

DEVELOPING A PIPS PROGRAM

A Guide for Level IV & V Trauma Centers



**IDAHO TIME SENSITIVE
EMERGENCY SYSTEM**
TRAUMA | STROKE | STEMI

CONTACT

Please do not hesitate to contact us with any questions or concerns. We would be happy to help to assist you in developing a PIPS program.

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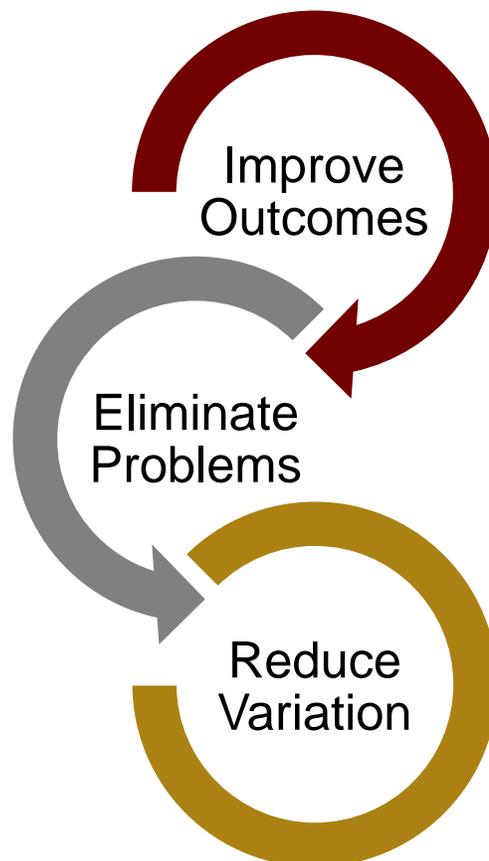
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OBJECTIVE

The objective of a Process Improvement and Patient Safety (PIPS) program is to improve patient outcomes, eliminate problems, and reduce variation in patient care.

All trauma centers should systematically and critically evaluate their trauma care using performance measurements. Doing so fosters current, competent clinicians and validates care.

While there is no precise prescription for a PIPS program, the process should demonstrate a continuous process of monitoring, evaluating, and improving the performance of the trauma program.



Remember...the Performance Improvement and Patient Safety (PIPS) Committee is patient care-focused. The Trauma Program Operational Process Performance Committee (TPOPPC) is system and process-focused.

STRUCTURE

WHO?

The PIPS Committee must be chaired by the Trauma Medical Director and include the Trauma Program Manager, an emergency department representative, a radiology representative, a laboratory representative and a pre-hospital representative (EMS). If surgical services are available, the committee must also include a general surgery representative.

The PIPS Committee has the authority to:

- Conduct trauma peer review to evaluate cases or problems;
- Develop standards of quality trauma care for adult and pediatric trauma care;
- Monitor compliance;
- Change trauma care policies, procedures, guidelines, and protocols;
- Correct problems or deficiencies; and
- Analyze and evaluate the effect of corrective actions.

WHAT?

A trauma center should provide safe, efficient, and effective care to the injured patient. Doing so requires the trauma program to continuously measure, evaluate, and improve care. These essential elements of a trauma program are commonly known as the trauma PIPS program. The PIPS program should be data-driven, systematic, have measurable goals, span the continuum of care, and directly impact care at the bedside.

WHEN?

It is recommended that the PIPS Committee meet monthly, but the frequency should be based on your trauma patient volume and the facility's need for improvement.

REVIEW PROCESS

The PIPS program must be able to identify trauma patients, use internal registry data, and have appropriate audit filters.

Important Elements

- Focus on the performance of the trauma service and trauma processes.
- Focus on opportunities for improvement.
- Use best practices when designing or redesigning processes.
- Identify potential safety risks.
- Eliminate barriers between departments and improve communication.
- Track findings to detect trends.
- Use results of review to determine educational needs.

Information Sources

- EMS run sheets.
- Medical records.
- Autopsies.
- Patient/family comments or complaints.
- Staff concerns.

Suggested Indicators for Review

- Deaths.
- Transfers.
- Unexpected outcomes.
- Sentinel events.

Idaho Time Sensitive Emergency System *Process Improvement & Patient Safety (PIPS)*

- Trauma team activations: over-triage and under-triage.
- Cervical spine clearance.
- Alcohol screening and intervention.
- Pain assessment and reassessment after intervention.
- Delays in treatment.

Data Points to Track

- Over-triage and under-triage.
- Number of activations: number of priority one activations, number of priority two activations, and number of priority three activations.
- Trauma team assembly time.
- Emergency provider response time.
- Transfers (ED dwell time and door to transfer time).
- CT time frames: time-to-CT; and CT read time.
- Deaths.

PRIMARY REVIEW

The primary review is performed by the Trauma Program Manager (TPM) who should review EVERY trauma chart on a daily or weekly basis depending on the volume of trauma patients. Reviews should be assigned to one of three categories:

1. No action required;
2. Resolved by the TPM; or
3. Requires further review.

Even if the TPM is able to resolve the issue, the activity should be documented for ongoing monitoring and trend analysis. See page 15 for the *Primary PIPS Review – Trauma Program Manager* form and page 16 for the *Trauma Medical Record Review* form.

SECONDARY REVIEW

The secondary review is performed by the Trauma Medical Director (TMD) and Trauma Program Manager (TPM) on a weekly to monthly basis depending on the volume of trauma patients. After review, cases should be assigned to one of two categories:

1. Resolved by the TMD and/or the TPM; or
2. Requires further review.

The secondary review should include a review of the pertinent portions of the medical record; confirmation of all individuals involved; development of a timeline of the event; and review of any other pertinent documentation. See page 19 for the *Secondary PIPS Review – Trauma Medical Director* form.

TERTIARY REVIEW

The tertiary review is performed by the PIPS Committee. The PIPS Committee should review all cases that cannot be resolved by the Trauma Medical Director (TMD) and Trauma Program Manager (TPM). See page 20 for the *Tertiary PIPS Review – PIPS Committee* form.

CORRECTIVE ACTION

Corrective action must be measurable and patient focused. It should also consist of education, resource enhancement, protocol revision, and/or clinical practice guidelines.

PEER REVIEW

All providers who care for trauma patients must engage in a collaborative, periodic review of selected cases to identify and discuss opportunities for improvement. The goal is to increase the collective knowledge of the staff, in order to improve clinician and system performance.

CLOSING THE LOOP

Loop closure is essential.

Loop closure should be integrated throughout the institution and should be reported to the facility's quality improvement program. A common mistake is labeling your corrective action *plan* as loop closure. The problem, of course, is that having a plan is not the same as "closing the loop." Your plan is simply what you intend to do. During an on-site visit, reviewers want to see what you have already done, not what you anticipate.

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Process Improvement & Patient Safety (PIPS)

In order to demonstrate loop closure, you should always be able to answer the following statement, “Future similar patients are less likely to have this problem because_____.” It is recommended to have this sentence included and answered for all you PIPS reviews.

STRATEGIES

1. De-identify cases.
 - Focus on the care and the process, not the provider.
 - No need to discuss who was assigned to the case.
 - Attempt to turn any issue about a provider into a discussion about the system.
2. Attendees should be peers.
 - Providers are often more comfortable to be candid with their peers.
3. If possible, refrain from one-on-one counseling/discussions.
 - If one provider will benefit from the knowledge, it is likely that all providers will benefit. Education should be presented to all appropriate staff by the PIPS Committee.
4. Use reference material for best practice and evidence-based guidelines (i.e. American College of Surgeons, ATLS, or EAST).
5. If there is concern about the ability to provide objective, impartial review.
 - Consult your higher Level II or III referral center.
 - Ask for advice about specific cases and request outreach.
 - Ask for advice regarding current standards of care, best practices, or regional guidelines.
 - Discuss with your Regional TSE Committee.
 - This may be a region-wide problem.

FORMS

The review forms – Primary, Secondary, and Tertiary – have been provided as examples. You may use these forms or create your own. The forms can be found at the end of this guide.

RESPONSIBILITIES

LEADERSHIP'S RESPONSIBILITY

The leadership of the PIPS Committee sets the tone and defines expectations. The Trauma Medical Director must present the cases and support a "solution-oriented" focus.

COMMITTEE MEMBERS' RESPONSIBILITY

The PIPS Committee members are responsible for the following:

- Be open to a candid review of each case;
- Identify opportunities for improvement in diagnosis, decision making, interpretation, and technique;
- Look for opportunities for improvement; delay in recognition, delay in transfer decision, and inadequate protocols
- Recommend action plans and program goals; and
- Keep comprehensive minutes that capture the essence of the discussion and a general consensus of the participants.

SECURITY

- All participants must sign a confidentiality statement/agreement.
- Place a sign on the door indicating that it is a closed meeting.
- Have all participants sign in.
- Do not distribute documents. Use a projector.
- If you must distribute copies, number the copies, collect, inventory and properly dispose of copies at the end of the meeting.
- Avoid using email to disseminate confidential information.

COMMON PITFALLS

- Waiting for problems to affect patient care before taking action.
- Looking directly for complications or only looking at the outcomes rather than seeking opportunities.
- Accepting the status quo without sufficient discernment.
- Not monitoring compliance with your own guidelines.
- Not looking at EMS performance or involving them in the improvement process.
- Lack of physician leadership in the program.
- Lack of provider involvement in PIPS activities.

EXAMPLE OF A PIPS REVIEW

Step 1. Issue Identification.

- What “issue” was out of line with your goals or was caught by an audit filter?
- Trauma patient’s length-of-stay in ED was 150 minutes. Delayed transfer due to radiological studies performed before transfer.

Step 2. Compare the Specific Goals set by the Trauma Program.

- Trauma patients should transfer out of the ED within 120 minutes with an 80% achievement rate.

Step 3. Analyze.

- Look at the same data point for the last month, 6 months, or year depending on volume.
- Your data shows that 8 of 15 cases (53%) met the 120-minute standard. You have now identified this is an issue that needs to be addressed by the PIPS Committee.
- Research the 15 cases: Can you determine what the reason for delay was? Are most of the delays related to obtaining tests?

Step 4. Develop & Implement Action Plan.

- Send case to peer review (PIPS Committee).
- Review trauma transfer protocol. Is it clear that the goal is 120 minutes? Are there guidelines on when and how to call for transfer? Does the protocol outline what tests should be obtained or not obtained?
- Discuss rationale for changes (i.e. refrain from obtaining studies that do not impact the resuscitation, etc.).
- Update transfer plan (if needed), educate staff, and/or set up mechanism to track.

Step 5. Continuous Evaluation.

- Trend and measure performance. Evaluate each case. Are times improving? Continue to educate staff, refine the process, and celebrate improvement.

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Process Improvement & Patient Safety (PIPS)

- Evaluate cases over an established time frame. For example: 6 months later, now 10 out of 12 new cases (83%) met the 120-minute standard. Your intervention worked! Or, if your program is still not meeting the metric, do you need a new action plan?
- Continue to trend and measure performance.

Step 6. Loop Closure.

- Document your loop closure. Was the goal attained and what action(s) resulted in goal attainment?
- Describe the action plan, the protocol changes, and the education that was provided. Then show the data: Over a 12 months period, 18 out of 22 cases (82%) met the goal.
- Once goal is attained, the PIPS Committee can close the loop or continue to trend in order to verify continued success.

APPENDIX A: FORMS

Primary PIPS Review - Trauma Program Manager

Name:		MR#:	
Acct #:		Admit Date:	

System Related
<input type="radio"/> Trauma related death <input type="radio"/> Transfer <input type="radio"/> Requested review <input type="radio"/> Other:

Patient Care Related
<input type="radio"/> Delay in diagnosis of injury <input type="radio"/> Missed diagnosis of injury <input type="radio"/> Requested review <input type="radio"/> Other:

Notes/Issues:

Conclusion	Action	Date Complete
<input type="radio"/> No system or patient care	None	
<input type="radio"/> Trend/Track	TPM add to trend database	
<input type="radio"/> Trauma Medical Director	Submit chart to TMD for review	
<input type="radio"/> Other:		

Signature: _____ Date: _____

Trauma Program Manager

Trauma Medical Record Review Form

MRN: _____ Age: _____ Gender: _____

Admit	Transfer	Expired	Mode of Arrival
<input type="radio"/> Yes <input type="radio"/> Observation <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No Facility: _____	<input type="radio"/> Yes <input type="radio"/> No Funeral Home: _____	<input type="radio"/> EMS <input type="radio"/> POV ED Arrival Date: _____ ED Arrival Time: _____ ED Discharge Time: _____ LOS: _____
Unit/Room #			

Mechanism of Injury: _____

Pre Hospital Information

Provider: _____ EMS Scene Time: _____ minutes Run Sheet Present? Yes No
 BP _____ HR _____ Resp _____ GCS _____ BGL _____ Temp _____ Intubated? Yes Size: _____ No
 Extrication? Yes No Spinal Immobilization? Yes No C-Collar? Yes No
 Oxygen? Yes No Method? _____ IV: _____

Notes/Comments:

Clinical Information

Trauma Team activation? Yes No Appropriate? Yes No Why? _____
 ED provider notified @ _____ ED provider arrived @ _____
 Transfer to: Level I Level II Level III Level IV Not designated
 Time transfer initiated: _____ Mode: Air EMS POV Provider: _____

Notes/Comments:

Documentation

Initial VS @ _____ BP HR Resp GCS SpO2 BGL Temp
Final VS @ _____ BP HR Resp GCS SpO2 BGL Temp

Serial Vital Signs? Yes No

Notes/Comments:

Treatment

IV x _____ Central Line? Yes No Chest Tube? Yes No Foley? Yes No

Crystalloid infused _____ cc Blood T&C? Yes No Units Transfused: _____

Oxygen? Yes No NG/OG? Yes No Other Tx: _____

Notes/Comments:

Diagnostics

Lab Labs drawn @ _____ H/H _____ CBC CMP/BMP PT/PTT ETOH UDS

X ray Done @ _____ Chest Pelvis C-spine Extremities

Other x-rays: _____

CT Done @ _____ Head Facial Bones Chest Abdomen Pelvis C-spine

Notes/Comments:

PI Process

Level of Review: _____

Problems Identified:

Loop Closure Activities:

Trauma Program Manager / Trauma Medical Director Signature

Date

Secondary PIPS Review - Trauma Medical Director

Name:		MR#:	
Acct #:		Admit Date:	

System Related
<input type="radio"/> Trauma related death <input type="radio"/> Transfer <input type="radio"/> Requested review <input type="radio"/> Other:

Patient Care Related
<input type="radio"/> Delay in diagnosis of injury <input type="radio"/> Missed diagnosis of injury <input type="radio"/> Requested review <input type="radio"/> Other:

Trauma Medical Director Review:

Conclusion	Action	Date Complete
<input type="radio"/> No system or patient care problem	None	
<input type="radio"/> Trend/Track	TPM add to trend database	
<input type="radio"/> PIPS Committee review	Submit chart to PIPS Committee for review	
<input type="radio"/> Other:		

Signature: _____ Date: _____

Trauma Medical Director

Tertiary PIPS Review - PIPS Committee

Name:		MR#:	
Acct #:		Admit Date:	

System Related
<input type="radio"/> Trauma related death
<input type="radio"/> Transfer
<input type="radio"/> Requested review
<input type="radio"/> Other:

Patient Care Related
<input type="radio"/> Delay in diagnosis of injury
<input type="radio"/> Missed diagnosis of injury
<input type="radio"/> Requested review
<input type="radio"/> Other:

Mortality was:
<input type="radio"/> Mortality without opportunity for improvement (non-preventable)
<input type="radio"/> Anticipated mortality with opportunity for improvement (potentially preventable)
<input type="radio"/> Unanticipated mortality with opportunity for improvement (preventable)

Notes/Issues:

Conclusion	Action	Person Responsible	Date Complete
<input type="radio"/> No system or patient care problem	None		
<input type="radio"/> Trend/Track	TPM add to trend database		
<input type="radio"/> More information needed	Request information		
<input type="radio"/> Problem Identified:			
<input type="radio"/> Other:			

Signature: _____ Date: _____

Trauma Program Manager