



**VRC** VERIFICATION  
REVIEW  
CONSULTATION  
*for excellence in trauma centers*



AMERICAN COLLEGE OF SURGEONS  
**VERIFICATION, REVIEW, AND CONSULTATION (VRC) PROGRAM**

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## 7 Performance Improvement and Patient Safety

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## **Rationale**

Processes for identifying adverse events and implementing subsequent corrective action plans—measurable through patient outcomes—are inherent cornerstones of continuous performance improvement and patient safety (PIPS). Problem resolution, outcomes improvement, and assurances of patient safety (“loop closure”) must be readily identifiable through structured PI initiatives.

## 7.1 Trauma PIPS Program—TYPE II

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### Applicable Levels

LI, LII, LIII, PTCI, PTCII

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### Definition and Requirements

In all trauma centers, the trauma PIPS program must be independent of the hospital or departmental PI program, but it must report to the hospital or departmental PI program.

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### Additional Information

The PIPS program must be empowered to identify opportunities for improvement and develop actions to reduce the risk of patient harm, irrespective of the department, service, or provider. The expected frequency and level of review require the PIPS program to function independently from the hospital/departmental PI program. However, the PIPS program must have a means to report events and actions to a departmental/hospital PI program so that events are aggregated across the organization.

The hospital or departmental quality program must provide feedback and loop closure to the trauma program.

Trauma care typically involves many providers across several disciplines and departments. The PIPS program is most effective when it brings the providers together to review and implement opportunities for improvement.

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### Measures of Compliance

Hospital organization chart reflecting the relationship of the PIPS program to the organizational PI program and demonstrating bidirectional flow of information

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### Resources

None

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### References

None

## 7.2 PIPS Plan—TYPE II

### Applicable Levels

LI, LII, LIII, PTCL, PTCII

### Definition and Requirements

All trauma centers must have a written PIPS plan that:

- Outlines the organizational structure of the trauma PIPS process, with a clearly defined relationship to the hospital PI program
- Specifies the processes for event identification. As an example, these events may be brought forth by a variety of sources, including but not limited to: individual personnel reporting, morning report or daily sign-outs, case abstraction, registry surveillance, use of clinical guideline variances, patient relations, or risk management. The scope for event review must extend from prehospital care to hospital discharge.
- Includes a list of audit filters, event review, and report review that must include, at minimum, those listed in the Resources section
- Defines levels of review (primary, secondary, tertiary, and/or quaternary), with a listing for each level that clarifies:
  - Which cases are to be reviewed
  - Who performs the review
  - When cases can be closed or must be advanced to the next level
- Specifies the members and responsibilities of the trauma multidisciplinary PIPS committee
- Outlines an annual process for identification of priority areas for PI, based on audit filters, event reviews, and benchmarking reports

### Additional Information

None

### Measures of Compliance

PIPS plan that meets criteria outlined in this standard

### Resources

Audit filters, event or report reviews:

- Surgeon arrival time for the highest level of activation
- Delay in response for urgent assessment by the neurosurgery and orthopaedic specialists
- Delayed recognition of or missed injuries
- Compliance with prehospital triage criteria, as dictated by regional protocols
- Delays or adverse events associated with prehospital trauma care
- Compliance of trauma team activation, as dictated by program protocols
- Accuracy of trauma team activation protocols
- Delays in care due to the unavailability of emergency department physician (Level III)
- Unanticipated return to the OR
- Unanticipated transfer to the ICU or intermediate care
- Transfers out of the facility for appropriateness and safety
- All nonsurgical admissions (refer to Standard 7.8)
- Radiology interpretation errors or discrepancies between the preliminary and final reports
- Delays in access to time-sensitive diagnostic or therapeutic interventions
- Compliance with policies related to timely access to the OR for urgent surgical intervention
- Delays in response to the ICU for patients with critical needs
- Lack of availability of essential equipment for resuscitation or monitoring
- MTP activations
- Significant complications and adverse events
- Transfers to hospice
- All deaths: inpatient, died in emergency department (DIED), DOA
- Inadequate or delayed blood product availability
- Patient referral and organ procurement rates
- Screening of patients for psychological sequelae (LI/LII/PTCL/PTCII)
- Delays in providing rehab services
- Screening and intervention for alcohol misuse
- Pediatric admissions to nonpediatric trauma centers
- Neurotrauma care at Level III trauma centers
- Trauma and neurotrauma diversion
- Benchmarking reports

### References

None

## 7.3 Documented Effectiveness of the PIPS Program—TYPE II

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### Applicable Levels

LI, LII, LIII, PTCI, PTCII

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### Definition and Requirements

All trauma centers must have documented evidence of event identification; effective use of audit filters; demonstrated loop closure; attempts at corrective actions; and strategies for sustained improvement measured over time.

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### Additional Information

None

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### Measures of Compliance

PIPS documentation including peer review minutes, loop closure documentation, monitoring of event rates, OPPE, benchmarking reports, or other relevant data to inform and evaluate PI

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### Resources

None

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### References

None

## 7.4 Participation in Risk-Adjusted Benchmarking Programs— TYPE II

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### Applicable Levels

LI, LII, LIII, PTCI, PTCII

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### Definition and Requirements

All trauma centers must participate in a risk-adjusted benchmarking program and use the results to determine whether there are opportunities for improvement in patient care and registry data quality.

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### Additional Information

TQIP meets the participation requirement for a risk-adjusted benchmarking program.

Risk-adjusted benchmarking programs other than TQIP must meet criteria listed on the TQP website, found on [www.facs.org](http://www.facs.org).

Participation in a risk-adjusted benchmarking program with regular review of data provides the best opportunities for centers to understand where there might be gaps in their quality of care.

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### Measures of Compliance

- During the site visit process, present the opportunities for improvement and actions taken to improve patient care and registry data quality from the evaluation of the risk-adjusted benchmarking report
- For trauma centers not participating in TQIP:
  - Documented proof of participation in a risk-adjusted benchmarking program that meets criteria listed for alternate programs
  - Copies of the two most recent risk-adjusted benchmark reports, at least one of which must have been received during the reporting period

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### Resources

None

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### References

None

## 7.5 Physician Participation in Prehospital Performance Improvement—TYPE II

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### Applicable Levels

LI, LII, LIII, PTCI, PTCII

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### Definition and Requirements

In all trauma centers, a physician from the emergency department or trauma program must participate in the prehospital PI process, including assisting in the development of prehospital care protocols relevant to the care of trauma patients.

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### Additional Information

None

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### Measures of Compliance

- Attendance records from prehospital PI meetings
- Prehospital care protocols relevant to the care of trauma patients

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### Resources

None

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### References

None

## 7.6 Trauma Multidisciplinary PIPS Committee Attendance— TYPE II

### Applicable Levels

LI, LII, LIII, PTCI, PTCII

### Definition and Requirements

All trauma centers must meet the following trauma multidisciplinary PIPS committee meeting attendance thresholds:

- 60 percent of meetings for the TMD (cannot be delegated to the associate TMD)
- 50 percent of meetings for each trauma surgeon
- 50 percent of meetings for the liaisons (or one predetermined alternate) from emergency medicine, neurosurgery, orthopaedic surgery, critical care medicine, and anesthesia
- 50 percent of meetings for the liaison (or one predetermined alternate) from radiology (LI, LII, PTCI, and PTCII)

Combined adult (Level I/II) and pediatric (Level II) trauma centers must have 50 percent attendance by a representative (TMD or one predetermined alternate) from the other program; this representative is responsible for disseminating information to panel members of the other program.

### Additional Information

Attendance requirements may be met by teleconference. Trauma multidisciplinary PIPS committee meeting attendance may be waived for military deployment, medical leave, and missionary work. Documentation in support of absences must be provided by the trauma center.

The minimum attendance for liaisons is based on the combined attendance for the alternate and the liaison. If the TMD also serves as the ICU director, this person meets the minimum attendance threshold as the TMD and the ICU director.

If a trauma surgeon only serves as a backup, (i.e., is never first call for trauma surgery), they are not subject to attendance requirements. The TMD should disseminate information discussed in these meetings to everyone involved in caring for trauma patients.

### Measures of Compliance

- Dates of PIPS committee meetings throughout the reporting period
- PIPS committee meeting attendance list

### Resources

None

### References

None



## 7.7 Trauma Mortality Review—TYPE II

### Applicable Levels

LI, LII, LIII, PTCI, PTCII

### References

None

### Definition and Requirements

In all trauma centers, all cases of trauma-related mortality and transfer to hospice must be reviewed and classified for potential opportunities for improvement.

Deaths must be categorized as:

- Mortality with opportunity for improvement
- Mortality without opportunity for improvement

### Additional Information

Mortalities include DOA, DIED, and patients who died after withdrawal of life-sustaining care.

The goal of reviewing events is to identify potential opportunities for improvement.

A death should be designated as “mortality with opportunity for improvement” if any of the following criteria are met:

- Anatomic injury or combination of severe injuries but may have been survivable under optimal conditions
- Standard protocols were not followed, possibly resulting in unfavorable consequence
- Provider care was suboptimal

Reviewing each mortality and transfer to hospice provides the greatest assurance that the trauma program will identify opportunities for improvement. Transfers to hospice require review to ensure there were no opportunities for improvement in care that might have significantly changed the clinical course that ultimately led to the decision for hospice care.

### Measures of Compliance

Trauma multidisciplinary PIPS committee meeting minutes documenting review of mortalities

### Resources

None

## 7.8 Nonsurgical Trauma Admissions Review—TYPE II

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### Applicable Levels

LI, LII, LIII, PTCL, PTCII

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### Definition and Requirements

In all trauma centers, all nonsurgical trauma admissions must be reviewed by the trauma program.

As part of secondary review, the Trauma Medical Director must review non-surgical admissions that meet any of the following criteria:

- No trauma or surgical consultation
- ISS>9
- Cases with an opportunity for improvement identified at primary review

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### Additional Information

If there is no identified opportunity for improvement, the following non-surgical admissions may be closed in primary review:

- Admissions that have had a surgical or trauma consultation OR
- ISS≤9

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### Measures of Compliance

- Written PI plan that includes NSA review process (submitted as part of Standard 7.2)
- Report on all NSA
- Documentation that the cases were reviewed

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### Resources

None

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### References

None

## 7.9 Trauma Diversions Review—TYPE II

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### Applicable Levels

LI, LII, LIII, PTCI, PTCII

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### Definition and Requirements

In all trauma centers, all instances of diversion must be reviewed by the trauma operations committee.

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### Additional Information

The name of the trauma operation committee may vary. For example, it might be called the “trauma/hospital systems committee.”

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### Measures of Compliance

Minutes/documentation from the trauma operations committee review

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### Resources

None

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### References

None

## 7.10 Prehospital Care Feedback—TYPE II

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### Applicable Levels

LI, LII, LIII, PTCL, PTCII

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### Definition and Requirements

All trauma centers must have a process of reviewing and providing feedback to:

- EMS agencies, related to accuracy of triage and provision of care
- Referring providers, related to the care and outcomes of their patients and any potential opportunities for improvement in initial care

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### Additional Information

None

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### Measures of Compliance

- Documentation of the process for reviewing and providing feedback
- Evidence of communication (feedback) between trauma center, EMS agencies, and referring providers

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### Resources

None

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### References

None



