SETTRAC response to Memorial Hermann Hospital Increased Diversion Time Post Ike

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Trauma Volume 2008
MHH- Red line

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07:36 Wednesday, October 8, 2008 9

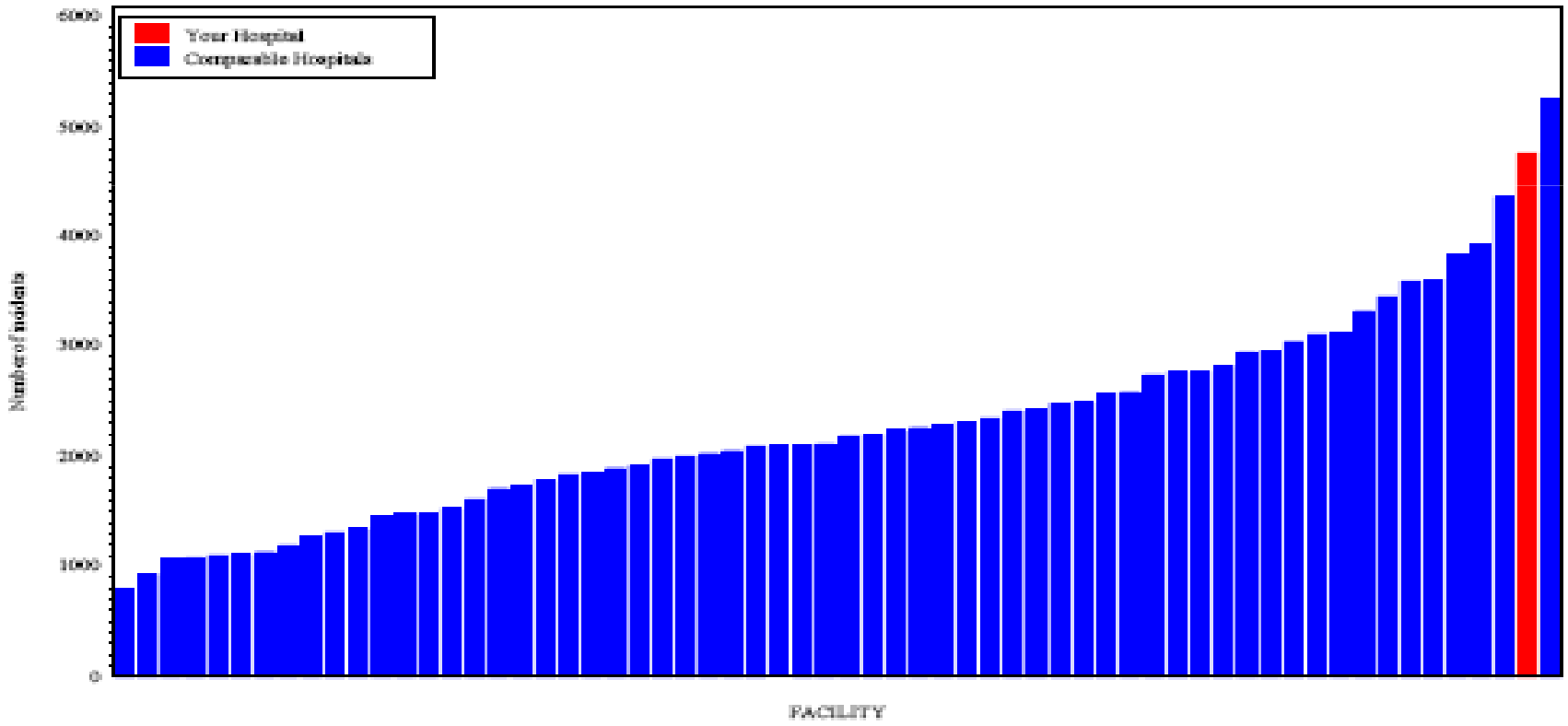
NTDB NATIONAL TRAUMA DATA BANK

Benchmark Report 2008

Facility ID : 48022

Comparison Group: Trauma Level I and Bed Size > 600

Number of Incidents per Facility



Trauma Volume 2009
MHH- Red line

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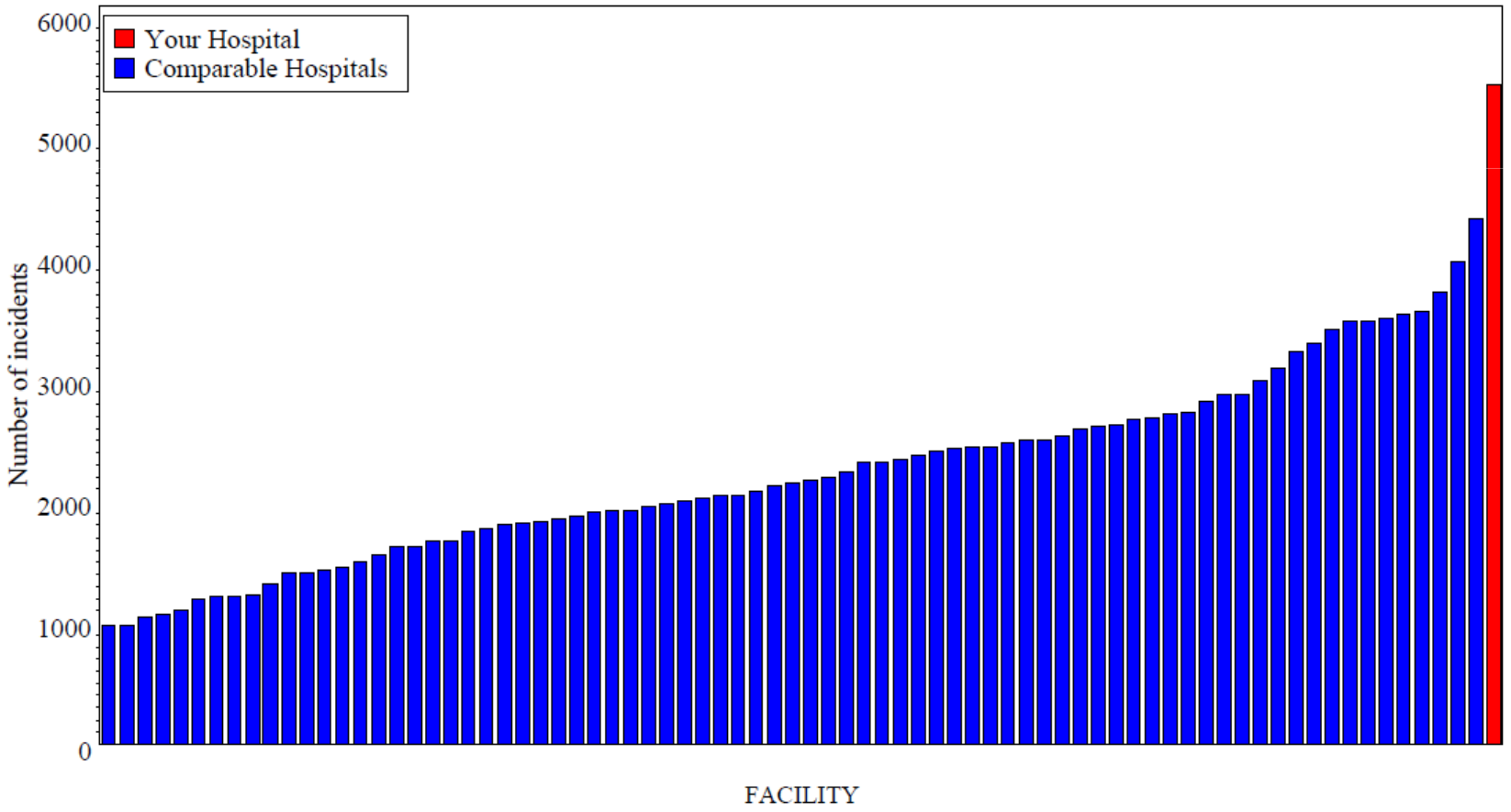
NTDB NATIONAL TRAUMA DATA BANK

Benchmark Report 2009

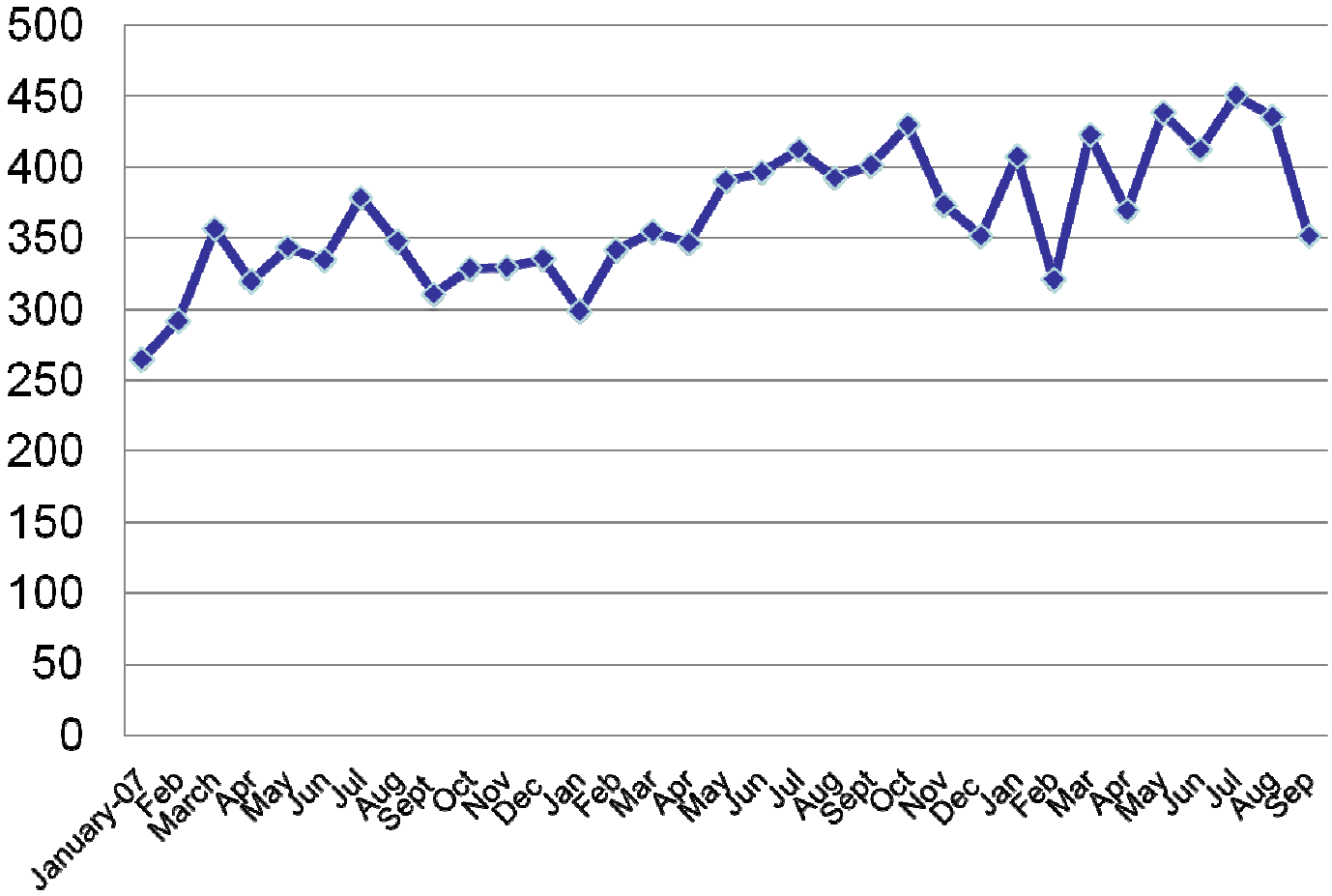
Facility ID : 48022

Comparison Group: Trauma Level I and Bed Size > 600

Number of Incidents per Facility



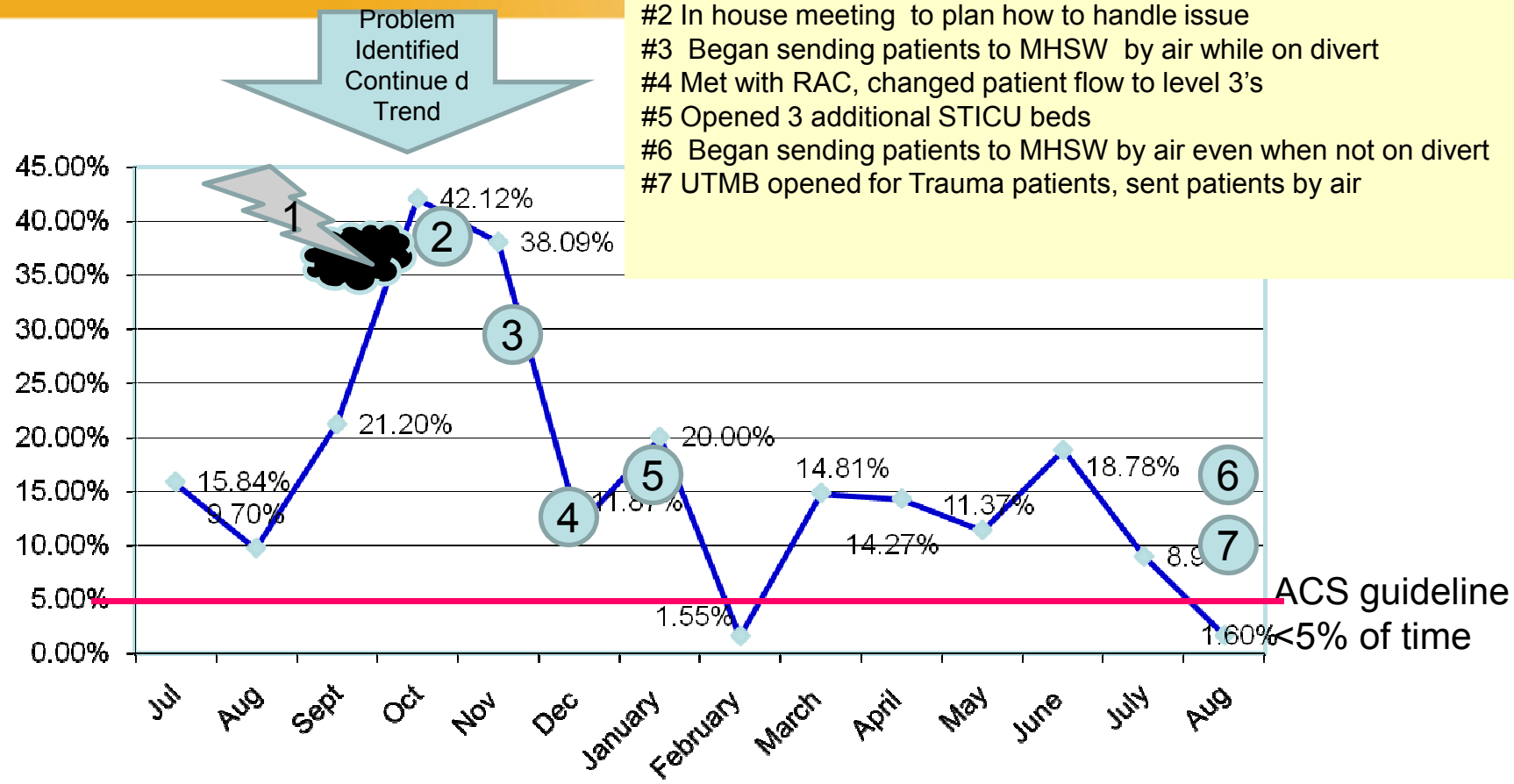
Adult Trauma
By Month: 2007/2008/2009



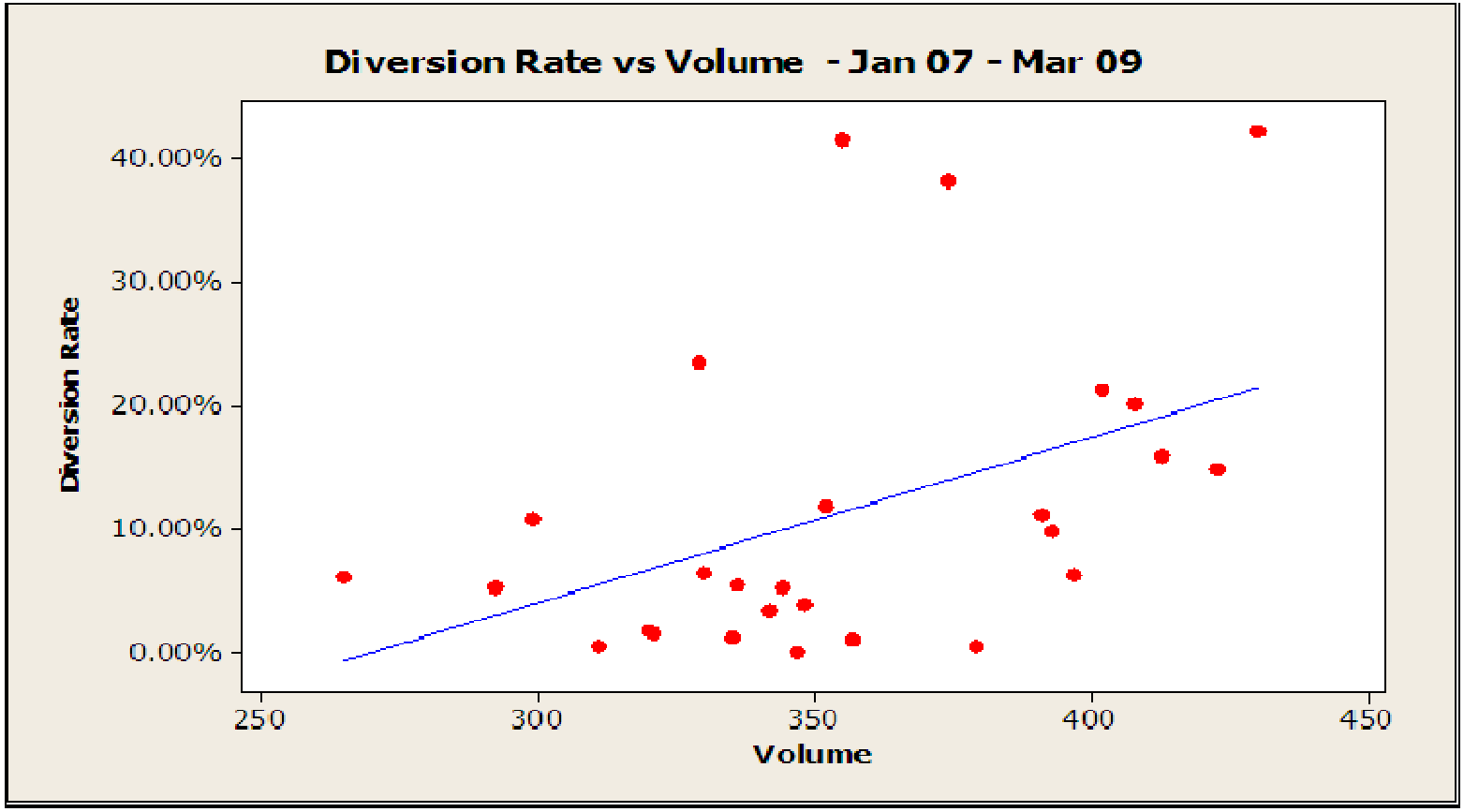
Data includes all trauma admissions, deaths, transfers, and COU, excludes burns and pediatric trauma patients

Trauma Diversion MHH- Adult Percentage of Time by Month 2008-2009

#1 Hurricane IKE
#2 In house meeting to plan how to handle issue
#3 Began sending patients to MHSW by air while on divert
#4 Met with RAC, changed patient flow to level 3's
#5 Opened 3 additional STICU beds
#6 Began sending patients to MHSW by air even when not on divert
#7 UTMB opened for Trauma patients, sent patients by air



Adult Trauma Admissions/Trauma Diversion By Month: 2007/2008/2009



P Value = 0.017

The NEW ENGLAND JOURNAL of MEDICINE

2006;354;4

A National Evaluation of the Effect of Trauma-Center Care on Mortality

Ellen J. MacKenzie, Ph.D., Frederick P. Rivara, M.D., M.P.H., Gregory J. Jurkovich, M.D., Avery B. Nathens, M.D., Ph.D., Katherine P. Frey, M.P.H., Brian L. Egleston, M.P.P., David S. Salkever, Ph.D., and Daniel O. Scharfstein, Sc.D.

- RESULTS: The in-hospital mortality rate was significantly lower at trauma centers than at non-trauma centers
  - 7.6 percent vs. 9.5 percent
  - One-year mortality rate 10.4 percent vs. 13.8 percent
  - Differences in mortality rates were primarily confined to patients with more severe injuries.

- CONCLUSIONS: The risk of death is significantly lower when care is provided in a trauma center than in a non-trauma center and argue for continued efforts at regionalization.

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The Journal of TRAUMA® Injury, Infection, and Critical Care

Emergency Department Diversion and Trauma Mortality: Evidence From Houston, Texas

Charles E. Begley, PhD, YuChia Chang, BS, Robert C. Wood, MPH, and Arlo Weltge, MD

Background: This study examined the relation between trauma death rates and hospital diversion in the Houston emergency medical service area.

Methods: A risk analysis and logistic regression were performed comparing death rates for trauma patients hospitalized on significant emergency department diversion days, defined as days when both of two level 1 hospitals were on diversion for more than 8 hours, and on nonsignificant diversion days, defined as one or both hospitals on diversion for fewer than 8 hours or not on diversion at all.

Results: The percentage of deaths among all trauma patients, transfers, and nontransfers admitted on significant diversion days was consistently higher than on nonsignificant diversion days, but the difference was not statistically significant. A higher mortality rate, approaching statistical significance, was found for one subgroup of the most severe trauma patients who had been transferred from another hospital.

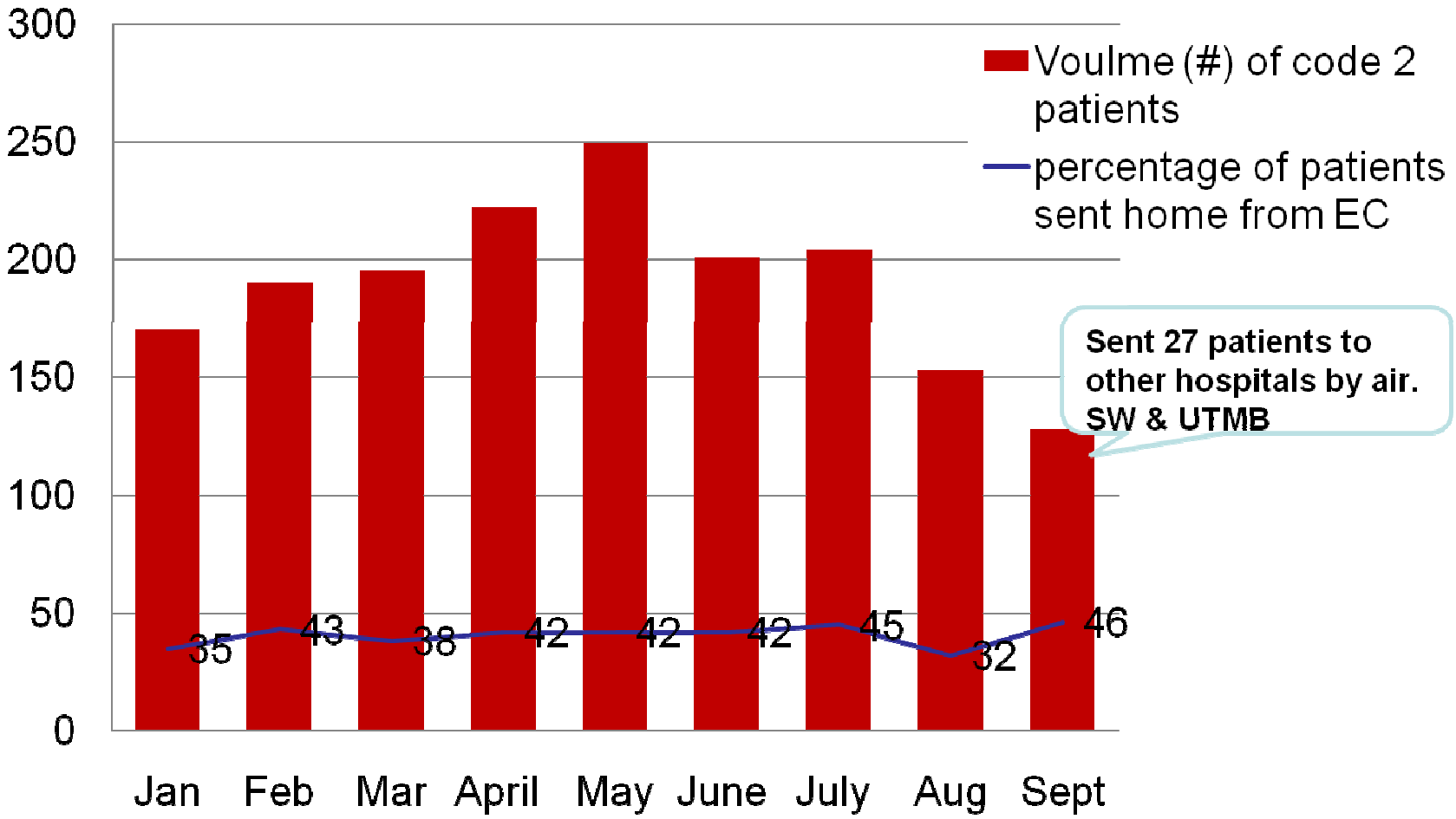
Conclusions: A possible association between emergency department diversion and death rates in Houston trauma hospitals was found, particularly among the most severe trauma patients transferred from lower-level hospitals. A follow-up study is needed for further investigation of this relation.

Key Words: ED crowding, EMS diversions, Trauma mortality.

J Trauma. 2004;57:1260–1265.

- 5000 admissions year at Memorial Hermann Hospital
- Diversion when full
- Code Red report

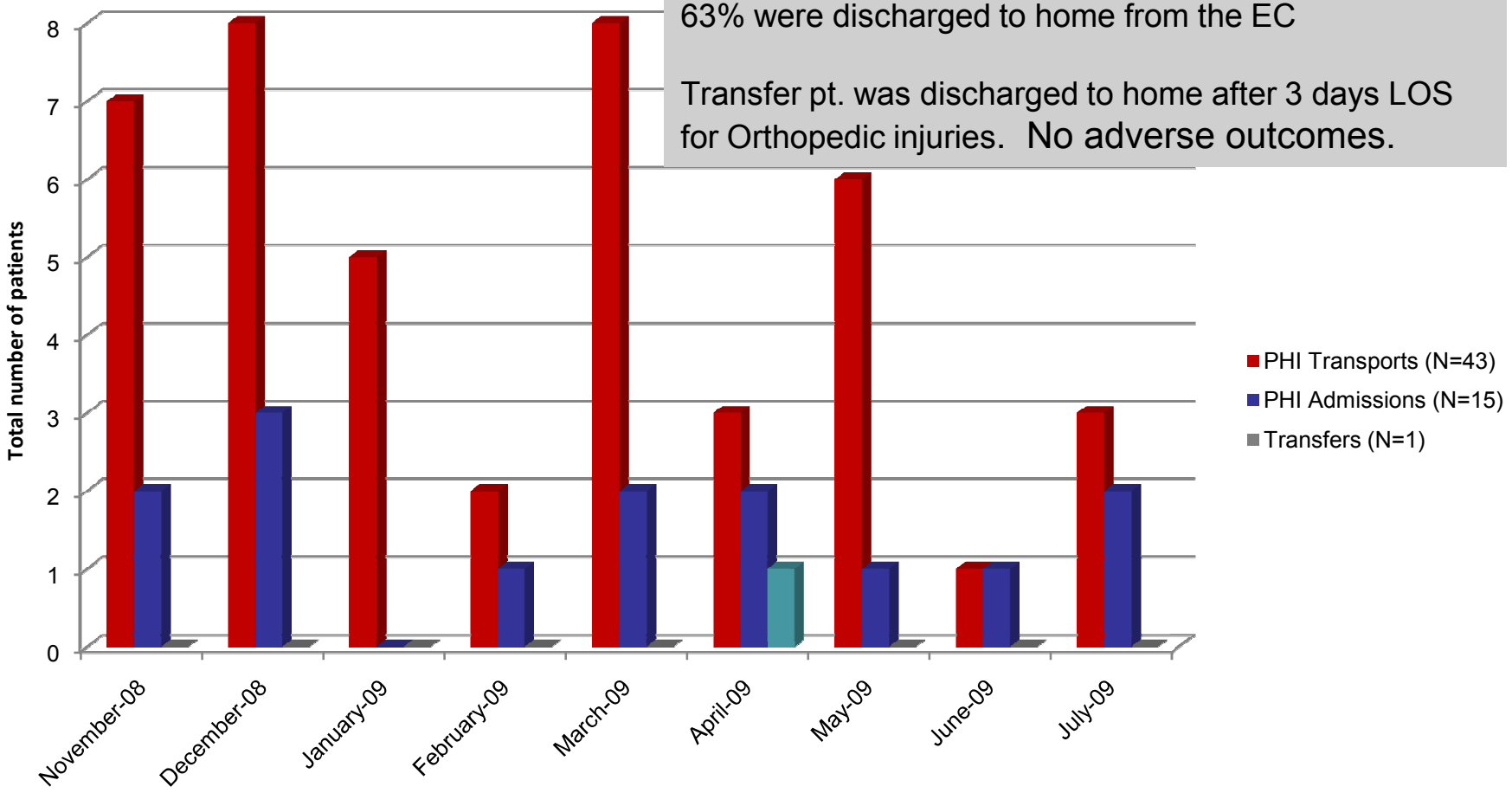
Code 2 Volume 2009 Adult



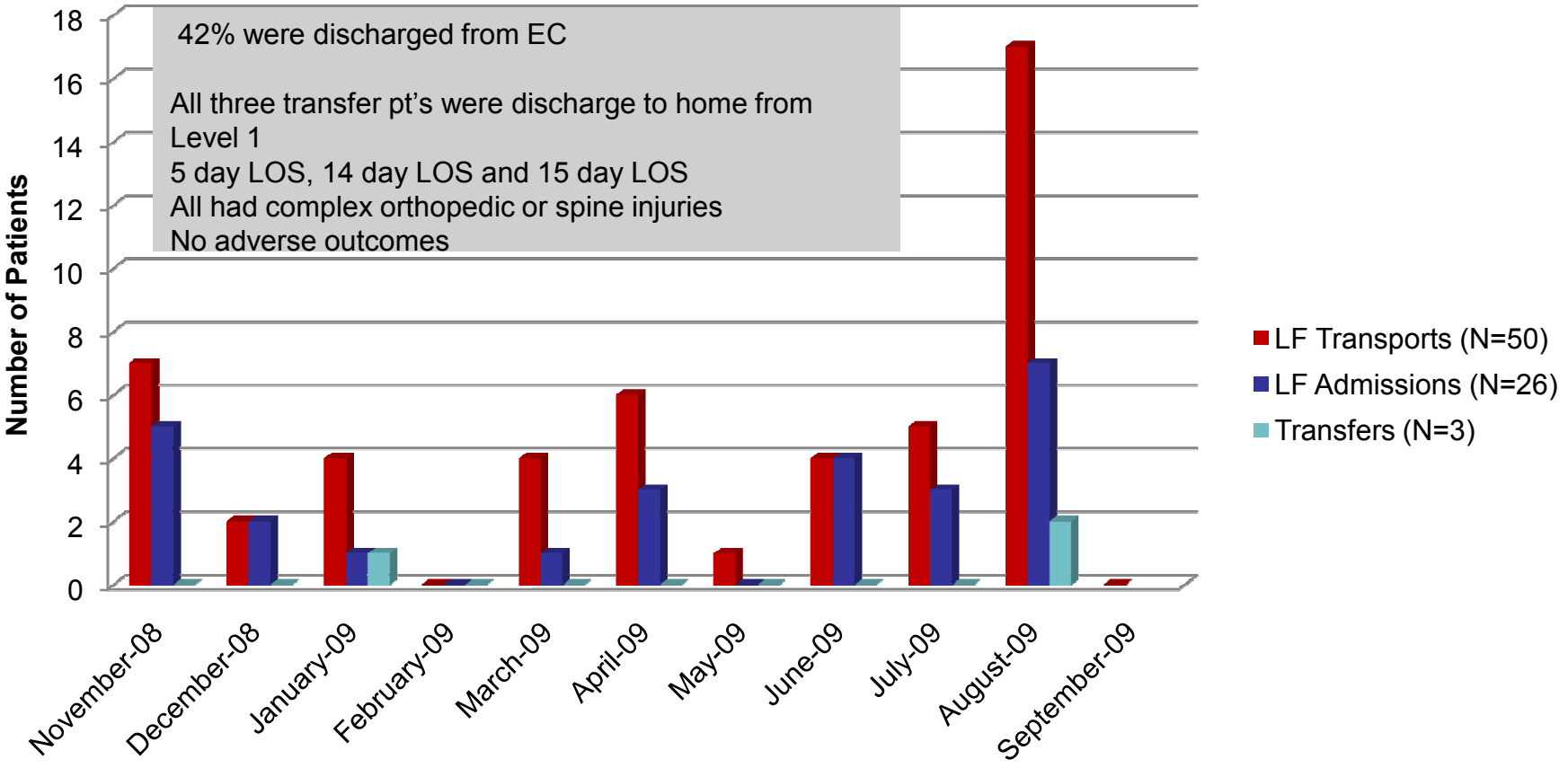
PHI Transports Scene to Memorial Hermann Southwest Hospital

63% were discharged to home from the EC

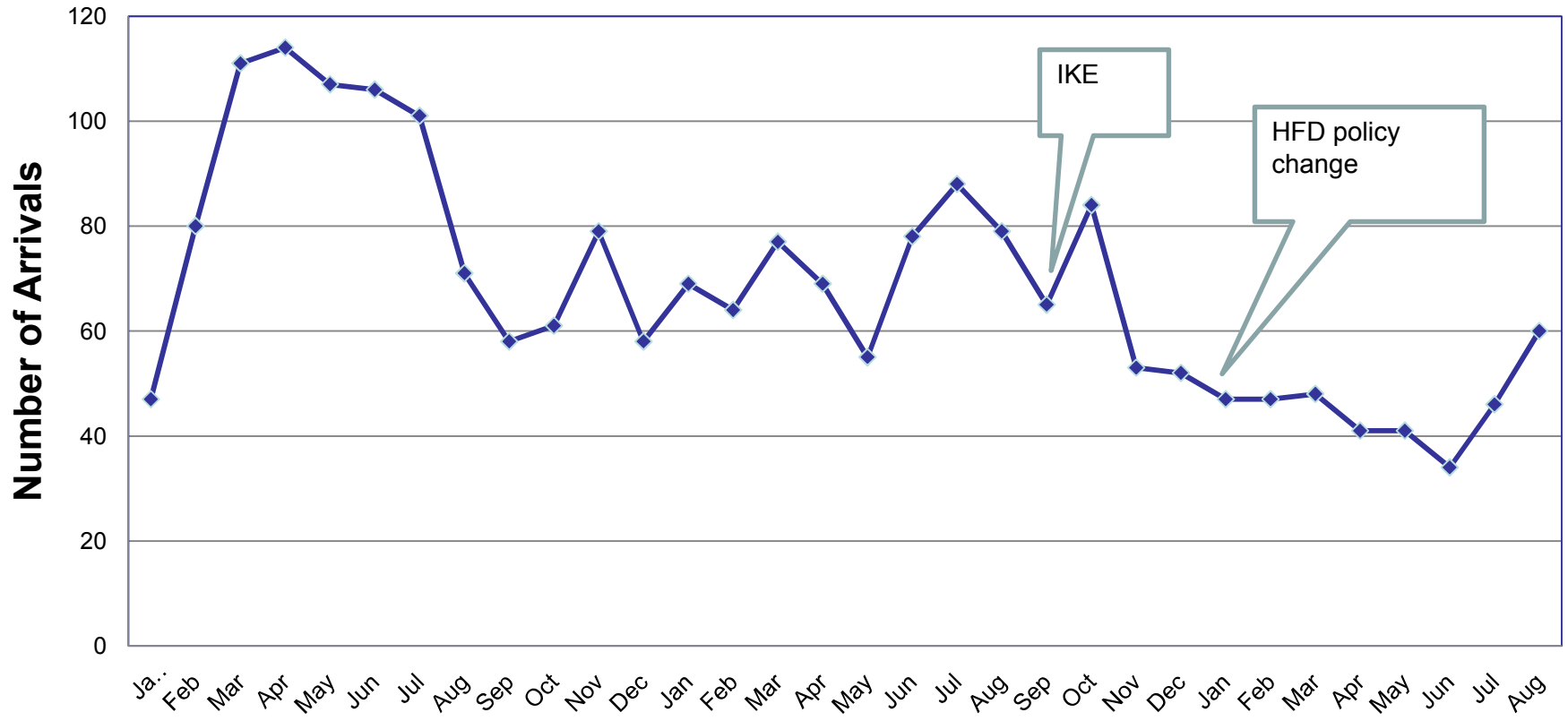
Transfer pt. was discharged to home after 3 days LOS for Orthopedic injuries. No adverse outcomes.



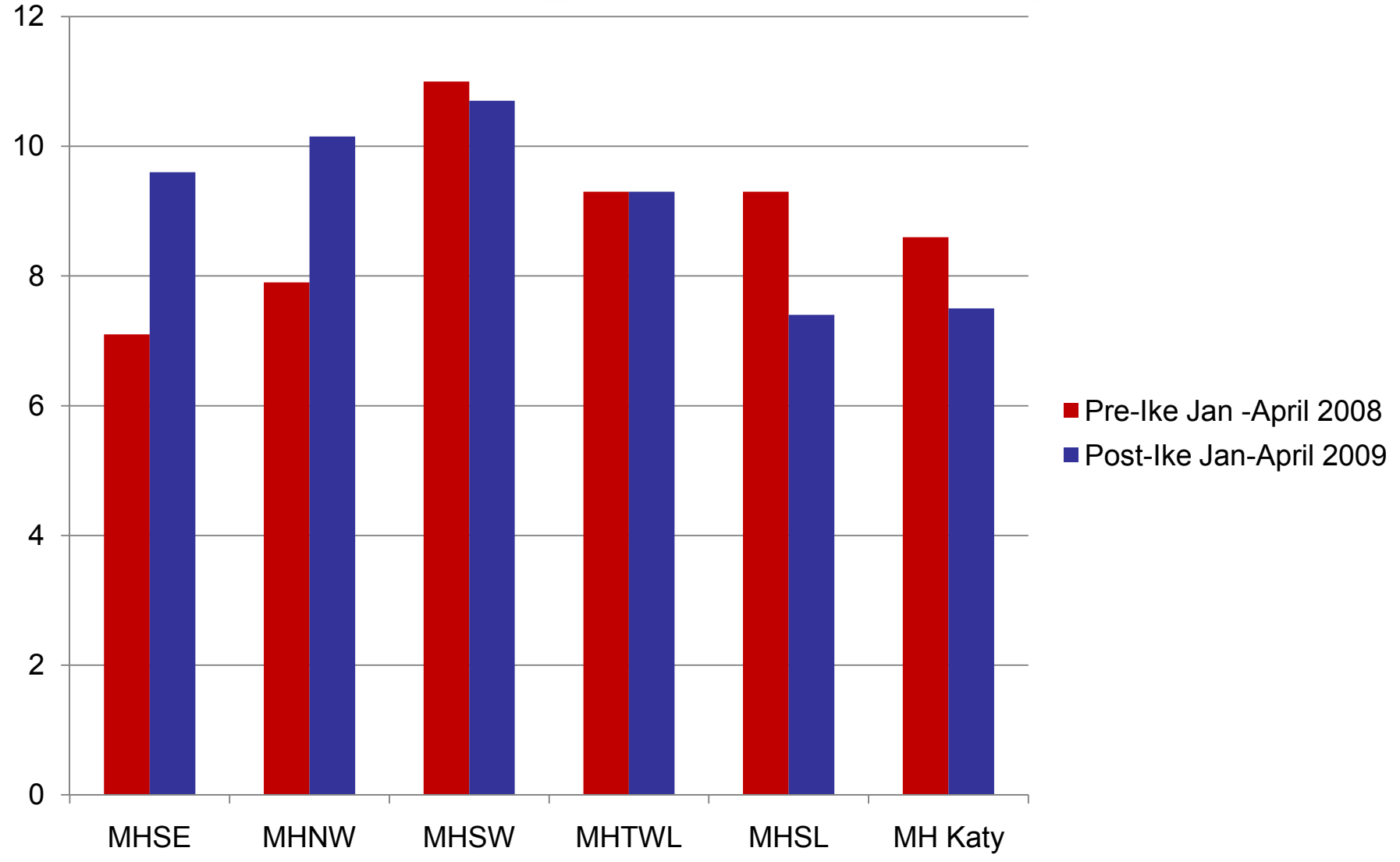
Trauma Life Flight Transports Scene to Memorial Hermann Southwest by Air



HFD Trauma Transports to Memorial Hermann TMC



ISS values for Trauma patients transported to level 3 or 4 by EMS



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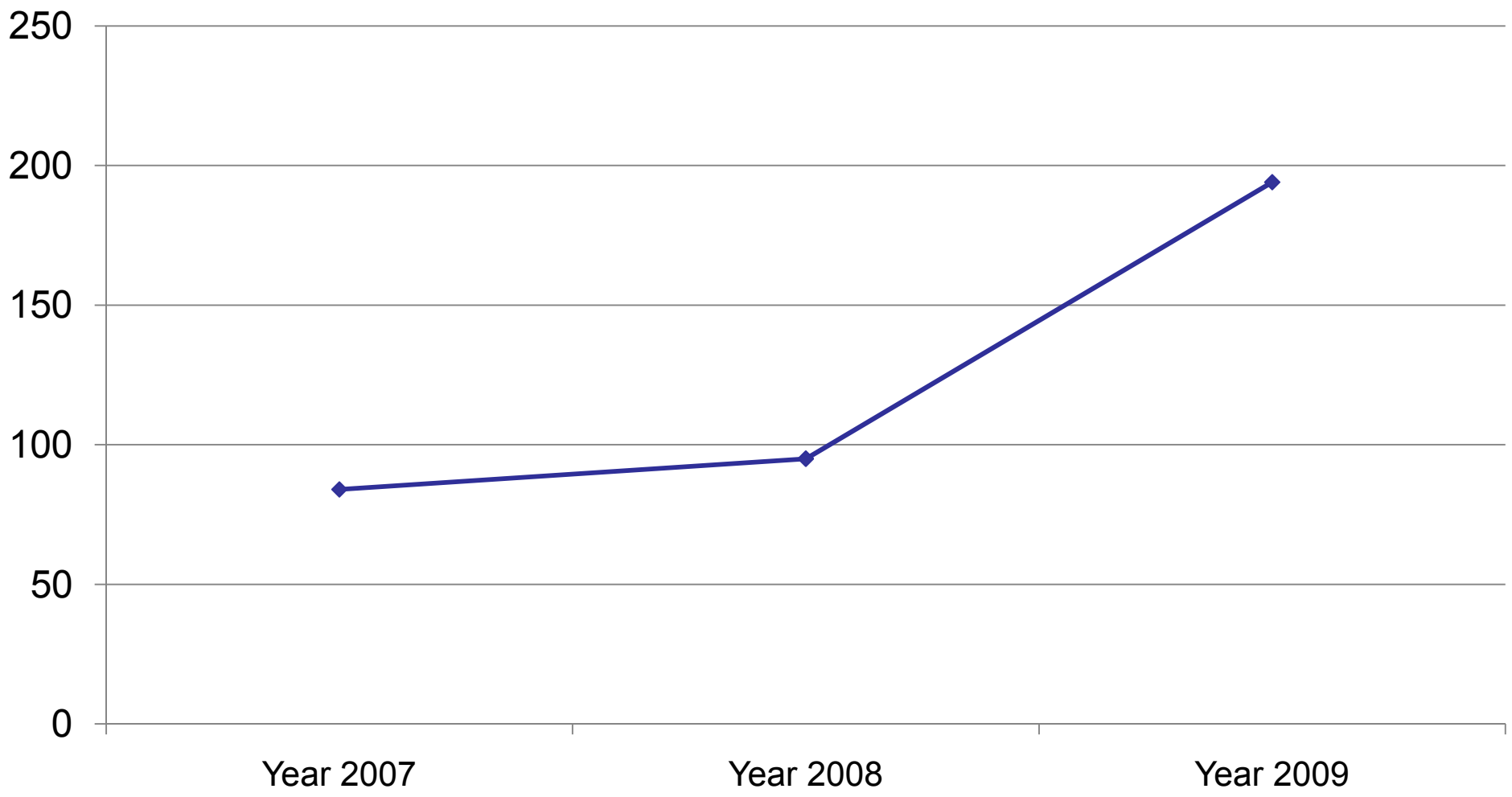
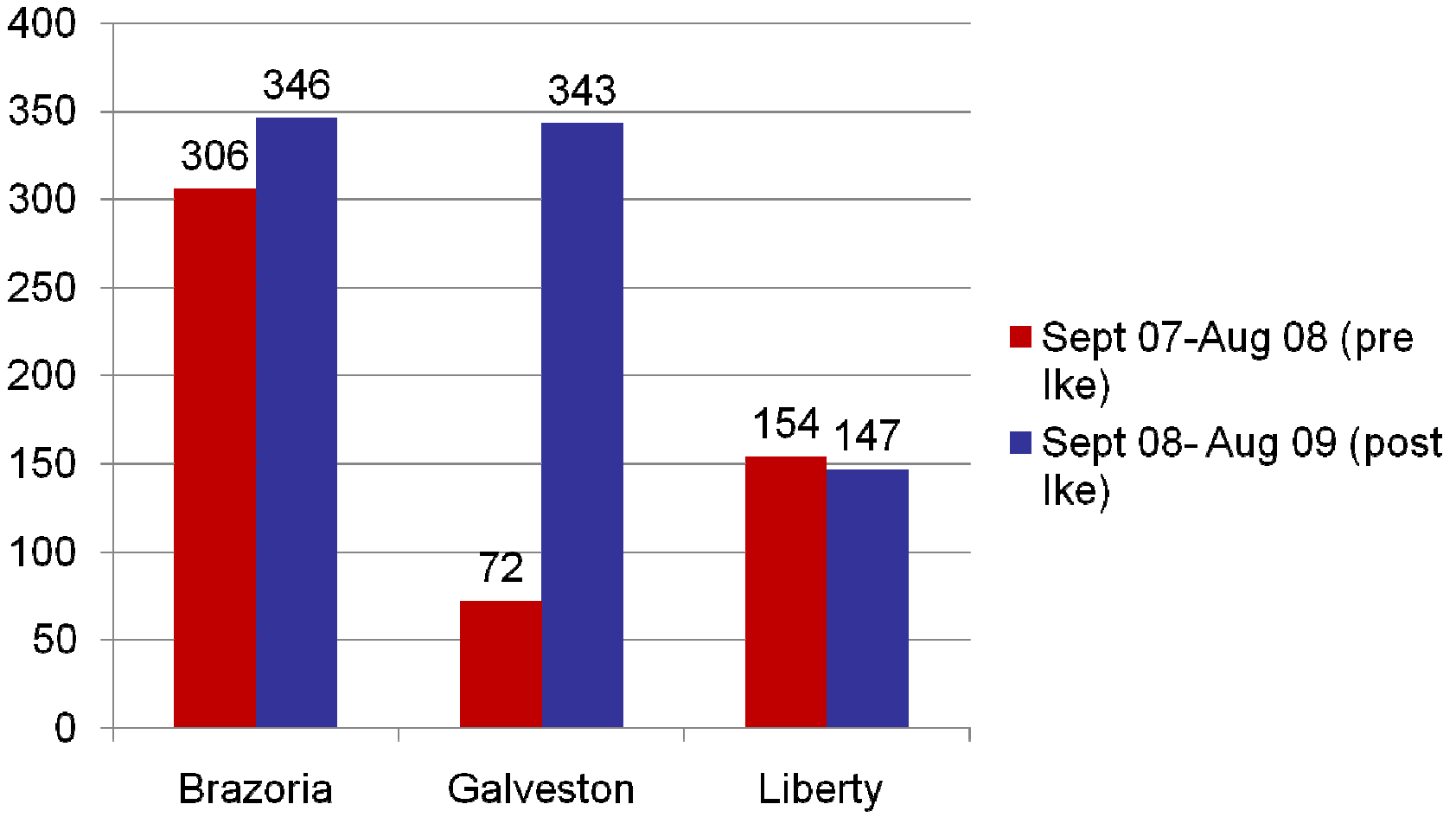
Review of January-August 2008 and January – August 2009 Data shows

- Overall increase to MHH level three trauma centers by 19% (N=179)
- Decrease in MH-TMC level one trauma center by 2.8% (N=49)

Ground EMS transports to Level 3 requiring transfer to MHH TMC Level 1



Trauma Arrivals by County



Summary

- Trauma diversion was addressed at several points
  - Internal- working with MHSW and Life Flight
  - HFD changed pre-hospital triage guidelines thus-
    - Dispersing appropriate patients to Level 3
    - Increased percent of patients to BTGH by ground
  - UTMB re-opening as trauma center

  While this data is only reflective of the data from the Memorial Hermann Hospital system, we are aware that it is the result of pre-hospital, all trauma centers and non-trauma centers working together to achieve optimal patient outcomes.

- Goal- decreased diversion time and level 1 hospital open to receive transfers of major trauma.

  THE SYSTEM WORKS!