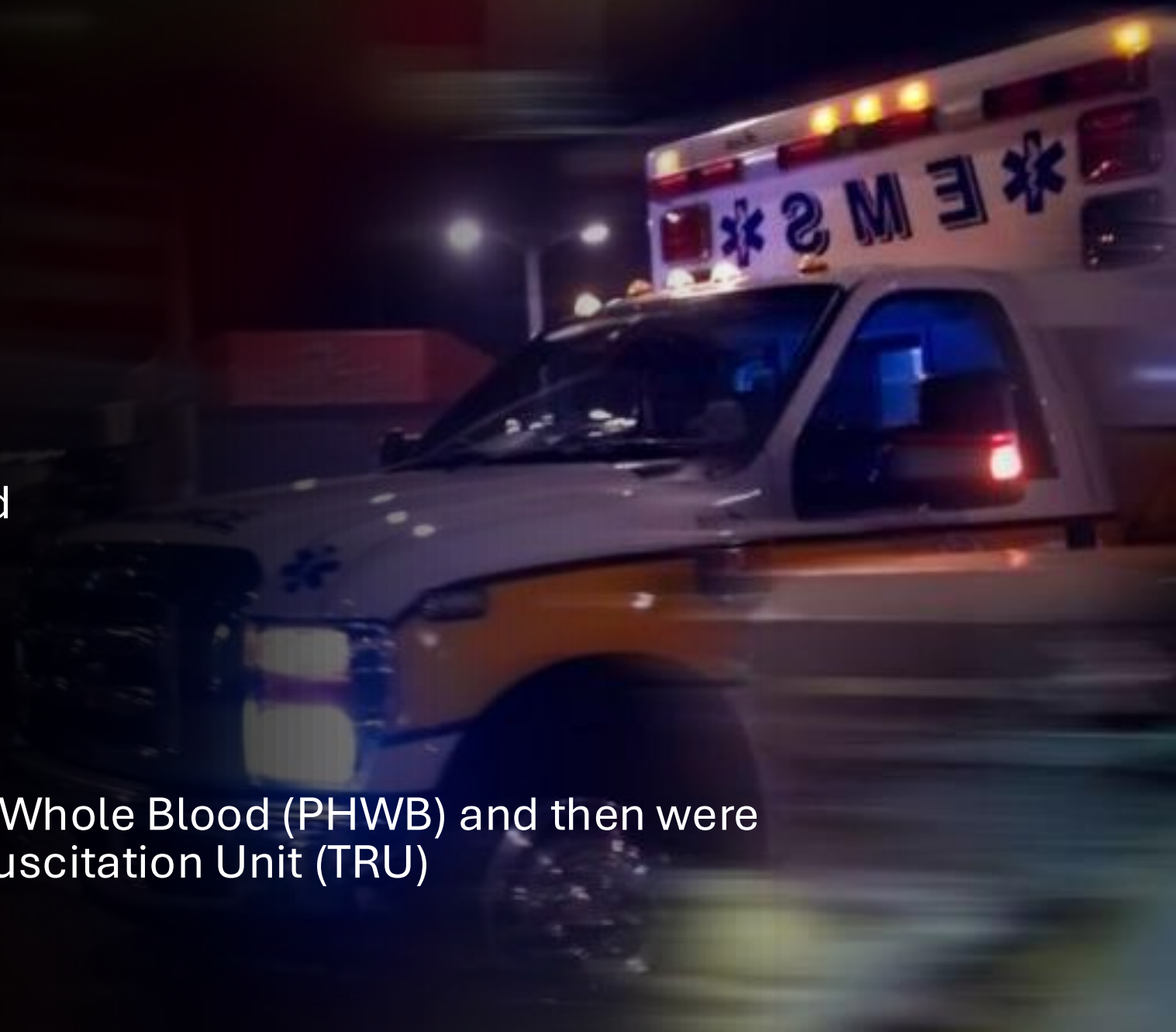
Summary

- Very low incident of PHWB and Discharge from ED
 - 18 in the last 8 years
- Abundance of caution in penetrating trauma
- EMS is the realm of the unknown
 - Not privileged to all the imaging and data points that we get access to for our decision making
 - Sensitivity more valuable in this setting than specificity
 - All patients had a shock index > 1 and were bleeding
 - 13/23 were laceration/KSW



Overview

- All Penetrating
 - 6 GSW
 - 13 Laceration/Stab wound
 - 1 Dog bite
 - 1 Fall
- 2 Blunt
- Was PHWB indicated?
- 18 patients received Prehospital Whole Blood (PHWB) and then were discharged from the Trauma Resuscitation Unit (TRU)



Over Triage?

- Performance review of all patients receiving PHWB but discharged from ED
- Need to monitor transfusion triage triggers for both OVER AND UNDERTRIAGE