Current Status

Why do we need Verification?
- Evidence of the need to improve trauma services in Australasia
- Evidence of improved outcomes and reduced length of stay in institutions which have undergone Verification
- Literature exists regarding the benefits of Trauma Verification and impact on patient outcomes

How has the Trauma Verification Program been Established?
- Seeding grant from Royal Australasian College of Surgeons (RACS)
- Multidisciplinary committee with support of relevant Colleges
- The Australasian Trauma Verification Manual (including the pre-review questionnaire and Model Resource Criteria prepared by the multi-disciplinary Verification Working Party)

What has been Achieved?
- Intercollegiate cooperation
- Revision of standards for trauma care in Australasia
- Many Verification Reviews in most States and Territories
- Development of Trauma Verification expertise
- Positive feedback from trauma program directors undergoing a review

Future Directions
- Refinement of standards as evidence emerges
- Ongoing multidisciplinary support
- Verification of non-major trauma care providers
- Closer alliance with purchasers of trauma care (E.g. Departments of Health)
Development of the Trauma Verification Program

Introduction

Verification of trauma services providing care to the severely injured patient is an exciting advance in trauma care in Australasia. There is overwhelming evidence that trauma services in many jurisdictions in Australasia need to be dramatically improved. This is why we need Verification.

Other health-care delivery systems have undergone an accreditation process with dramatic improvement in results. An excellent example is the breast screening program.

In March 2000, under the chairmanship of Dr Jim McGrath, a multi-disciplinary group of committed clinicians was assembled to form the Trauma Verification Sub Committee. Utilising a seeding grant of $50,000 from the Royal Australasian College of Surgeons, a pilot program of six consultation visits was conducted over 24 months in Australasia.

The Verification process has used overseas visiting trauma clinicians and Australasian trauma clinicians and has borrowed heavily from the verification experience of the American College of Surgeons Committee on Trauma (ACS CoT). In that country the Verification process has been active for almost 20 years and has undergone considerable evolution. We have been most grateful for the support from the ACS CoT who has provided guidance. They have also allowed Trauma Verification Sub-Committee members to attend both the ACS CoT Verification Review Committee meetings and observe on Verification visits to hospitals in the United States.

It is important to note the difference between the ACS CoT Verification program and the Australasian Verification program - namely the Australasian program’s involvement of clinicians other than surgeons - which brings a broader and more collegial emphasis to Verification.

Committee Structure

The Trauma Verification Sub-Committee is a Sub-Committee of the Trauma Committee of the Royal Australasian College of Surgeons. Despite the very close links with the Royal Australasian College of Surgeons, the Verification Sub-Committee is a truly multi-disciplinary Inter-Collegiate process. The partners in the Verification process are:

1. JFCIM - Joint Faculty of Intensive Care Medicine
2. ANZCA - Australian & New Zealand College of Anaesthetists
3. ACEM - Australasian College for Emergency Medicine
4. ATS - Australasian Trauma Society
Consultation vs. Formal Verification

The objective of a Trauma Verification Consultation visit is to provide a constructive review of the trauma service, provide critique and identify areas where the service would be unable to meet the criteria stipulated if undergoing Formal Verification. It can be used to improve the trauma service or as preparation for Formal Verification. Every Trauma Service must undergo a Consultation Verification visit prior to the more rigorous Formal Verification visit. A Consultation Site Visit requires only a small, two-three member team.

A Formal Trauma Verification visit has the objective of determining what areas a trauma service is unable to meet the criteria stipulated. It has a full multi-disciplinary team of usually five members which reviews all areas of delivery of trauma care within the hospital.

Designation

Trauma Verification does not designate which hospitals receive major trauma. Major trauma services are designated by either the regional health service or the state Departments of Health.

Verification is aimed at improving the quality of care and not deciding which institutions should manage major trauma.
The Program

Pre-Review Questionnaire
Each institution undergoing a Consultation or Formal Verification visit completes a pre-review questionnaire which details strengths and weaknesses of the trauma services. The pre-review questionnaire allows the site review team to focus on those particular issues relevant to that service.

Model Resource Criteria
The resource criteria were deemed either essential or desirable for a major trauma service in Australasia. Where possible, evidence supporting inclusion for the criteria was listed. However, many of the essential criteria for provision of major trauma care in the Australasian hospital environment remain a consensus statement rather than inclusion based on a high level of evidence drawn from randomised controlled clinical trials.

Site Review
A team of five reviewers conducts the site review for a Formal Trauma Verification visit and a two-three member team is required for a Consultation visit. The team is multidisciplinary, reflecting the broad range of clinical care required by the multiply injured patient.

The team reviews the pre-review questionnaire with the key trauma service personnel on the evening prior to the visit, undertakes a detailed tour of the facility, meets key clinicians and hospital management and conducts medical chart reviews to verify the quality of trauma care being provided.

Reporting Mechanism
At the immediate completion of the site review the institution receives verbal feedback. The team leader of the Verification team has this responsibility.

Each institution undergoing either a formal Trauma Verification visit or a Consultation visit receives a comprehensive written report from the Verification team.

The report is submitted to the Trauma Verification Sub-Committee for final approval before the report is sent to the authorising body and/or the trauma director and hospital administration.

Funding
The initial funding for the Trauma Verification process was via a grant from the Royal Australasian College of Surgeons of $50,000.

Website
The Trauma Verification Program maintains a comprehensive webpage with up to date and relevant information regarding the program. For further information, please visit www.surgeons.org/traumaverification
Achievements

Intercollegiate Cooperation
The cooperation between the different clinical disciplines involved in care of the major trauma process has been the success of the program to date.

Revision of Standards for Trauma Care in Australasia
Model resource criteria for major trauma services were developed beginning with a workshop sponsored by Royal Australasian College of Surgeons in December 2000. The workshop was well attended and received participation from a broad range of clinicians involved in major trauma care. Important documents which formed the framework for the development of the current version of the Model Resource Criteria include:

- *Resources for Optimal Care of the Injured Patient: 1999 Committee on Trauma American College of Surgeons (The Gold Book)*
- *Report of the Working Party on Trauma Systems National Road Trauma Advisory Committee (NRTAC) 1993*
- *Review of Trauma & Emergency Services - Victoria 1999 (ROTES Report)*

Consultation Visits
Six hospitals undertook Trauma Verification in 2000/2001 as part of the pilot project. These were:

- Liverpool Hospital, NSW
- New Children's Hospital, Westmead, NSW
- Alfred Hospital, VIC
- John Hunter Hospital, NSW
- Royal Adelaide Hospital, SA
- Westmead Hospital, NSW

Development of Trauma Verification Expertise
Undertaking a critical peer review of a trauma service requires a new skill and so far over 20 clinicians have been initiated in these skills. As the program advances further, more reviewers will be trained.

Benefits
The process of preparation for a Trauma Verification Formal or Consultation visit has been described by the individual institutions undergoing Verification as highly productive. It has provided an opportunity to critically evaluate the structure, staffing and resources within each individual institution providing care for the major trauma patient.

It has been reported that the Trauma Verification process has enabled institutions to acknowledge in a substantive way their commitment to the provision of care to the seriously injured patient.

It has also been reported that participation as site review team members by experienced senior trauma clinicians (medical and nursing) has permitted an exchange of ideas and appreciation for solutions to shared challenges.

Reports from trauma program directors about the impact of Verification have been very positive. The following comments from trauma directors demonstrate the immediate value of a Trauma Verification or Formal Consultation visit:
"the best thing that has happened in trauma care"
"it identified areas of weakness that we were unaware existed"
"it emphasised the need for action"
"an extremely rewarding and informative exercise"
“Verification highlighted to hospital management the quality of work done by all those involved in the care of the multi-injured patient”
“Thirty five weaknesses in our Major Trauma Service were identified from the Verification Report, most of which have since been corrected. Verification has been the single most helpful and practical exercise I have undertaken in my experience in Trauma. It is the most effective tool to improve and upgrade a trauma service - both in terms of the relatively low-cost to the hospital and as a practical guide to problem solving”

Feedback
All trauma program directors who have undertaken a Trauma Verification Formal or Consultation visit are surveyed one year after the visit to assess the impact on each of those services. It is anticipated that as Trauma Verification Formal visits follow Consultation visits, evidence of the impact of the process in improving quality of care and trauma patient outcomes will be generated.

Costs
The cost of Trauma Verification can be recouped in better patient outcomes, fewer complications and shorter hospital stays. For instance, a saving of just 3–4 ICU bed days on one patient pays for the entire verification visit.

The fees for Trauma Verification are determined by the type of visit.

- Trauma Verification Formal Review fee: $10,500
- Trauma Verification Consultation Review fee: $8,500

Future Directions

Ongoing Multidisciplinary Support
Maintenance of the multidisciplinary support, from all the Colleges, is important to the continuing success and future of the Verification Program.

Verification of Non-Major Trauma Care Providers
As broader Verification expertise develops, smaller review teams will be able to consult and verify non-major trauma services.

Closer Alliance with Purchasers of Trauma Care
Clear liaison and reporting mechanisms with the trauma care funding providers is necessary. Ultimately the quality of care information gleaned from Verification might be used by designating agencies but the way in which such information is transferred must be transparent and agreed upon.

Dr Arthas Flavouris
Chairman
Trauma Verification Sub-Committee
January 2007
Appendix A

Evidence for Verification:

American College of Surgeons, Committee on Trauma Verification Review: does it really make a difference?

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Source

Abstract

BACKGROUND
Although not directly involved in designation per se, the American College of Surgeons (ACS) Committee on Trauma verification/consultation program in conjunction with has set the national standards for trauma care. This study analyzes the impact of a recent verification process on an academic health center.

METHODS
Performance improvement data were generated monthly from the hospital trauma registry. Forty-seven clinical indicators were reviewed. Three study periods were defined for comparative purposes: PRE (January, June, October 1997), before verification/consultation; CON (April 1999-October 1999), after reorganization; and VER (November 1999-September 2000), from consultation to verification.

RESULTS
Statistically significant (p < 0.05) quantitative and qualitative changes were observed in numbers (percent) of patients reaching clinical criteria. These included prehospital, emergency department, and hospital-based trauma competencies. Trauma patient evaluation (including radiology) and disposition out of the emergency department (< 120 minutes) improved in each study section (PRE, 21%; CON, 48%; VER, 76%). Enhanced nursing documentation correlated with improved clinical care such as early acquisition of head computed axial tomographic scans in neurologic injured patients (PRE, 66%; CON, 97%; VER, 95%). Intensive care unit length of stay (< 7 days) decreased (PRE, 87%; VER, 97.8%). Other transformations included increase in institutional morale with recognition of trauma excellence within the hospital and resurgence of the trauma research programs (60 institutional review board-approved projects).

CONCLUSION
The ACS verification/consultation program had a positive influence on this developing academic trauma program. Preparation for ACS verification/consultation resulted in significant improvements in patient care, enhancement of institutional pride, and commitment to care of the injured patient.
Appendix B

SAN ANTONIO, TEXAS October 12, 13, 14 2000

Session VII A - Paper #26 1:50 p.m.

IMPACT OF PREPARATION AND ACHIEVEMENT OF ACS LEVEL 1 TRAUMA VERIFICATION RAISES HOSPITAL PERFORMANCE AND IMPROVES PATIENT OUTCOME

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Invited Discussant: Brent A. Eastman, MD

Objective:

To assess the impact on patient outcome and hospital performance of preparing for and achieving ACS Level 1 Trauma Verification.

Hospital Setting:

A previously designated state Regional Trauma Center located adjacent to a major metropolitan area. Preparation for ACS verification began in early 1996 and was completed in early 1998. Final verification took place in April 1999. Data were analyzed before (1994) and after (1998) process.

Hospital System Improvements:

Marked increase in administrative support with trauma organized as one of the hospital’s six centers of excellence. Two full-time board certified trauma/critical care surgeons were added to the current six trauma surgeons. Their major focus was trauma care. Trauma support staff was also increased with case managers, a trauma nurse practitioner, additional trauma registrars, and administrative support staff. Education and CQI were markedly expanded starting in 1996.

Results:

There were 1098 trauma patients admitted in 1994, 1658 in 1998. Overall mortality decreased (1994: 7.38%, 1998 5.37%, p<0.05). There was a marked decrease in mortality for severely injured (ISS>30) patients (1994: 44% mortality [38/86], 1998: 27% [22/80], p<0.04). Average LOS also decreased (1994: 12.22 days, 1998 9.87 days, p<0.02). This yielded an estimated cost savings for 1998 of greater than $7,000/patient (total saving estimate of 11.6 million dollars).

Conclusions:

Trauma system improvement as related to achieving ACS Level 1 verification appeared to have a positive impact on survival and patient care. There were cost savings realized which helped alleviate the added expense of this system improvement. The process of achieving ACS Level 1 Verification is worthwhile and can be cost effective.