



TOURNIQUETS

Application Assessment and Documentation



SIERRA - SACRAMENTO VALLEY
EMERGENCY MEDICAL SERVICES AGENCY

Serving Butte, Colusa, Glenn, Nevada, Placer, Shasta, Siskiyou, Sutter, Tehama, and Yuba Counties



WHAT'S THE PROBLEM

Over the past several months, we have received multiple concerns from our Trauma Centers regarding tourniquet related issues, INCLUDING:

- Inappropriate application resulting in venous stasis only
- Patient selection
- Failure to report tourniquets at transfer of care

S-SV TOURNIQUET REVIEW

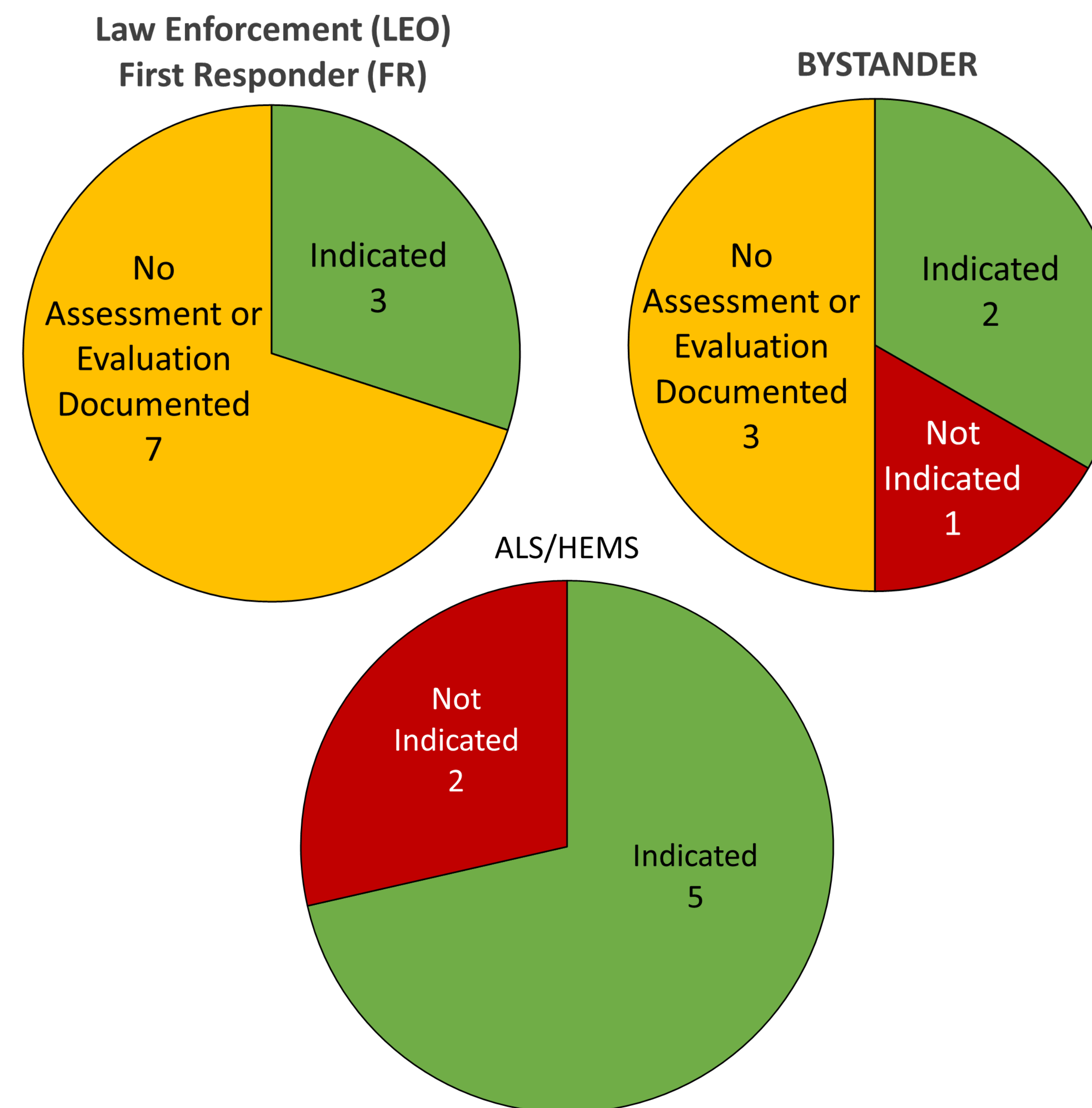
Using ImageTrend and Trauma Registry data, 23 tourniquet applications in 2021 were reviewed to evaluate:

- Adherence to S-SV Policy T-4
- Appropriateness of tourniquet application (based on PCR documentation and/or hospital diagnosis of vascular injury)
- Completeness of documentation including: assessment findings before/after tourniquet placement, mitigation efforts prior to tourniquet, estimated blood loss (EBL), nature of bleeding (e.g. spurting, oozing, etc.)
- Documentation of evaluation of tourniquets placed by FR/LEO/Bystander

71% of tourniquets placed by **ALS/HEMS** were indicated

16/23 indicated
12/23 HEMS

FINDINGS



Of the 16 placed by FR/LEO/Bystander, only 3 PCRs documented an assessment of the efficacy and/or appropriateness of the tourniquet

FREQUENT DOCUMENTATION ISSUES

- No ALS/HEMS assessment/evaluation of tourniquet placement by FR/Bystander/LEO
- No documentation of EBL
- No documentation of mitigation efforts employed prior to tourniquet placement (e.g. direct pressure, hemostatic agent, etc.)
- No documentation of reassessment during transport and at transfer of care

How Tight Should The Tourniquet Be?

A tourniquet should be tightened until it obliterates the distal pulse

A tourniquet that is too loose allows for continued arterial inflow, but restricts venous outflow which can lead to increased compartment pressures and compartment syndrome

PROTOCOL REMINDERS

S-SV Policy T-4 for Extremity Hemorrhage

- Attempt to control bleeding with direct pressure
- Consider hemostatic agent application
- Apply tourniquet proximal to bleeding, if necessary
- Apply 2nd tourniquet proximal to 1st for continued bleeding

DOCUMENTATION REMINDERS

Remember to include the following documentation for patients treated under Policy T-4

- Mechanism of injury
- Description of the injury (location, est. size, etc.)
- EBL
- Mitigation strategies employed prior to tourniquet placement
- Circulation, motor, sensory exam findings before/after tourniquet placement

Tourniquets placed by FR/LEO/Bystander shall be evaluated by ALS/HEMS providers. If there is an improvised tourniquet, or if hemorrhage control can be obtained with bandaging, direct pressure or hemostatic agents....

REMOVE IT