## Table of Contents

- Letter from the Chairman and Executive Director  
  Page 3 
- Pennsylvania Trauma Systems Foundation Mission Statement/Profile  
  Page 4 
- Board of Directors  
  Page 5 
- Foundation Operations  
  Page 7 
- Organizational Accomplishments  
  Page 8 
- Committees Accomplishments  
  Page 12 
- Map of Trauma Centers in Pennsylvania  
  Page 17 
- Statistical Highlights  
  Page 18 
- Pennsylvania Trauma Outcome Study Highlights  
  Page 20 
- Finances  
  Page 24 
- Partnering Organizations  
  Page 26 
- Pennsylvania Trauma Systems Foundation Staff  
  Page 27 
- Committee Organization Chart  
  Page 28
A Message from the 2011 Chairman of the Board and Executive Director

This annual report for 2011 highlights the activities of the Pennsylvania Trauma Systems Foundation as it celebrates its 26th year of service in advancing the care of injured patients in Pennsylvania. In 1985 the Foundation was developed by a group of committed organizations and incorporated into the EMS Act to assure the highest level of trauma care possible. This care involves a comprehensive network of services starting with emergency care at the time of the injury to the commitment of a trauma center in providing 24-hour availability of clinical experts and resources to make the difference in saving lives. As the accrediting body for trauma centers in this state, PTSF has the task of assuring the public that a trauma center meets the rigorous criteria necessary to care for the most severely injured patients.

In 2011 the PTSF Strategic Plan was finalized with two major goals:
- Optimizing access to quality trauma care for all trauma patients
- Increasing PTOS quality and data utilization

The first goal was advanced through the work of the Rural Trauma Committee with finalization of standards of accreditation for Level IV trauma centers by the PTSF Board of Directors. To date five hospitals have submitted letters of intent to pursue Level IV accreditation and several others are exploring this option. For those hospitals that are critical access hospitals, PTSF was able to waive all PTSF fees for education and registry software as a result of grant moneys received by the Pennsylvania Office of Rural Health through the HRSA Federal Flex Grant Program. Other hospitals continue to pursue Level II and Level III accreditation bringing the number of pursuing hospitals up to eight. Education was also offered to four hospitals by Level I and Level II centers that provided onsite instruction of the Rural Trauma Team Development Course. This course seeks to enhance Emergency Department care of injured patients for those hospitals that are not accredited.

The second goal of increasing the quality and utilization of our PTSF data was advanced through PTSF’s work with our software vendor Digital Innovations, Inc. Data was made more accessible to our trauma centers through the development of PTOS Data Dashboards that were posted to the PTSF web portal. Each year 5 additional dashboards will be created in collaboration with Pennsylvania’s trauma centers.

Beyond these special projects our committees spent countless hours advancing the care of injured patients in the areas of geriatrics, pediatrics, data collection, research, and performance improvement. We can’t thank our members enough for sharing their expertise with each other and us.

Thank you for reviewing this year’s accomplishments of PTSF. Because of you we continue to elevate the bar for trauma care throughout Pennsylvania and the country.

Sincerely,

Jack E. Wilberger, Jr., MD
Chairman Board of Directors

Juliet Geiger, RN, MSN
Executive Director
PA Trauma Systems Foundation
Vision

**VISION:** "The Pennsylvania Trauma Systems Foundation will become the premier organization in Pennsylvania for assuring optimal outcomes for all trauma patients."

Mission

In pursuit of optimal support for injured persons in Pennsylvania, the Pennsylvania Trauma Systems Foundation exists to establish accreditation standards while promoting the advancement of trauma services.

The Pennsylvania Trauma Systems Foundation is committed to the reduction of death and disability caused by trauma and the provision of expeditious, quality healthcare that is evidence based.

Values

**Excellence:** We promote and support quality results and optimal outcomes through continuous performance improvement, education and collaboration.

**Innovation:** We seek and support innovations and best practices that standardize practice and shape the future of trauma care in Pennsylvania.

**Integrity:** We are committed to honesty, fairness and transparency.

**Teamwork:** We encourage respectful multidisciplinary collaboration to develop standards, solve problems, and achieve common goals.

Background

The Pennsylvania Trauma Systems Foundation was created by the combined efforts of the Pennsylvania Medical Society and The Hospital and Healthsystem Association of Pennsylvania along with the Pennsylvania Nurse’s Association, the Pennsylvania Emergency Health Services Council, and the Pennsylvania Department of Health.

The Commonwealth of Pennsylvania first recognized the Foundation in December 1984 when Governor Thornburg signed Act 209 into law. Act 209 expired in June 1985. A comprehensive Emergency Medical Services Act (Act 45) was signed into law in July 1985, which again recognized the Pennsylvania Trauma Systems Foundation and established its mandate.
Structure

A 20-member board of directors governs the activities of the Foundation. This board is comprised of professionals with experience and expertise in the trauma and health care industry. The Foundation strives to ensure equal geographic representation among board members. Board members are nominated by state organizations as mandated in the EMS act. A list of the 2011 board members and their nominating organizations is listed below:

<table>
<thead>
<tr>
<th>NOMINATING ORGANIZATION</th>
<th>BOARD MEMBER</th>
</tr>
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<tbody>
<tr>
<td>1. American College of Emergency Physicians</td>
<td>Richard S. MacKenzie, MD</td>
</tr>
<tr>
<td>2. Hospital &amp; Healthsystem Association of PA</td>
<td>James Burke</td>
</tr>
<tr>
<td>3. Hospital &amp; Healthsystem Association of PA</td>
<td>Chris Gessner, MD</td>
</tr>
<tr>
<td>4. Hospital &amp; Healthsystem Association of PA</td>
<td>Kevin Mosser, MD (Vice Chairman)</td>
</tr>
<tr>
<td>5. Hospital &amp; Healthsystem Association of PA</td>
<td>Doug Trostle, MD</td>
</tr>
<tr>
<td>6. Hospital &amp; Healthsystem Association of PA</td>
<td>Margaret McGoldrick</td>
</tr>
<tr>
<td>7. Pennsylvania Emergency Health Services Council</td>
<td>Greg Frailey, DO, FACOEP</td>
</tr>
<tr>
<td>8. Pennsylvania Medical Society (ACSCOT)</td>
<td>William Hoff, MD</td>
</tr>
<tr>
<td>9. Pennsylvania Medical Society/ PA Neuro Society</td>
<td>Jack Wilberger, MD (Chairman)</td>
</tr>
<tr>
<td>10. Pennsylvania Medical Society/ PA Ortho Society</td>
<td>Spence Reid, MD</td>
</tr>
<tr>
<td>11. Pennsylvania Medical Society (At large)</td>
<td>Patrick Reilly, MD, FACS</td>
</tr>
<tr>
<td>12. Pennsylvania State Nurses Association</td>
<td>Christine Wargo, RN, MSN</td>
</tr>
<tr>
<td>13. Pennsylvania State Nurses Association</td>
<td>Kathleen Randall, RN, BSN</td>
</tr>
<tr>
<td>14. Pennsylvania Trauma Nurse Advisory Council</td>
<td>Michelle Fontana, RN, BSN</td>
</tr>
<tr>
<td>15. Pennsylvania Medical Society</td>
<td>Patrick Reilly, MD, FCCP, FACS</td>
</tr>
<tr>
<td>16. Pennsylvania Department of Health</td>
<td>Doug Kupas, MD, Bureau of EMS</td>
</tr>
<tr>
<td>19. Majority Chairman, Senate Public Health and Welfare Committee</td>
<td>Senator Pat Vance</td>
</tr>
<tr>
<td>20. Minority Chairman, Senate Public Health and Welfare Committee</td>
<td>Senator Shirley Kitchen</td>
</tr>
</tbody>
</table>
Back Row (left to right):
- Spence Reid, MD
- Kathleen Randall, RN
- Simon Lampard, MD
- Patrick Reilly, MD
- Douglas Trostle, MD
- Rep. Bryan Cutler
- Christopher Gessner (Treasurer)
- Douglas Kupas, MD
- David Loder, Esq. (Legal counsel)
- Gregory Frailey, DO

Front Row (left to right):
- Kevin Mosser (Vice Chairman)
- Jack Wilberger, MD (Chairman)
- James Burke
- William Hoff, MD
- Richard MacKenzie, MD
- Christine Wargo, RN
- Margaret McGoldrick

Missing from Photo: Michelle Fontana, Senator Pat Vance, Senator Shirley Kitchen, Representative Vanessa Lowery Brown
Foundation Operations

Accreditation
One of the primary missions of the PTSF listed in the EMS Act of 1985 is trauma center accreditation which involves the development of standards of accreditation and performing on site accreditation surveys by independent teams of physicians and nurses. Typically staff accompanies a three member team comprised of two physicians and a nurse. Additional specialists may be added to the team based on issues found during previous surveys or if an institution is applying as a new trauma center. Accreditation surveys typically occur on a 3 year cycle but may occur more frequently based on issues cited during a site visit.

Highlights
- Seven hospitals underwent trauma center accreditation surveys.
- No new hospitals were accredited as trauma centers.
- Thirty-one trauma centers remained accredited.

Education
During the course of the year PTSF conducts a variety of regional and statewide educational programs. Some of them are conducted in collaboration with other organizations. Joint annual events include the annual PTSF/PaCOT fall conference developed in collaboration with the Pennsylvania Chapter of the ACS Committee on Trauma. PTSF sponsored events are conducted by PTSF staff and are geared toward the needs of its trauma centers or those hospitals pursuing accreditation. Educational offerings are also customized to meet the needs of those requesting support from our office.

Highlights
- Hospital On-site visits
  - Registry Education: 16
  - Hospitals interesting in pursuing trauma center accreditation: 7

- Statewide Seminars
  - January 27-28: AIS 2005 Injury Coding Course, Mechanicsburg, PA
  - April 7-8: 4th Annual Basic Trauma Registrar Course, Mechanicsburg, PA
  - May 19-20: 3rd Annual Advanced Trauma Registrar Course, Mechanicsburg
  - October 19-21: Annual PTSF/PaCOT Fall Conference, Harrisburg, PA
  - Nov. 18: Electronic Application for Survey Hands-On Class, Mechanicsburg

- Webinars
  - March – Pursuing Level III Accreditation
  - September - Level IV Software Training Webinar
  - October - Level IV Registry Basics
  - November - Electronic Application for Survey
  - November - Success is Just Around the Corner
  - December - 2012 Trauma Registry Collector Updates
  - December - 2012 Trauma Registry Collector Updates
  - December - Developing Quality Indicators
2011 Key Organizational Accomplishments

Strategic Planning
With the help of an external consultant a three year strategic plan was finalized setting the course for ongoing development and enhancement of Pennsylvania’s trauma system. New Value Statements were also developed. (See page 4.)

Pennsylvania Trauma Systems Foundation
2012 – 2014 Strategic Goals

Objective 1: Continue trauma system development to optimize access to quality trauma care for all injured patients.

GOALS

2012
- Educate hospitals pursuing Level III/IV trauma center accreditation
- Initiate revision of Level IV trauma center mandatory transfer out criteria
- Revise Electronic Application for Survey and Site Surveyor Software for Level IV trauma centers
- Develop new PTSF website
- Perform PTSF staffing needs analysis

2013
- Pursue additional efforts to advance trauma care in non trauma hospitals
- Evaluate progress on 2007 Trauma System Assessment (BIS) action items and create new trauma system goals
- Develop educational strategies to educate public and non trauma centers about the value of the trauma system
- Conduct surveys for hospitals pursuing Level IV accreditation

2014
- Conduct PTSF Strategic Planning Session
- Initiate education campaign to increase public awareness regarding the value of the trauma system.

Objective 2: Increase trauma registry data (PTOS) quality and data utilization to improve patient outcomes through research and performance improvement activities of PTSF, trauma centers and the trauma system.

2012
- Develop PTSF research strategy
- Implement PTSF Dashboards and plan for further enhancements
- Create linkages between PTOS and other data sets in collaboration with other agencies including the PaDOH
- Finalize Pennsylvania Outcomes and Performance Improvement Measuring System (POPIMS) standardization process
- Create plan for use of Central Performance Improvement Data Repository

2013
- Implement PTSF Dashboard enhancements
- Reexamine utility of PTOS quarterly data reports and alternate methods of providing comparison data to trauma centers.
- Migrate Collector Trauma Registry to ICD-10 format
- Initiate central PI repository data submission process

2014: Reexamine Trauma Registry Education Visit format
Technology Enhancements

Each year PTSF continues to enhance its technology. 2011 was no exception. Focused efforts were conducted in 3 main focus areas:

1. **PTSF education through the use of web technology**
   - 8 webinar education programs were conducted
   - PTSF committees utilized conference calling and webinar strategies to conduct meetings.

2. **Trauma registry data collection, submission and analysis**
   - Utilizing the Web Portal developed for the Electronic Application for Survey, the Foundation and Digital Innovations, Inc. developed a data submission application allowing trauma centers to submit their data submission in one easily transferred file rather than emailing six different files. This application also allowed for the recording of a submission log verifying the data submission.
   - A Dashboard area of the Web Portal was developed. Five standard interactive dashboards were added covering quarterly TRISS statistics, EMS scene time statistics, and statistics by mechanism of injury. This allows trauma centers to view data and manipulate that data without having to request the data from the Foundation.
   - A report posting area was added to the Web Portal. This allowed for the posting of the Dashboard reports.
   - National Trauma Data Set Screens were purchased from Digital Innovations by PTSF for addition to the Collector Trauma Registry software of all trauma centers. This provided a method for easier collection and submission of data elements to the National Trauma Data Bank.

3. **Completion of the Electronic Application for Survey**
   - Utilizing a PTSF workgroup, Electronic Application for Survey revisions were made reducing redundancy and the number of fields needing to be completed.

4. **Office Technology Enhancements**
   - All PTSF staff equipment was updated with laptops and docking stations allowing both portability and dual monitor capabilities.
Trauma System Development

Trauma System development has been a key ongoing goal since the PTSF conducted its last strategic planning session in 2008 and created its vision statement. In 2009 and 2010 the rural trauma committee met monthly and created Level IV trauma center standards of Accreditation which were approved at the March 2011 board meeting. The development of Level IV trauma centers was approved to enhance care of injured patients primarily during the Emergency Department phase of care for hospitals in underserved rural areas of Pennsylvania. Standards of Accreditation were developed after thoughtful consideration of regulations from other states and with the input of a variety of organizations including a strong presence by the Pennsylvania Office of Rural Health. The approval of SB 922 in 2010 has continued to provide state and federally matching funds to hospitals pursuing Level III accreditation.

Highlights

- 1 hospital is pursuing Level II Accreditation: Forbes Regional Medical Center
- 2 hospitals are pursuing Level III Accreditation:
  - Meadville Medical Center
  - Hazleton General Hospital
- 5 hospitals are pursuing Level IV Accreditation (3 critical access and 2 non-critical access hospitals.
  - Charles Cole Hospital
  - Fulton County Medical Center
  - Troy Hospital
  - St. Luke’s Miners Hospital
  - Grove City Medical Center
Pennsylvania Department of Public Welfare (DPW)
Since the passage of HB100 in 2004, which supports trauma centers and developing Level III trauma centers with financial support, PTSF continues to provide the Department of Public Welfare (DPW) with data submitted by trauma centers to the Pennsylvania Trauma Outcome Study. In support of burn center funding, the PTSF also provides the DPW with data submitted by burn centers based in part on inclusion criteria outlined in the Pennsylvania Trauma Outcome Study. In both cases, the PTSF data is used to calculate funding which is then disseminated by the DPW.

Pennsylvania Office of Rural Health (PORH)
The Pennsylvania Office of Rural Health continued to be a strong supporter of the PTSF due to its mission of working with local state and federal partners to achieve equity in, and access to, quality health care for Pennsylvania's rural residents. Activities in 2011 included:
- Providing Federal Rural Flex Grant Funds to PTSF to provide rural trauma education at the annual conference.
- Providing Flex Grant funding to trauma centers to conduct the Rural Trauma Team Development Course to critical access hospitals. The RTTDC is a course sponsored by the American College of Surgeons and teaches rural hospitals how to care for trauma patients appropriately and expeditiously while fostering relationships between trauma centers and their receiving hospitals.
- Involving PTSF in its quarterly Critical Access Hospital meeting.
- Participating in the PTSF Rural Trauma Committee

Pennsylvania Department of Health (DOH)
- PaDOH Injury Community Planning Group (ICPG): PTSF worked with the ICPG to help develop a survey for trauma centers to assess what Emergency Room data is being captured by the trauma center in databases other than the trauma registry.
- PaDOH Bureau of EMS: PTSF provided staff support to the Bureau of EMS to determine the viability of linking our two data sets via Patient Care Record numbers.
- PaDOH Department of Vital Statistics: In 2011, PTSF received grant funding to collaborate with the Department of Vital Statistics on the linking of PTOS data with data they receive from the Pennsylvania Healthcare Cost Containment Council (PHC4).

Hospital and HealthSystem Association of Pennsylvania (HAP)
As one of the founding organizations of the PTSF, HAP continues to work collaboratively with PTSF involving us in a variety of initiatives throughout the year. Highlights in 2011 were:
- HAP Trauma Center Advocacy Day: PTSF joined trauma centers throughout the state in providing education to legislators regarding the value of trauma centers and support through state funding.
- Rural Washington Roundtable at HAP Headquarters with HHS Secretary Kathleen Sebelius: This forum brought together various state agencies together to share rural challenges with Secretary Sebelius during a visit to PA.
- HAP Section of Accredited Trauma Center meetings: PTSF provided quarterly meeting updates to the members of this group which includes trauma medical directors and trauma program managers from every trauma center in Pennsylvania.

**Pennsylvania Rural Health Association (PRHA)**
The Pennsylvania Rural Health Association is PTSF’s newest partner. PTSF participated in a Rural Legislative Briefing sponsored by the PRHA to educate legislators on rural health challenges. PTSF’s Executive Director was elected to their Board of Directors.

**Pennsylvania Emergency Health Services Council (PEHSC)**
PTSF continues to partner with PEHSC in providing input on a variety of EMS initiatives. 2011 highlights included:
- Pa. Emergency Medical Services for Children Program (EMSC): PTSF participated in EMSC meetings acting as a liaison between EMSC and Pennsylvania trauma centers. EMSC recommendations were also incorporated in Pennsylvania Standards for Trauma Center Accreditation.
- PEHSC Board of Directors: Executive Director Juliet Geiger continued to participate in quarterly board meetings and EMS State Plan initiatives offering updates on PTSF trauma system development activities.
PTSF Committee Descriptions and Accomplishments
2011

There are six standing committees within the organized structure of the Foundation. These committees serve a variety of functions ranging from revising and implementing the Standards for Trauma Center Accreditation to researching and analyzing PTOS data. The Pennsylvania Trauma Systems Foundation relies on the expertise of both its Board members and committee representatives to assure policies and procedures are in place which guide its mission.

Committes comprised solely of Board members (6):

**Bylaws Committee:** Met once during conference call to review the PTSF bylaws and make recommendations to the Board for revisions.
- Chairperson: Christina Wargo RN
- Staff support: Juliet Geiger
- Bylaws Changes:
  - Rural Trauma Committee added as a standing committee reporting to the PTSF Board of Directors

**Conflict of Interest:** Met before July and September Board meetings to determine board member conflicts for the accreditation meetings.
- Chairperson: Doug Trostle, MD
- Staff support: Juliet Geiger
- COI Changes: Clarifications regarding what constituted a conflict were added.

**Executive Committee:** Met monthly via conference call except during Board meeting months to discuss PTSF operations and assist Executive Director in decision making.
- Officers of the Board of Directors: J. Wilberger, K. Mosser, C. Gessner
- Immediate past Chairman of the Board: M. McGoldrick
- Chairman of the Policy and Procedures Committee: W. Hoff
- Chairman of the Standards Committee: M. Fontana
- Chairman of the Trauma Registry Committee: R. MacKenzie
- Chairman of the Finance Committee: C. Gessner
- Chairperson: Jack Wilberger
- Staff support: Juliet Geiger and Linda Henry

**Finance Committee:** Met twice to analyze PTSF finances including changes to a new retirement plan and investment strategies.
- Chairperson: C. Gessner
- Staff support: Juliet Geiger and Linda Henry
  - Developed a work group and finalized recommendations for long term investment strategies and use of investment funds.

**Nominating Committee:** Met once to review candidates submitted by sponsoring organizations to the PTSF Board of Directors, and submitted those names to the PTSF Board of Directors for final approval for 2011.
- Chairperson: Richard MacKenzie, MD
- Staff support: Juliet Geiger and Linda Henry
Accomplishments: One new board member approved for 2012: Philip Pandolph, CEO, Meadville Medical Center

Policy and Procedure Committee: Met quarterly. Reviewed policies and procedures related to PTSF operations.
- Chairperson: William Hoff, MD
- Staff support: Kevin Burd
- Accomplishments: Continued development of the rural (i.e. level III & level IV) site survey process; revision of accreditation policies related to rural trauma development and current practice; and revision of the current accreditation report structure.

Committees comprised of both board and non-board members
(9 Committees /8 Ad Hoc Committees)

Rural Trauma Committee
The purpose of this new committee is to enhance trauma care services to rural areas of Pennsylvania. This includes promoting education and hospital partnerships, conducting research and considering the development of additional levels of trauma centers to meet rural needs.
- Chairperson: Simon Lampard, MD
- Staff support: Juliet Geiger
- Accomplishments:
  - Finalized Level IV Standards with approval by Board of Directors in March 2011.
  - Rural Trauma Educational track conducted at PTSF Fall Conference.
  - Level III Work Group established to refine Mandatory Transfer Out Criteria and other standards. (See PTSF Website at www.ptsf.org under “Standards of Accreditation”.)
  - Rural Trauma Team Development Course promoted for delivery by Level I/II trauma centers utilizing Federal flex grant funds from the Pa Office of Rural Health to fund courses for Critical Access Hospitals.

Burn Committee
Charged with examining how PTSF can enhance statewide care of burn patients through research, education, and registry efforts. This committee is an advisory committee to the Trauma Registry committee.
- Chairperson: Mary Lou Patton, MD
- Vice Chairperson: Richard MacKenzie, MD
- Staff Support: Nathan McWilliams
- Accomplishments:
  - Recommended burn occurrence definitions to the American Burn Association (ABA).
  - Began discussion of regional burn preparedness plans.
Ad Hoc Burn Occurrences
The purpose of this committee is to review burn occurrence literature and determine what if any burn occurrences to add to the PTOS and to determine if any changes should be made to the current burn occurrences in PTOS.
- Chairperson: Mary Lou Patton, MD
- Staff Support: Nathan McWilliams
- Accomplishments:
  - Discussed the ABA’s pursuit of standard burn occurrence definitions.

Ad Hoc Burn Research
The purpose of this committee is to support and develop research on burn patient outcomes at non-burn centers in PA.
- Chairperson: Mary Lou Patton, MD
- Staff Support: Nathan McWilliams
- Accomplishments:
  - Turned over pursuit of regional burn disaster plans to the full burn committee.
  - The committee then went on hiatus until further burn research is requested.

Committee to Develop Site Survey Outcome Measurements
Meets at least quarterly and is charged with developing a standardized system for performance improvement in Pennsylvania which would allow for a more outcomes oriented approach to trauma center accreditation.
- Chairperson: Patrick Reilly, MD
- Staff Support: Nathan McWilliams
- Accomplishments:
  - Finalized the use of the ACS opportunities for improvement nomenclature.
  - Discussed future revisions to POPIMS.
  - Approved new Opportunities for Improvement list in POPIMS.

Ad Hoc Occurrences Committee
This committee is a sub-committee of the Committee to Develop Site Survey Outcome Measurements and is tasked to review, update, and align the PTOS occurrence definitions with other accrediting body definitions. Committee met twice in 2011.
- Chairperson: Patrick Kim, MD
- Staff Support: Kristine Lucabaugh
- Accomplishments:
  - Reviewed PTOS Occurrence definitions assuring alignment with NTDB occurrence definitions.
  - Chairperson Patrick Kim, MD obtained membership to an American College of Surgeons Committee focused on reviewing hospital complication definitions. Dr. Kim shared the PTOS definition of the decubitus ulcer complication resulting in a change in the national trauma databank definition.
**Pediatric Trauma Committee**
Met quarterly to review standards which apply to care of the pediatric trauma patient and is charged with pediatric trauma system development. This committee, at a minimum, is comprised of all trauma coordinators and medical directors from Pediatric Level I and II Trauma Centers. Non-pediatric center representatives are also included.
- Chairperson: Barbara Gaines, MD
- Vice Chairperson: Chris Gessner
- Staff Support: Kevin Burd
- Accomplishments:
  - State-wide education presented at Annual Conference & Meeting
  - Ongoing development of pediatric standards for adult trauma programs.
  - Pediatric Radiology statement posted on PTSF Website.

**Research Committee**
Met quarterly to prioritize clinical and trauma system research topics involving the use of PTOS data and acted in an advisory capacity to trauma centers wishing to perform research studies utilizing PTOS data.
- Chairperson: Jack Wilberger, MD
- Staff support: Nathan McWilliams
- Accomplishments:
  - Approved multiple studies submitted by trauma centers.
  - Discussed future direction of the research committee.
  - Provided input to an internal Trauma Registrar workflow study.
  - Provided input for a geriatric triage study conducted by one of our trauma centers in conjunction with the Geriatric committee.

**Standards Committee**
Met quarterly to revise and develop standards for trauma center accreditation.
- Chairperson: Michelle Fontana, RN
- Staff support: Susie Werner, RN
- Accomplishments:
  - Formed Level III workgroup resulting in revision of Level III standards including Mandatory Transfer Out Criteria which was approved by the PTSF Board of Directors.
  - Revised standards for both adult and pediatric trauma centers for all levels in the following areas: Trauma Medical Director, Nursing Credentialing, Radiology, Spiritual Counseling, Radiology, Performance Improvement, and Glossary Definitions (Core Panel, Research). See www.ptsf.org for a complete list of changes.
  - Approved several alternate pathway requests for non-board certified physicians.
**Trauma Registry Committee**
This committee met 4 times to review and recommend changes to the PTOS trauma registry data elements.
- Chairperson: Richard MacKenzie, MD
- Staff support: Kristine Lucabaugh
- Accomplishments:
  - Increased use of webinar technology for statewide registrar education.
  - Reviewed NTDB co-morbid conditions for adoption in PTOS.
  - Completed stage 1 of data submission process to the central site web portal.
  - Reviewed multiple registry data elements and concepts and made recommended changes.
  - Provided support to PA Trauma Quality Improvement Program software users.

**Geriatric Trauma Committee**
The vision of the committee is to pioneer and excel in the care of the injured elderly patient in Pennsylvania.
- Chairperson: Robert Barraco, MD
- Staff Support: Kevin Burd
- Accomplishments:
  - State-wide education presented at Annual Conference & Meeting
  - Ongoing development of a geriatric standard for adult trauma programs
  - Development of a retrospective research study on geriatric triage.

**Ad Hoc E-AFS Committee**
The purpose of this committee was to assist PTSF staff in developing, revising, and testing a PTSF Electronic Application for Survey in collaboration with staff from Digital Innovations, Inc.
- Staff Support: Nathan McWilliams
- Accomplishments: Recommended, approved and implemented changes to the EAFS software. Developed an online tutorial for site surveyors to review prior the accreditation visit.
ACCREDITED PA TRAUMA HOSPITALS
October 1, 2010 through September 30, 2011 (Level I and II)
November 1, 2010 through October 31, 2011 (Level III)

1. Abington Memorial Hospital
2. Albert Einstein Medical Center
3. Allegheny General Hospital
4. Altoona Hospital
5. Aria Health - Torresdale Campus
6. The Children's Hospital of Philadelphia
7. The Children's Hospital of Pittsburgh
8. Community Medical Center
9. Conemaugh Memorial Medical Center
10. Crozer-Chester Medical Center
11. Geisinger Medical Center
12. Geisinger Wyoming Valley Medical Center
13. Hahnemann University Hospital
14. Hamot Medical Center
15. Lancaster General Hospital
16. Lehigh Valley Hospital
17. Paoli Hospital
18. Penn State Milton S. Hershey Medical Center
19. Pocono Medical Center
20. The Reading Hospital and Medical Center
21. Robert Packer Hospital
22. St. Christopher's Hospital for Children
23. St. Luke's Hospital
24. St. Mary Medical Center
25. Temple University Hospital
26. Thomas Jefferson University Hospital
27. University of Pennsylvania Health System, University of Pennsylvania Medical Center
28. UPMC Mercy
29. UPMC Northwest
30. University of Pittsburgh Medical Center
31. York Hospital
Pennsylvania Trauma Outcome Study  
Statewide Trauma Registry Database  

INCLUSION CRITERIA

The Pennsylvania Trauma Outcome Study is the Pennsylvania Trauma Systems Foundation statewide trauma registry, which contains data collected by each accredited trauma center in the state. Unlike other states, Pennsylvania does not collect information on every patient treated in a trauma center who is injured. Data must meet strict inclusion criteria. These criteria have evolved over the years as a function of review by the PTSF Trauma Registry Committee. Only patients with the following criteria are submitted:

ALL patients admitted for treatment of a diagnosis of trauma (ICD-9-CM injury codes 800-995) and who meet any of the following criteria:

- All Intensive Care Unit (ICU) admissions (2:1 ratio) - Excluding ICU used as a PACU
- All step-down unit admissions (4:1 ratio)
- All Dead on Arrivals (DOA), pronounced dead after arrival
- All Trauma Deaths
- All trauma patients remaining at your facility over 48 hours, beginning from the time of arrival to the Emergency Department. Trauma patients are defined as patients remaining at your facility for the treatment or diagnosis of trauma.
- All admitted transfers In

  e.g. Transfer In: Patient seen at another facility and transferred to your facility. Include patients transferred in from another accredited trauma center. Patients transferred into your facility and then discharged home from your ED should not be included in the PTOS.

- All transfers Out

  e.g. Transfer Out: Patient seen in Emergency Department at your facility and then admitted either to the Operating Room for emergency surgery or to the inpatient nursing unit. Then, due to a deteriorating condition, requires transfer to another accredited trauma center or burn center. Those patients must be included, as well as those patients who are admitted to the Emergency Department and then transferred to another accredited trauma center or burn center. Patients transferred out to any other hospital should not be included.

- Cases meeting any of the above criteria, but have no documented injuries

- Burn cases which meet one of the above criteria plus one of the following:
- burned area 2° > 10%
- burned area 3°: any age group
- chemical burn
- electrical injury, including lightning injury
- burn of face, hands, feet or perineum or major joints
- inhalation injury
- burn accompanied by:
  - significant associated injury or pre-existing disease
  - suspected child abuse

**OPTIONAL**  
Elective admissions (patients not admitted through the Emergency Department not transferred from another facility) with an injury date > 72 hours prior to admission and an Injury Severity Score ≥ 13 may be submitted to PTOS. Elective admissions with injury > 72 hours prior to admission and ISS < 13 need not be submitted.

**EXCLUDING -**

- Patients who only suffer a solitary hip fracture, (ICD-9-CM code 820.0 - 820.9 with no other injuries (contusion and abrasions of skin should not be considered other injuries)) as a result of a fall on the same level (ICD-9-CM E-codes E885.0-E888.9). The intent is to exclude solitary hip fractures that are pathological or osteopenic in nature.
- Asphyxiation with no other injuries
- Drownings
- Poisonings (Chemical Ingestion, including internal organ burns from chemical ingestion, classifiable to the ICD-9-CM code 947)
- Admitted patients injured while in a trauma center, i.e. a patient who fell out of bed.
- Patients only having a hypothermia or hyperthermia diagnosis with no other injuries.

FYI: Exclusions override inclusions.

**STATISTICAL HIGHLIGHTS:**

- There are currently 38,822 patients in the registry with an ED admission date of calendar year 2011. We received 1,200 more trauma incidents in 2011 as compared to 2010.
- The sum total of all trauma patients submitted to the PTOS database as of December 31, 2011 is 607,725.
- Approximately 60 requests for data were processed using data provided by the Pennsylvania Trauma Outcome Study database. There was a 27% increase in data requests in 2011 as compared to 2010.
Pennsylvania Trauma Outcome Study Highlights

2011 Articles Published Utilizing the Pennsylvania Trauma Outcome Study


Patients qualifying for the PTOS continue to increase.

This chart clearly illustrates that despite the increase in the PTOS population over the last decade, the percent of mortality for these patients continues to decrease.
Elderly Population

As Pennsylvania’s population continues to age the number of elderly patients qualifying for the PTOS continues to increase.

Patients aged 85 or greater continue to be a growing trauma population. In 2008, for the first time ever, PTOS patients aged 85 or greater exceeded the number of PTOS patients aged 65-74. Patients aged 65 or greater make up 31.8% of 2011 trauma patients.
Cause of Injury

Motor vehicle crashes and falls remain the two primary causes of injuries for patients cared for in Pennsylvania’s trauma centers. Motorcycle injuries and Assaults remain the third highest causes of injuries in Pennsylvania in 2011. Falls as a cause of injury is continuing to outpace all other injury mechanisms in the PTOS registry.

For the first time in 2004, falls as a mechanism of injury passed the total number of motor vehicle and motorcycle accidents. By 2011, the number of PTOS cases with a fall mechanism of injury is double the number of PTOS cases with motor vehicle or motorcycle mechanism of injury. The number of falls is nearly six times greater than the number assaults and gunshot wound cases for 2011.
Payment

The chart below represents the top primary payers over the last several years. Historically, Commercial Insurer has been the primary payer for the majority of PTOS cases. Starting with 2011, Medicare has become the primary payer for the majority of PTOS cases. Together, Medicare and Medicaid account for 43% of PTOS cases as the primary payer. That is a 2% increase from 2010.
Finances

PTSF is a non-profit Pennsylvania corporation operating under Section 501 (C) (3) of the Internal Revenue Service Code. Primary funding is obtained through fees associated with the accreditation process. Occasionally federal and state grants are obtained. In 2011 the Office of Rural Health awarded PTSF a grant of $22,000 to cover expenses incurred by offering rural trauma development education at the annual fall conference. The Department of Health also awarded PTSF a grant of $3,520 to assist with collection of data related to injuries and deaths in PA collected by accredited trauma centers in PA.

Total Income: $1,491,351  Total Expenses: $1,438,062  Surplus: $53,289

2011 REVENUE
2011 EXPENSES

- Salaries, Benefits: $664,847
- Staff Training & Travel: $25,287
- Rent & Utilities: $47,193
- Legal: $64,672
- PTOS Contract: $287,238
- Education: $82,744
- Accreditation: $76,161
- Administration & General: $189,920
- Rent & Utilities: $47,193
- Staff Training & Travel: $25,287
State and National Partners

The Pennsylvania Trauma Systems Foundation partners with many organizations to accomplish the work of trauma system development, education, and research.

Some of the many organizations the Foundation collaborates with are:

- American Association for the Surgery of Trauma (AAST)
- American College of Emergency Physicians, PA Chapter (ACEP)
- American College of Surgeons (ACS)
- American Health Information Management Association (AHIMA)
- American Trauma Society (ATS)
- Central Pennsylvania Health Information Management Association (CPHIMA)
- Department of Health, Bureau of Emergency Medical Services
- Department of Health, Injury Community Planning Group (ICPG)
- Eastern Association for the Surgery of Trauma (EAST)
- Firearm Injury and Prevention Center at Penn (FICAP)
- Hospital and Healthsystem Association of Pennsylvania (HAP)
- Leadership Harrisburg Area (LHA)
- National Association for Health Care Quality (AHCQ)
- National Association of EMS Officials (NASEMSO)
- Pennsylvania Chamber of Commerce
- Pennsylvania Chapter of ACS Committee on Trauma
- Pennsylvania Chapter of the American College of Emergency Physicians
- Pennsylvania Department of Public Welfare
- Pennsylvania Division of American Trauma Society
- Pennsylvania Emergency Health Systems Council (PEHSC)
- Pennsylvania Health Information Management Association (PHIMA)
- Pennsylvania Health Management Corporation (PHMC)
- Pennsylvania Injury Reporting and Intervention System (PIRIS)
- Pennsylvania Legislative Budget and Finance Committee (LBFC)
- Pennsylvania Medical Society
- Pennsylvania Office of Rural Health
- Pennsylvania Rural Health Association
- Pennsylvania State Nurses Association
- Society of Trauma Nurses
2011 PENNSYLVANIA TRAUMA SYSTEMS FOUNDATION STAFF

Back from left to right:
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Susie Werner, RN, MAS – Director of Accreditation
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