CHEST TRAUMA MORTALITY RATE REMAINS UNCHANGED OVER A 10 YEAR PERIOD AT A LEVEL 1 TRAUMA CENTRE IN SOUTHWESTERN ONTARIO
SV Patel, K Vogt, RA Malthaner
Department of Surgery, Schulich School of Medicine & Dentistry, University of Western Ontario, London, ON, Canada

INTRODUCTION
• Trauma to the chest remains a significant cause of mortality and morbidity in the multiply injured patient.
• Thoracic trauma is the cause of death in 25% of these patients and a contributory cause of death in an additional 25%.
• The objective of this study was to determine the changes in mortality in the different types of thoracic trauma over a ten year period in southwestern Ontario.

METHODS
• Patients admitted to the trauma service at London Health Sciences Centre between January 1, 1999 and December 31, 2008 were retrospectively reviewed from a prospective database.
• Inclusion Criteria:
  » Injury Severity Score (ISS) > 12
  » Age ≥ 18
  » Patient sustained a chest injury
• Statistical analyses were performed using STATA version 10.0 (STATA Corp, College Station, Tex).

RESULTS
• There were 5,188 patients admitted to the trauma service during the ten year period, 2078 (40%) had a chest injury. The average injury severity score (ISS) of all patients was 29 with an average abbreviated injury score (chest) of 3.4.
• Penetrating trauma accounted for 67 admissions (3%) during the ten year period, with a ten year mortality rate of 13.4%.
• Blunt trauma was seen in 2,011 admissions, with a mortality rate of 13.6% over this period.
• Intentional trauma (self inflicted and assaults) was observed in 129 patients (6.2%).
• 90% of penetrating traumas were intentional compared to only 3% of blunt traumas.
• The proportion of intentional traumas did not change significantly during the study period (p=0.476).
• There was no change in overall mortality rate over the ten year period (p=0.172) and no increase in the mortality rate from penetrating trauma over this period (p=0.174).

CONCLUSIONS
• Thoracic trauma continues to represent a significant proportion of trauma admissions.
• At our centre, penetrating trauma was rare, and most often intentional.
• The mortality rate over the period did not change significantly, in either penetrating trauma or chest trauma as a whole.
• Surgical intervention was required in only a minority of cases.