BestPractices

Team and Triage and Treatment Urgent Matters Grant

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The Science, Art and Business of Patient Care

BestPractices, Inc.

- **Creating the FUTURE of Emergency Medicine**

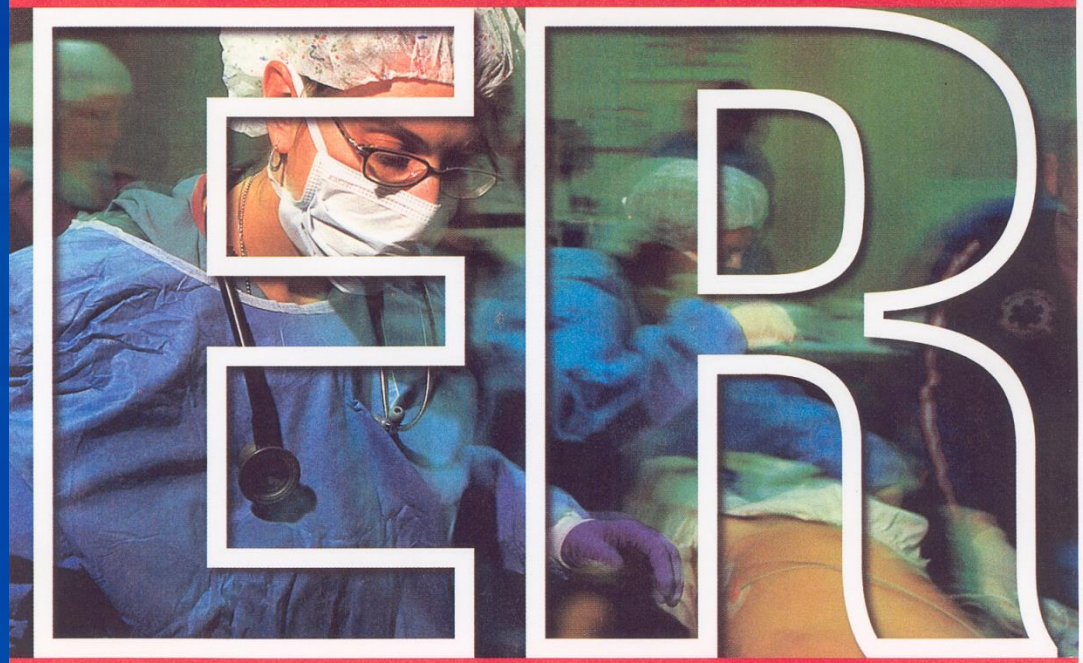
  The SCIENCE of Clinical Excellence
  The ART of Customer Service
  The BUSINESS of Execution

THE HANSSEN MOLE HUNT • DODGING THE DOW

U.S.News & WORLD REPORT

SEPTEMBER 10, 2001 www.usnews.com

CRISIS IN THE ER



Turnaways and huge delays are a surefire recipe for disaster. What you can do

$3.95

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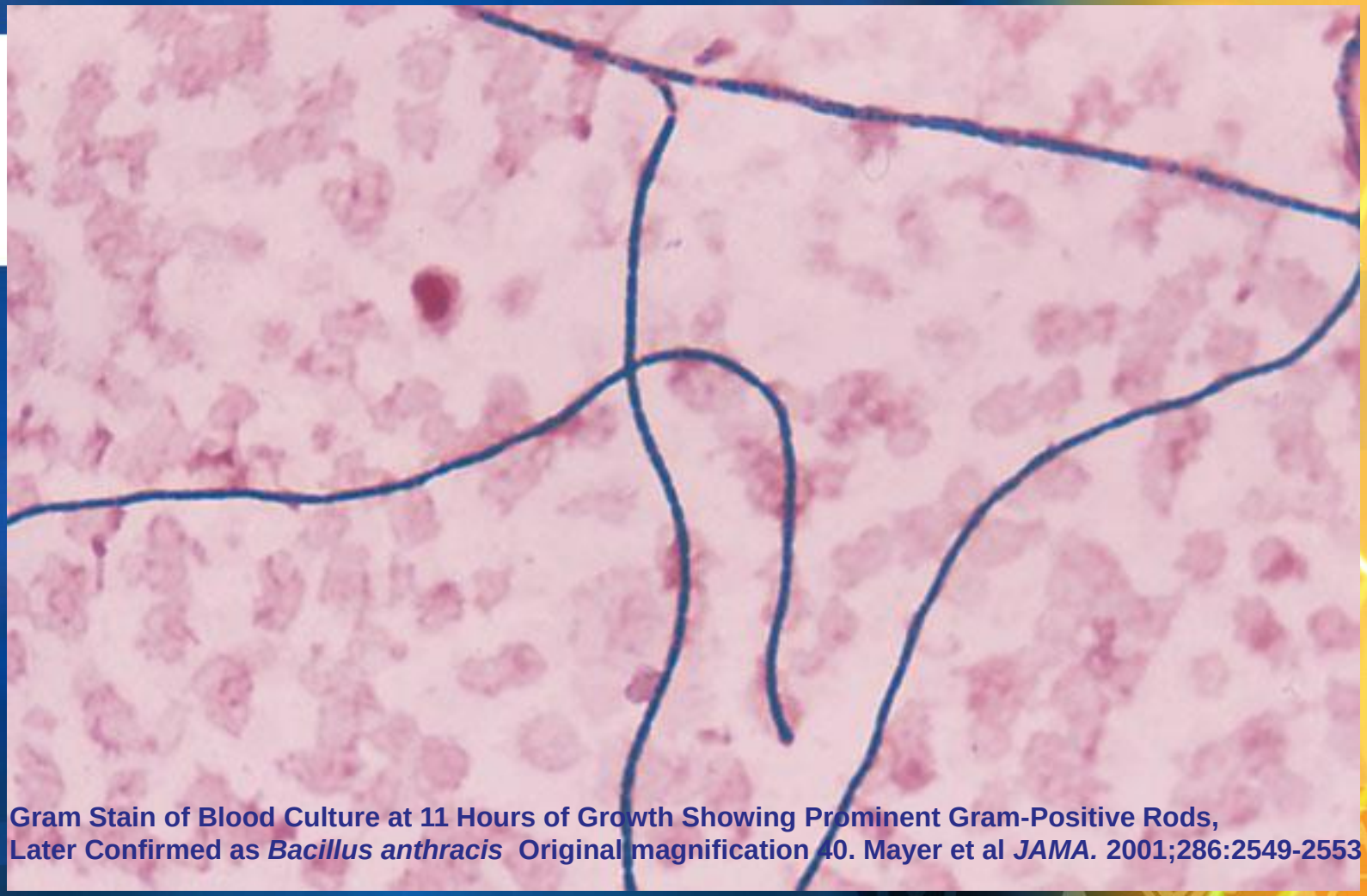
Business of Patient Care

Inova AirCare , Inova Health Systems, Falls Church, VA responding to the Pentagon on September 11, 2001

Ground Zero Redux 10/19/01



Gram Stain of Blood Culture at 11 Hours of Growth Showing Prominent Gram-Positive Rods, Later Confirmed as *Bacillus anthracis* Original magnification 40. Mayer et al *JAMA.* 2001;286:2549-2553

Walking the Tightrope: The State of the Safety Net in 10 US Communities

- The emergency department “frequently serves as the safety nets’ ‘safety net’ seeing individuals who have nowhere else to go for timely care.”

Robert Wood Johnson
Urgent Matters

- Team Triage and Treatment
- Adopt-A-Boarder/Code Omega

Team Triage and Treatment

- 79% of the time at IFH/IFHC, there are more of them than there are places to put them
- Advisory Board data-21% is national average
- This is a daily occurrence at virtually (literally?) all safety net hospitals
- Nonetheless, the times, types and acuity of such patients are relatively known by PI data
- T3 deploys personnel and process to address this issue in a replicable fashion

Team Triage and Treatment (T3)

- Intriguing concept-if Team Triage, not MD
- Clearly, the patient doesn't think the ED visit starts until they see 'the Doctor"
- Early trials showed promise and problems
- Promise-the patients loved it and a lot of care and testing was obviated
- Problems-the nurses HATED it-because there was no one to DO the stuff that the MD generated

T3 Personnel-Philosophy

- Emergency Physician
- Emergency Nurse
- Scribe
- Tech-Sec
- Registrar
- Begin the evaluation and Treatment at the Point of Contact

T3

- Addresses capacity constraints creatively by “moving upstream” in the process in a dramatic fashion-forward deployment of resources
- Requires “catching the ball” in the back
- Requires not just bodies, but fundamental change in resources, processes, and philosophy
- Registration is a key stakeholder and must be involved early

T3-Hypotheses

- Patient Satisfaction Will Improve
- Employee Satisfaction Will Improve
- For T3 patients, Turn Around Times Will Decrease
- Patients leaving before treatment (LWBS) will decrease (79% - no room assignment)
- T3 will, at worst, be revenue-neutral
- Patient Safety may improve
- The impact will disproportionately be on E/M 3-4

T3- Data Sources

- Patient Satisfaction
- Employee Satisfaction
- TurnAround Time
- LWBS
- Revenue impact
- Patient Safety
- Patient Acuity

- 100% Patient Survey
- 100% Staff Survey
- 100% Chart Review
- 100% Chart Review
- Cost-benefit analysis
- Occurrence reports
- E/M code reports

T3 Obstacles

- Places
- Registration
- Personnel

- Processes
- Philosophy

- 2 beds and hallway
- COWS/QuickReg
- MD
- RN
- Scribe, registrar, sec/tech
- Balls in the air
- LBJ’s wisdom

T3 Implementation

- Weekly “Blasts” to provide consistency and promote problem identification
- 10 hour shifts, from 1000 to 2000, to match peak flow, based on Performance Improvement data
- Over 150 hours of T3 provided, in total
- “Downloads” on each shift to assess problems and fix them “on the fly”
- Fully implemented, an average of 4.7 patients per hour were seen

T3 Results-Patient Satisfaction

- Overall Experience-Triage
  - 81% Outstanding
  - 13% Very Good
  - 6% Good
- Seeing MD in Triage
  - 86% Outstanding
  - 7% Very Good
- Overall ED Experience
  - 86% Outstanding
- Amount of Time in ED
  - 87% Appropriate, 13% Somewhat too long
- Return/Loyalty
  - 100%

Conclusion ?

Regarding patient satisfaction, team triage was an overwhelming success !

Staff Satisfaction

- ED Runs More Smoothly
- Less Stress in “Back”
- Beneficial to Patients
- Beneficial to Staff

- MD-100% SA/A
- RN 86%SA/A-14%DA
- MD-13% SA, 87% A
- RN-71%SA/A, 29%DA
- MD-56% SA, 44% A
- RN-86%SA/A, 14%DA
- MD-33% SA, 67% A
- RN-86%SA/A, 14% D

Conclusion?

With regard to staff satisfaction, MDs were more satisfied than RNs, but both were in agreement that T3 was a success, particularly for the patient.

Turn Around Time

- Total TAT decreased 46 minutes (from 330 to 284) or a 15 % reduction
- This is the TOTAL reduction for ALL ED patients
- TAT for T3 patients decreased from 330 minutes to 118 minutes, or a 64% reduction in TAT
- 34% of T3 patients were “treated and streeted” (NOT triaged away-treatment completed at triage)

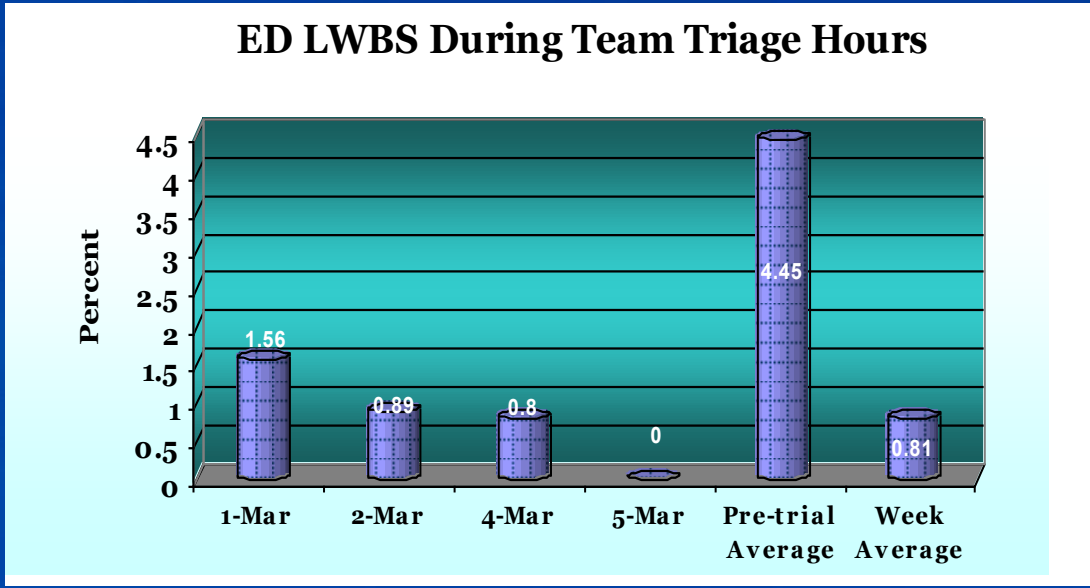
Abdominal Pain Subset

- Time to pain treatment decreased by 94 minutes
- 27% of all T3 patients had either an abdominal CT or pelvic US
- Time to completion of study declined 157 minutes
- Possible additional capacity effect

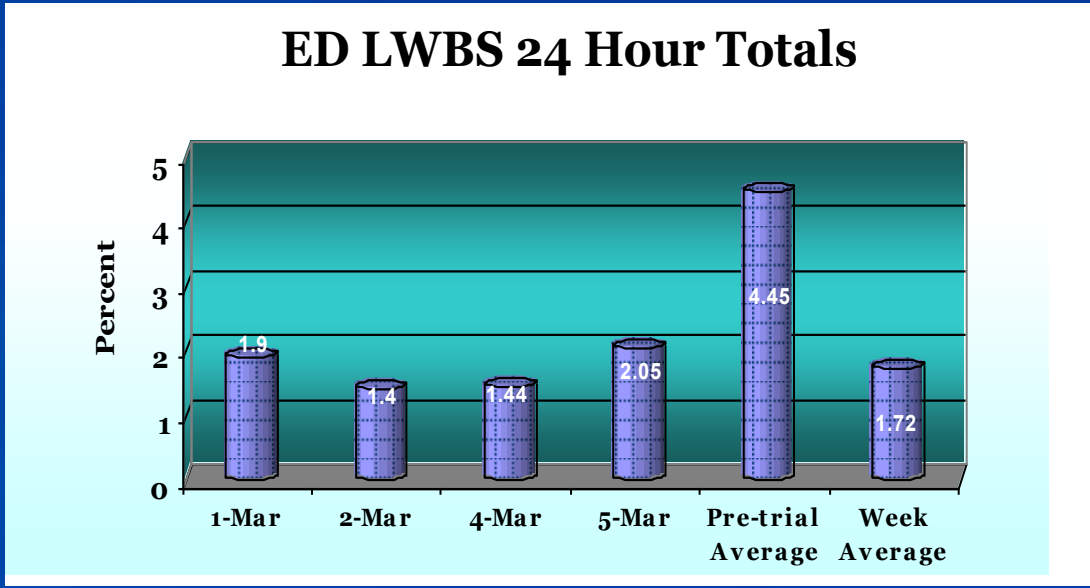
Conclusion?

Team Triage had a dramatic effect on TAT, even during hours and for patients when T3 was not in operation.

LWBS Decreased from 4.45 to 0.81 During T3 Hours



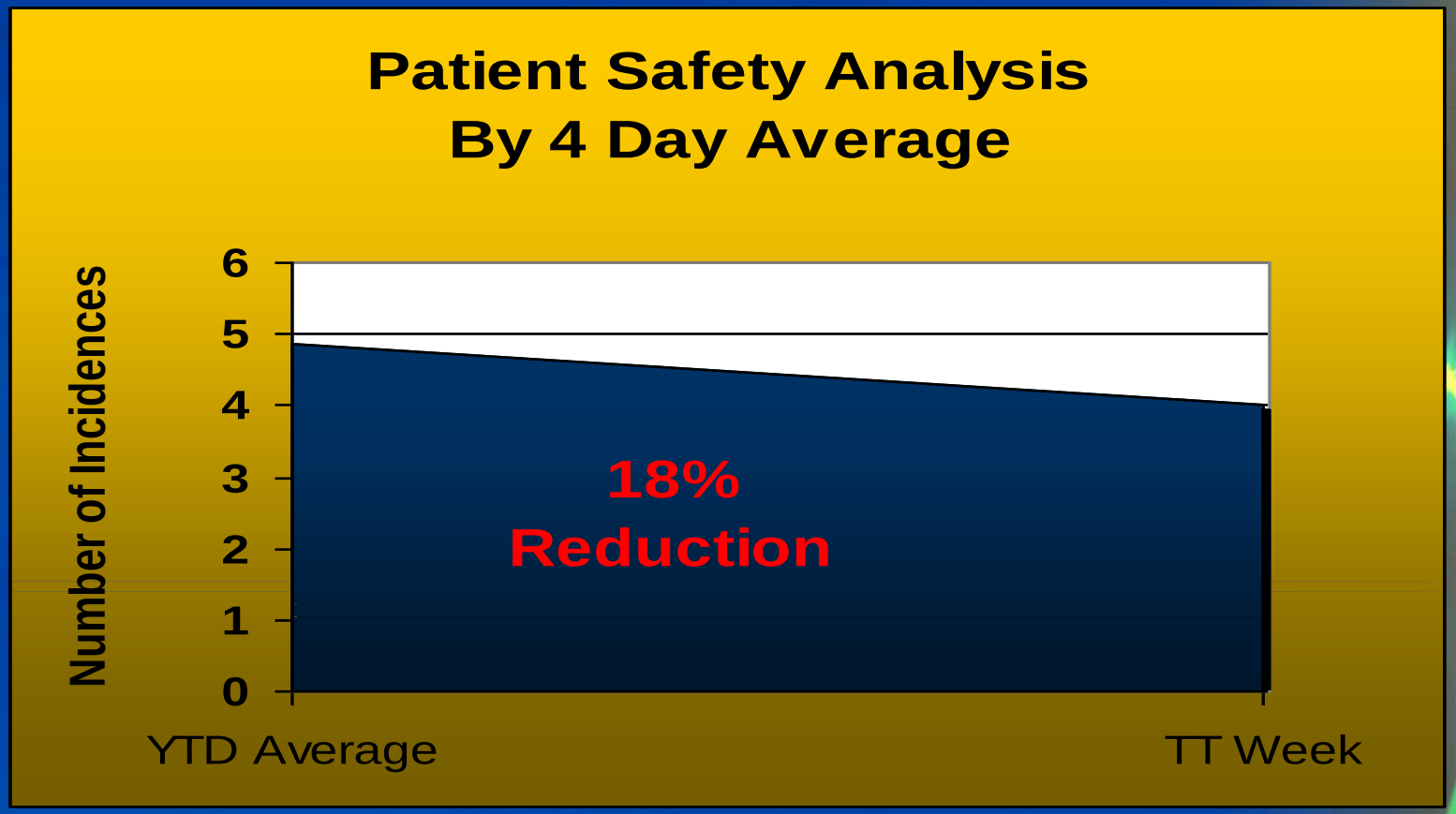
LWBS Decreased from 4.45 to 1.72 for the Entire Day



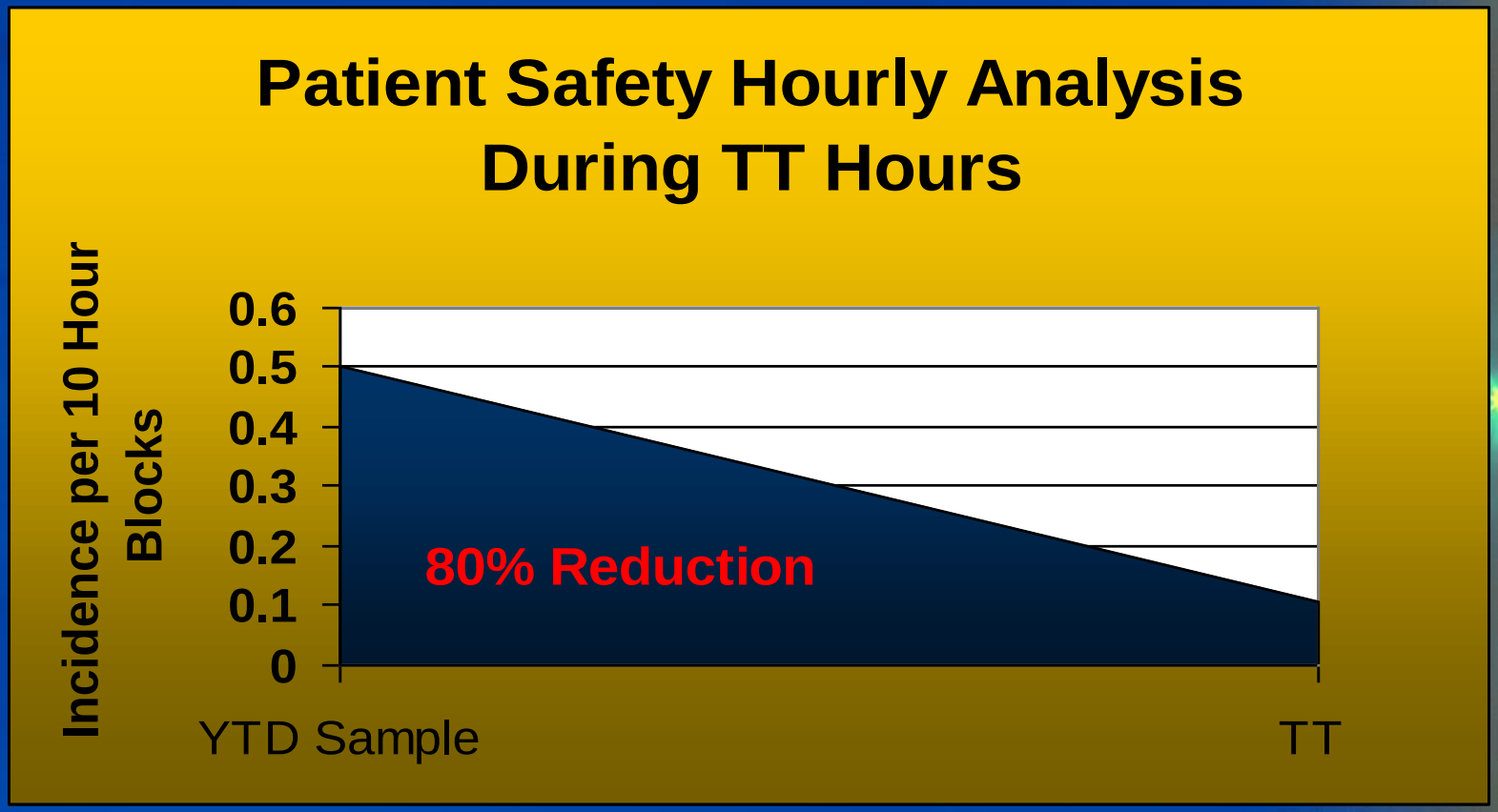
Conclusion?

LWBS declined dramatically both during T3 hours and throughout the day, increasing revenue capacity.

Patient Safety



Patient Safety



Conclusions?
Patient Safety

- Patient safety occurrences decreased by 14% during team triage trials
- Patient satisfaction clearly played a role as well
- The sustainability of these improvements will need to be studied

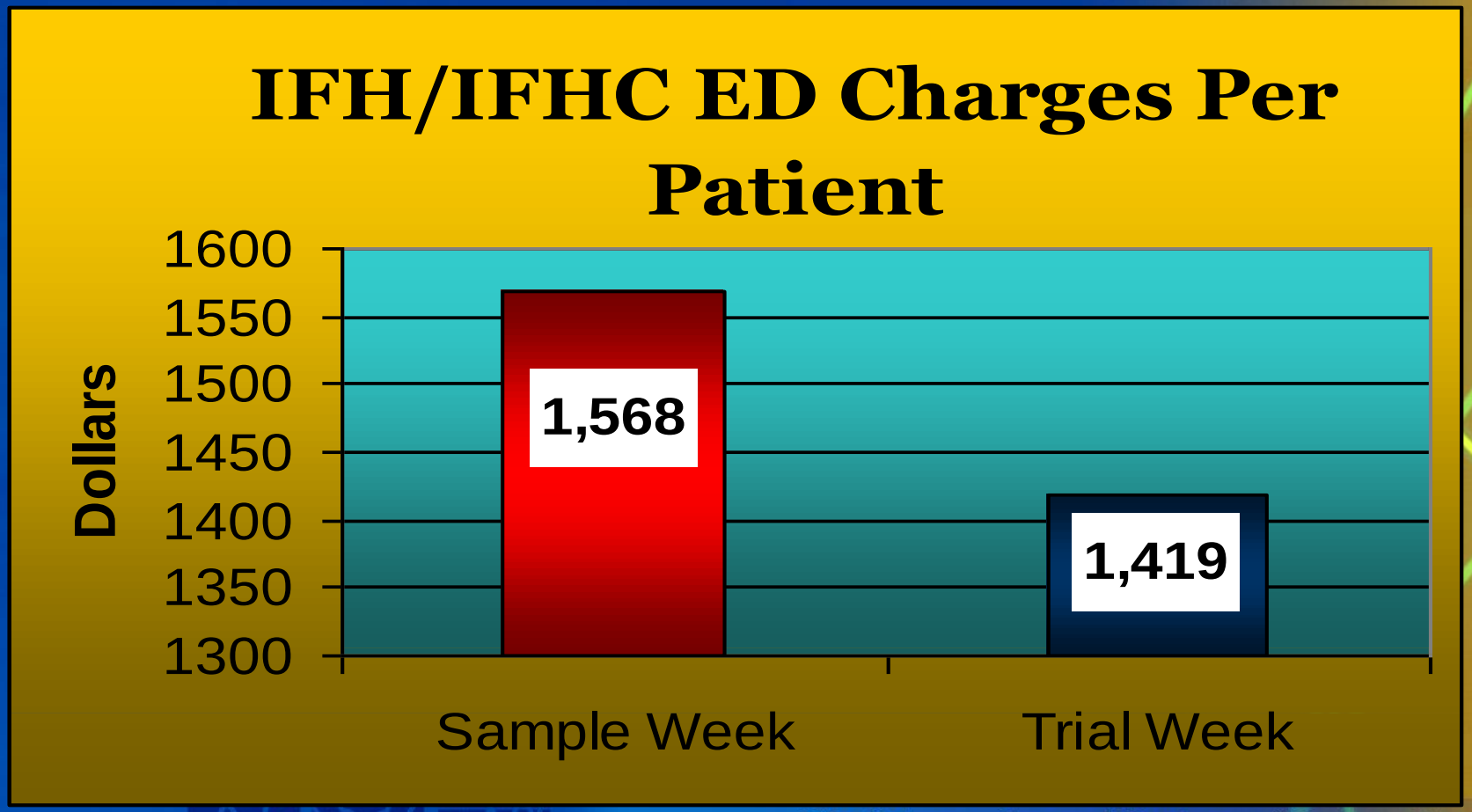
Conclusions?

Patient acuity at Team Triage was weighted neither toward E/M 1-2 (Fast Track) patients or E/M 5 (Critical) patients, but towards those with E/M 3-4 levels

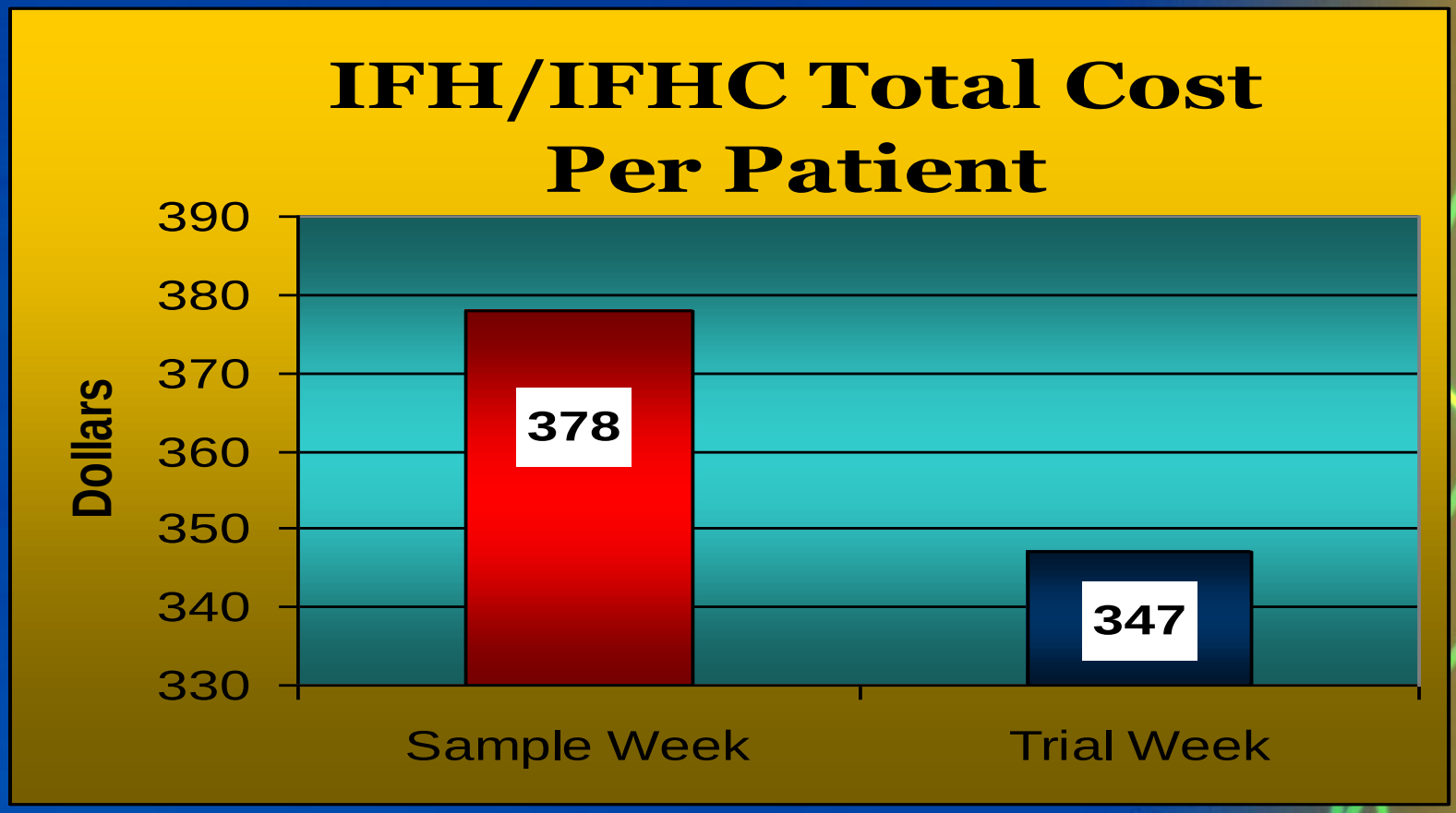
Financial Impact

- Calculating overall financial impact is a complex equation involving facility fees, laboratory and imaging components, professional fees, payer mix, LWBS, and TAT/census data, at a minimum
- That said, our analysis focused on the number of LWBS patients, which is hard data on finances

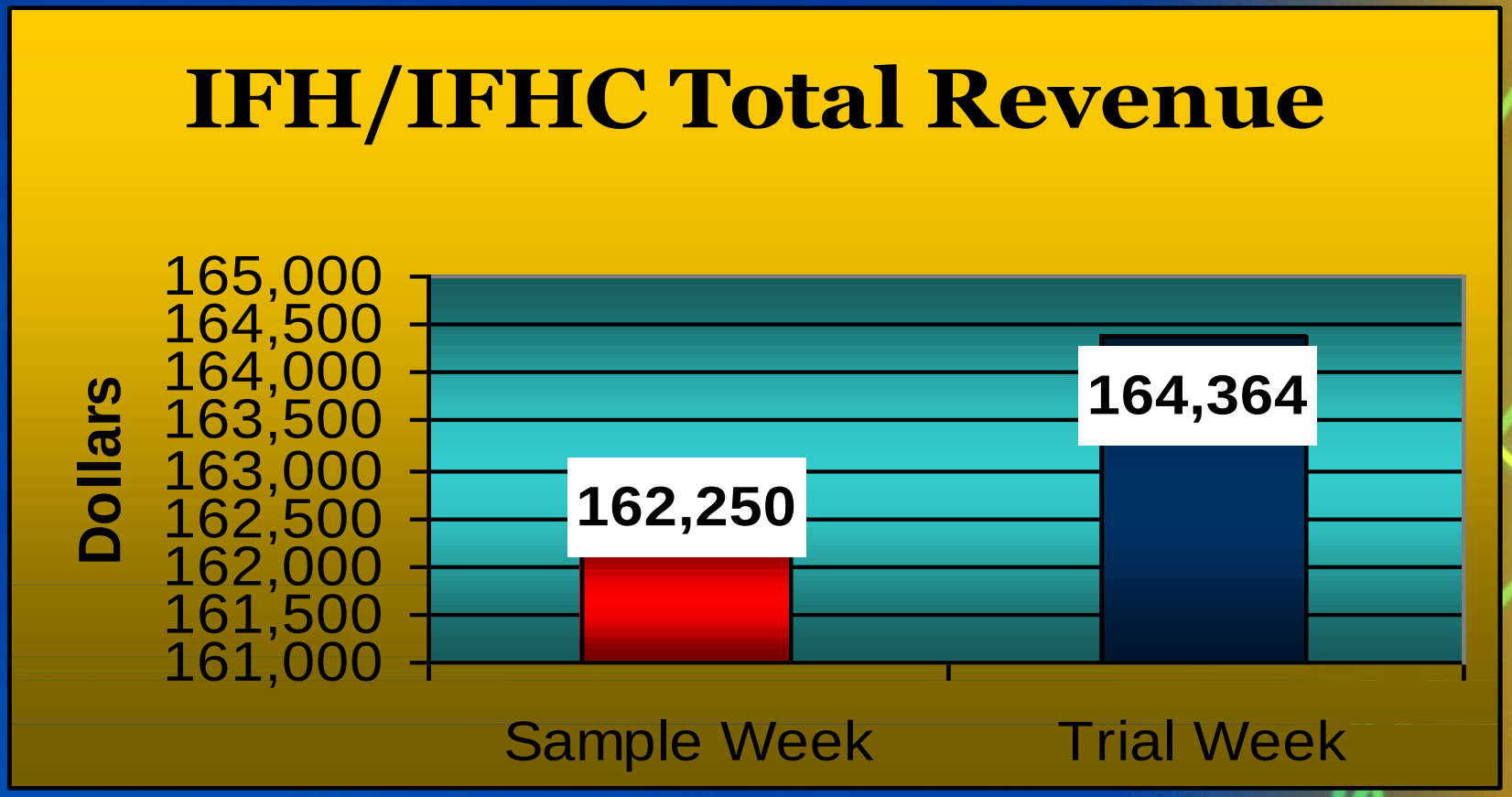
Team Triage Cost Analysis



Team Triage Cost Analysis



Team Triage Cost Analysis



Financial Impact
Facility and Ancillary Components

- 34% of patients were “treated and streeted,” reducing both facility and ancillary charges and costs
- Senior ED MDs were used in T3, who order less lab and imaging studies
- LWBS reductions resulted in ~6 additional patients per day being seen
- ED estimates are that 1.5 additional admissions were generated each day by T3 ($8,000 profit per patient)

Financial Impact
Professional Fees

- Team Triage dramatically increased the "asset velocity" of MD's, from 1.9 new patients per hour to 4.8 at peak times, with a mean of 3.7
- The payer mix for LWBS shows that the payer mix is improved, as LWBS patients have an improved payer mix

Financial Impact
Facility and Ancillary Components

- Facility charges and costs were up by ~8% per patient, but this compares to an overall ED average as control
- 34% of patients were “treated and streeted,” reducing both facility and ancillary charges and costs
- Senior ED MDs were used in T3, who order less lab and imaging studies
- LWBS reductions resulted in ~6 additional patients per day being seen
- ED estimates are that 1.5 additional admissions were
- generated each day by T3 ($8,000 profit per patient)
- Costs were $1750 per shift, additional revenues increased by $$3650 per shift
- ROI = 200%

Conclusions? Overall Financial Impact

- Combining facility, ancillary, professional fee, payer mix and admissions data indicates that Team Triage has had a positive financial impact, while improving asset velocity, patient satisfaction, and employee satisfaction
- Further exegesis of the data will be necessary for improved granularity
- Team Triage has a positive ROI in a level I Trauma Center, Safety Net ED with ~50% collection rate
- It appears that Team Triage is a compelling strategy for Safety Net hospitals

Team Triage and Treatment
Grade? A++

Thank You!