

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 715 CS Trauma Services

SPONSOR(S): Grimsley

TIED BILLS: IDEN./SIM. BILLS:

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR
1) Health Care Regulation Committee	9 Y, 0 N, w/CS	Bell	Mitchell
2) Health Care Appropriations Committee	10 Y, 0 N, w/CS	Money	Massengale
3) Health & Families Council			
4) _____	_____	_____	_____
5) _____	_____	_____	_____

SUMMARY ANALYSIS

The 2005 Legislature passed House Bill 497 and House Bill 1697, which provided additional funding to trauma centers through traffic infraction fines and court assessments. Revenues generated through these additional funds are appropriated into the Department of Health (DOH) Administrative Trust Fund, from which up to \$7.5 million is earmarked to provide funding for trauma centers on the basis of caseload and the severity of trauma patients. Currently, \$1 million has been raised by the increased fee.

House Bill 715 CS addresses the allocation and distribution of trauma center funds. The bill changes a number of provisions related to the distribution and determination of trauma payments to current verified trauma centers. The changes include:

- Changing the way trauma centers determine the severity of patients (by requiring trauma centers to evaluate patients with the International Classification Injury Severity Score (ICISS) instead of the Injury Severity Score (ISS)).
- Providing definitions for ICISS, trauma caseload volume, trauma patient, and local funding contribution.
- Creating a trauma center start-up grant program.

The fiscal impact of the bill is a one-time \$500,000 for the creation of a trauma center start-up grant, and is subject to appropriation in the General Appropriations Act.

The effective date of the bill is July 1, 2006.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. HOUSE PRINCIPLES ANALYSIS:

Promote Limited Government—The bill provides new definitions and changes the way verified trauma centers determine the severity of trauma patients that may alter the distribution of trauma center funds. The bill provides a one-time appropriation from general revenue of \$500,000 for the creation of a trauma center start-up grant.

B. EFFECT OF PROPOSED CHANGES:

Present Situation

In the 2005 session the Legislature passed House Bill 497 and House Bill 1697, both of which provide additional funding to trauma centers through traffic infraction fines and court assessments. House Bill 715 CS increased the civil penalties for drivers who fail to obey red traffic signals from \$60 to \$125. HB 1697 allocated funds from mandatory civil penalties to provide financial support to trauma centers throughout the state.

Revenues generated through these additional funds are appropriated into the Department of Health (DOH) Administrative Trust Fund, from which up to \$7.5 million is earmarked to provide funding for trauma centers on the basis of caseload and the severity of trauma patients. Currently, \$1 million dollars has been raised by the increased fee.

Trauma center funding is weighted based on the severity of trauma patients (40 percent), the trauma caseload volume (40 percent), and availability of local funding contributions (20 percent). The severity of trauma patients is determined by the ISS score and the caseload volume is determined by DOH's Trauma Registry Data.

The severity of trauma patients and caseload volume is collected and entered into the Department of Health Trauma Registry. The classification currently used to rate severity of trauma is the Injury Severity Score (ISS).

Trauma Registry data is currently verified by DOH staff during the yearly trauma center site survey. The DOH survey takes a very small sample of Trauma Registry records to evaluate trauma staffing and procedures. This survey does not focus on the validity of the Trauma Registry ISS.

Currently, funds collected for distribution to trauma centers are based on the calendar year and not the state fiscal year.

The University of Florida recently published, *A Comprehensive Assessment of the Florida Trauma System*. To improve trauma care in Florida, the report recommended placing trauma centers in Tallahassee and Bay County.

Effects of the Bill

The bill amends ss. 395.4001 and 395.4035, F.S., to address the allocation of trauma center funds. It changes a number of provisions related to the determination and distribution of trauma payments to current verified trauma centers.

The bill changes the standard by which trauma centers report injuries to DOH. Currently the severity of trauma patients is determined and coded with Injury Severity Scores (ISS), which only considers a maximum of three patient injuries. The bill requires trauma severity to be determined by the International Classification Injury Severity Scores (ICISS), the current standard, and other statistically valid and scientifically accepted methods of stratifying a trauma patient's severity of injury, risk of mortality, and resource consumption as adopted by DOH by rule. The impact of the change in injury determination methodology may change payment calculations for determining the amount of funding allotted to each trauma center.

The bill provides that DOH's Administrative Trust Fund may be used to maximize federal funds available to trauma centers. The total funds distributed to trauma centers may include revenue from DOH's Administrative Trust Fund and federal funds for which revenue from DOH's Administrative Trust Fund is used to meet state or local matching requirements, including Medicaid. Funds collected from traffic infractions and earmarked for trauma centers under ss. 318.14 and 318.18, F. S., will be distributed to trauma centers on quarterly basis. The data used to distribute trauma funds will be from the most recent year available.

The bill repeals s. 395.4035, F.S., the Trauma Trust Fund. This has no impact on trauma centers because the Trauma Trust Fund has never been used by DOH. Funds collected for distribution to trauma centers have been deposited into either the Emergency Medical Services Trust Fund or the DOH Administrative Trust Fund.

The bill amends s. 395.4001, F. S., to provide definitions for the International Classification Injury Severity Score (ICISS), trauma caseload volume, trauma patient, and local funding contribution. These are new statutory definitions.

Trauma Start-Up Grant

The bill creates s. 395.41, F.S., to establish a trauma start-up grant program. The program recognizes that there is significant up-front investment of capital incurred by hospitals to develop the physical space, equipment, and qualified personnel necessary to provide quality trauma services. The grant program provides a one-time grant of \$500,000, to be matched by local contributions, to qualifying hospitals. To qualify for the grant program a hospital must be located in a trauma region that does not currently have a trauma center and be at least 100 miles away from a current trauma center. A hospital must also meet the following criteria:

- Receive local funding contributions.
- Incur start-up costs in excess of the grant funding request.
- Actively pursue the establishment of a residency program in emergency medicine.

Hospitals receiving start-up grant funding have 24 months to become a trauma center or start-up grant funds must be returned.

BACKGROUND

Chapter 395, F.S., defines a trauma center as a facility within a general medical hospital determined by the Department of Health to be in compliance with trauma center verification standards. These centers treat individuals who have incurred blunt or penetrating injuries or burns, and who require immediate medical intervention and treatment. Trauma center patients require urgent, lifesaving care. Trauma centers must be ready at all times and have designated suites reserved to treat patients at all times. Emergency rooms are not trauma centers. A trauma center has dozens of specialists, many of whom are available 24-hours-a-day, seven days a week. Trauma centers have access to air emergency whose job is to be available for the moment a serious accident occurs.

The effectiveness of a trauma center lies in the speed and quality of treatment. Getting a patient definitive care within the first hour, or golden hour, of injury drastically increases their chances of survival. Trauma mortality is reduced by 15-20 percent when a very seriously injured patient is treated at a trauma center versus a non-trauma center.

Florida's trauma system has been under development since the passage of landmark trauma legislation in the late 1980s. Key components of this system include trauma centers, trauma agencies, trauma service areas, and trauma regions, as well as trauma transport protocols and trauma triage criteria for emergency medical service providers.

Florida Trauma Registry

The Florida Trauma Registry (FTR) collects patient-level data from the state's twenty-one trauma centers. As a state designated facility, a trauma center must maintain a comprehensive database of those injured patients treated within the hospital. The trauma registry supports the trauma centers required activities, including performance improvement, outcomes research, and resource utilization as well as providing the state public health system with the necessary data for state-wide planning and injury prevention initiatives.

Comparing the Injury Severity Scores and the International Classification Injury Severity Scores

Characterization of injury severity is crucial to the study and treatment of trauma. The measurement of injury severity began just over 50 years ago with the Abbreviated Injury Scale (AIS), a method developed to grade the severity of individual injuries. The AIS has been modified many times, most recently in 1990, and is the basis for the Injury Severity Score (ISS). The Injury Severity Score (ISS) was, for many decades, the standard summary measure of human trauma. However, it has two weaknesses. First, the ISS considers a maximum of only three of an individual patient's injuries which may not even be the patient's most severe injuries. Second, the ISS requires that all patients have their injuries described using an expensive assessment method unavailable at most hospitals, especially those that do not specialize in trauma.¹

A more recent approach to injury scoring is based on the *International Classification of Disease, Ninth Edition (ICD-9)* codes and is referred to as the *ICD-9 Injury Severity Score (ICISS)*. The ICISS is a data-driven alternative to ISS that uses empirically-derived injury severity measures, and considers all of an individual patient's injuries rather than just a few. The use of the standard ICD-9 classification scheme adds to the statistical appeal of the ICISS and avoids the need for costly AIS coding.²

In terms of methodology, the ICISS uses survival risk ratios (SRRs) calculated for each *ICD-9* discharge diagnosis. SRRs are derived by dividing the number of survivors in each *ICD-9* code by the total number of patients with the same *ICD-9* code. ICISS is calculated as the simple product of the SRRs for each of the patient's injuries.³ For example, if a population of 1,000 patients with femoral fractures included 100 patients who died, then the single SRR for that particular diagnoses would be .9 or $[1-(100/1000)]$. A patient with two injuries, one having a SRR of .9 and the other having a SRR of .5, would have a total probability of survival of .9 multiplied by .5, yielding an overall probability of survival of .45.⁴

¹ Osler, T., Rutledge, R., et al. **ICISS: An International Classification of Disease-9 Based Injury Severity Score.** *Journal of Trauma-Injury Infection & Critical Care.* 41(3):380-388, September 1996. Available online at <http://www.jtrauma.com/>.

² Sposato, E.M. "The End of the Injury Severity Score (ISS) and the Trauma and Injury Severity Score (TRISS): ICISS, an International Classification of Diseases, Ninth Revision-Based Prediction Tool, Outperforms Both ISS and TRISS as Predictors of Trauma Patient Survival, Hospital Charges, and Hospital Length of Stay. *Journal of Trauma Nursing.* Jan-March, 1999. Available online at <http://www.allbusiness.com/periodicals/article/350114-1.html>

³ Offner, P. Trauma Scoring Systems. *EMedicine.* 4/25/02. <http://www.emedicine.com/med/topic3214.htm>

⁴ <https://jobs.orhs.org/trauma/report-feb-05.pdf>

ICISS has demonstrated a greater reliability than ISS, and offers many advantages for predicting the severity of an illness and injury. The ICISS values may also be used as predictors of resource utilization, and may be used as an assessment tool in quality improvement efforts. Research has shown benefits of the ICISS over other scoring systems include:⁵

1. It represents a true continuous variable that takes on values between 0 and 1.
2. It includes all injuries.
3. ICD-9 codes are readily available and do not require special training or expertise to determine.
4. ICD-9 has better predictive power when compared to the ISS.
5. ICISS has the potential to better account for the effects of comorbidity on outcome by including the SRR for each comorbidity present.
6. The ICISS outperforms the ISS in predicting other outcomes of interest (e.g., hospital length of stay, hospital charges).
7. Compared to all over available severity adjustment systems, ICISS was most accurate.
8. ICISS can be more precisely population-based.
9. ICISS requires no additional software manipulation of data. ICDMAP-90 software for risk stratification converts International Classification of Disease (ICD) discharge diagnoses to injury severity scores to allow standardized outcome comparison.

C. SECTION DIRECTORY:

Section 1. Amends s. 395.4001, F.S., providing definitions.

Section 2. Repeals s. 395.4035, F.S.

Section 3. Amends s. 395.4036, F.S., providing standards for trauma center funding.

Section 4. Creates s. 395.41, F.S., establishing a trauma center start-up grant program.

Section 5. Provides that Section (4) of this act is effective subject to an appropriation in the General Appropriations Act.

Section 6. Provides the bill will take effect July 1, 2006.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

The bill requires a one time-time appropriation of \$500,000 from the General Revenue Fund to be deposited into the Administrative Trust Fund in the Department of Health to fund trauma center start-up grants.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

⁵ <http://www.emedicine.com/med/topic3214.htm> and <https://jobs.orhs.org/trauma/report-feb-05.pdf>

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The bill alters the way trauma centers determine the severity of trauma patients. Forty percent of trauma center funding is distributed by the ISS coded severity of trauma patients. Thus, the bill has the potential to increase or decrease trauma center payments depending on the results of the severity ranking system. Additionally, 40 percent of trauma center funding is distributed based on trauma caseload Trauma Registry data.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

This bill does not require counties or municipalities to spend funds or take action requiring the expenditure of funds. This bill does not reduce the percentage of state tax shared with counties or municipalities. This bill does not reduce the authority that municipalities have to raise revenue.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

The Department of Health has sufficient rule making authority to implement the provisions in the bill.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE & COMBINED BILL CHANGES

On April 11, 2006, the Health Care Appropriations Committee adopted a strike-all amendment and reported the bill favorably as a committee substitute. The strike-all amendment:

- Creates the trauma center startup grant program under section 395.41 Florida Statutes, in lieu of section 395.65 Florida Statutes.
- Includes the pursuit of an internal medicine residency program as one of the allowed prerequisites to grant funding.
- Provides that the creation of a trauma center start-up grant program is subject to appropriation in the General Appropriations Act.

On March 15, 2006 the Health Care Regulation Committee adopted a strike-all amendment and reported the bill favorably. The strike all amendment:

- Provides a definition for local funding contribution.
- Clarifies that funding distributions will be made using the most recent trauma patient data available.
- Clarifies that funds collected through traffic fines dedicated to support trauma centers will be distributed on a quarterly basis.
- Removes the proposed audit of trauma data.

- Provides \$500,000 for a trauma center start-up grant.

The analysis is drafted to the committee substitute.