#568

Joint Legislative Committee on Performance Evaluation and Expenditure Review (PEER)

Report to
the Mississippi Legislature

A Descriptive Review of the Mississippi Trauma Care Systems Fund

The Legislature created the state's trauma care system to "reduce the death and disability resulting from traumatic injury." State law requires every Mississippi licensed acute care facility to participate in the statewide trauma care system. Facilities are designated as Level I-IV trauma centers based on specific criteria, including the services each facility offers. Any hospital that chooses not to participate in the trauma care system or that participates at a level lower than the level at which it is capable of participating, as determined by the Department of Health, must pay a non-participation fee.

The Legislature established the Mississippi Trauma Care Systems Fund for use by the Department of Health in the administration and implementation of the comprehensive state trauma care plan. The fund receives revenues from assessments and fees related to vehicles, penalties assessed against hospitals that choose not to participate in the state's trauma care system, and interest on the investment of the fund. From FY 2009 through FY 2012, the Trauma Care Systems Fund received approximately $101 million in revenues.

From 1998 to 2008, the Department of Health used the Trauma Care Systems Fund to cover administrative expenses of the state trauma system, with the remaining balance distributed to participating trauma centers based on their provision of uncompensated care to patients. Beginning in FY 2010, the department continued to use the fund to cover administrative expenses of the system, but distributed the remaining balance in a formulated manner based on each hospital's specific designation as a trauma center.

Board of Health regulations specify the of types of expenditures that emergency medical services providers and trauma centers may make from their Trauma Care Systems Fund distributions. After establishing performance measures for the trauma care system, the Department of Health utilizes state, regional, and hospital-based committees to monitor and evaluate the performance of the state's trauma care system.

January 3, 2013

PEER: The Mississippi Legislature's Oversight Agency

The Mississippi Legislature created the Joint Legislative Committee on Performance Evaluation and Expenditure Review (PEER Committee) by statute in 1973. A joint committee, the PEER Committee is composed of seven members of the House of Representatives appointed by the Speaker and seven members of the Senate appointed by the Lieutenant Governor. Appointments are made for four-year terms, with one Senator and one Representative appointed from each of the U. S. Congressional Districts and three at-large members appointed from each house. Committee officers are elected by the membership, with officers alternating annually between the two houses. All Committee actions by statute require a majority vote of four Representatives and four Senators voting in the affirmative.

Mississippi's constitution gives the Legislature broad power to conduct examinations and investigations. PEER is authorized by law to review any public entity, including contractors supported in whole or in part by public funds, and to address any issues that may require legislative action. PEER has statutory access to all state and local records and has subpoena power to compel testimony or the production of documents.

PEER provides a variety of services to the Legislature, including program evaluations, economy and efficiency reviews, financial audits, limited scope evaluations, fiscal notes, special investigations, briefings to individual legislators, testimony, and other governmental research and assistance. The Committee identifies inefficiency or ineffectiveness or a failure to accomplish legislative objectives, and makes recommendations for redefinition, redirection, redistribution and/or restructuring of Mississippi government. As directed by and subject to the prior approval of the PEER Committee, the Committee's professional staff executes audit and evaluation projects obtaining information and developing options for consideration by the Committee. The PEER Committee releases reports to the Legislature, Governor, Lieutenant Governor, and the agency examined.

The Committee assigns top priority to written requests from individual legislators and legislative committees. The Committee also considers PEER staff proposals and written requests from state officials and others.

PEER Committee
Post Office Box 1204
Jackson, MS 39215-1204

(Tel.) 601-359-1226
(Fax) 601-359-1420
(Website) http://www.peer.state.ms.us

The Mississippi Legislature

Joint Committee on Performance Evaluation and Expenditure Review

PEER Committee

SENATORS
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JESSICA SIBLEY UPSHAW

TELEPHONE:
(601) 359-1226

FAX:
(601) 359-1420

Post Office Box 1204
Jackson, Mississippi 39215-1204

Max K. Arinder, Ph. D.
Executive Director

www.peer.state.ms.us

OFFICES:
Woolfolk Building, Suite 301-A
501 North West Street
Jackson, Mississippi 39201

January 3, 2013

Honorable Phil Bryant, Governor
Honorable Tate Reeves, Lieutenant Governor
Honorable Philip Gunn, Speaker of the House
Members of the Mississippi State Legislature

On January 3, 2013, the PEER Committee authorized release of the report entitled **A Descriptive Review of the Mississippi Trauma Care Systems Fund**.

Senator Gary Jackson, Chair

This report does not recommend increased funding or additional staff.

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List of Exhibits

A Descriptive Review of the Mississippi Trauma Care Systems Fund

Executive Summary

Introduction

In response to a legislative request, the PEER Committee reviewed the revenues, distributions, and expenditures of the Mississippi Trauma Care Systems Fund.

The Legislature created the state's trauma care system to "reduce the death and disability resulting from traumatic injury." Participants in the state's trauma care system are the Department of Health, the department's Trauma Care Advisory Committee, the seven trauma care regions and their boards of directors, hospitals that have qualified as trauma centers, a burn center, and emergency medical services providers. State law requires the Department of Health to develop the Trauma Care System Plan, which guides the system, and to develop regulations for the system. Data for the system is maintained in a statewide trauma registry.

MISS. CODE ANN. Section 41-59-5 (1972) requires every Mississippi licensed acute care facility to participate in the statewide trauma care system. Facilities are designated as Level I-IV trauma centers based on specific criteria, including the services each facility offers.[1] As of September 24, 2012, seventy-eight in-state hospitals, one in-state burn center, and two out-of-state hospitals were participating in the Mississippi trauma care system.[2]

All facilities in the trauma care system, except Level I trauma centers, are required by regulation and the Trauma Care System Plan to have transfer agreements in place with higher-level facilities to expedite and facilitate the transfer of patients in need of a higher level of care. Transfer agreements are also in place for specialty care patients such as burn and pediatric patients.

Any hospital that chooses not to participate in the trauma care system or that participates at a level lower than the level at which it is capable of participating, as determined

[1]Level I trauma centers have the greatest amount of clinical services to handle trauma cases on a twenty-four-hour per day, seven-day per week basis; Level IV trauma centers have only basic emergency medicine services.

[2]University of South Alabama Hospital in Mobile, AL, and the Regional Medical Center at Memphis in Memphis, TN, provide Level I care for transferred patients.

by the Department of Health, must pay a non-participation fee as required by the *Mississippi Trauma Care System Regulations*.

Sources of Revenues for the Trauma Care Systems Fund

The Legislature established the Mississippi Trauma Care Systems Fund for use by the Department of Health in the administration and implementation of a comprehensive state trauma care plan. The fund receives revenues from assessments and fees related to vehicles, penalties assessed against hospitals that choose not to participate in the state's trauma care system, and interest on the investment of the fund.

From FY 2009 through FY 2012, the Trauma Care Systems Fund received approximately $101 million in revenues, including:

- approximately $76.4 million from assessments (i. e., on moving traffic violations; speeding, reckless, and careless driving;) and fees (i. e., vehicle license tags; certain distinctive license plates; point-of-sale fees on all-terrain vehicles, and motorcycles);
- approximately $17 million from non-participation fees from hospitals; and,
- approximately $7.5 million in other revenues, including interest income, returns of funds disbursed in prior years, and a transfer of funds from a State Treasury fund closed by the Legislature.

Distribution of Money from the Trauma Care Systems Fund

From 1998 to 2008, the Department of Health used the Trauma Care Systems Fund to cover administrative expenses of the state trauma system, with the remaining balance distributed to participating trauma centers based on their provision of uncompensated care to patients. Beginning in FY 2010, the department continued to use the fund to cover administrative expenses of the system, but distributed the remaining balance in a formulated manner based on each hospital's specific designation as a trauma center.

Initially, the Department of Health distributed funds to hospitals that voluntarily participated in the state's trauma care system on the basis of their provision of uncompensated care to trauma patients. In its 2007 session, the Legislature created a Trauma Care Task Force to determine adequate funding requirements for the system. In 2008, the task force recommended a different method for distributing monies from the Trauma Care Systems Fund to trauma care regions, trauma centers, and emergency medical services providers.

Since FY 2010, the Department of Health has distributed monies in the Trauma Care Systems Fund to hospitals in a

formulated manner based on each hospital's designated trauma center level and the populations served by the emergency medical services providers in each trauma care region. (See pages 19 through 24 of the report for a description of the fund distribution method.)

During FY 2010 through FY 2012, the department distributed approximately $74 million from the fund to emergency medical services providers, trauma centers, and the Joseph M. Still Memorial Burn Center at Crossgates River Oaks Hospital in Brandon.

Allowable Expenditures from Trauma Care Systems Fund Distributions

Board of Health regulations specify the types of expenditures that emergency medical services providers and trauma centers may make from their Trauma Care Systems Fund distributions.

Departmental regulations allow emergency medical services providers to expend their distributions primarily on employee compensation, training, and equipment related to trauma care. The regulations require Level I-III trauma centers and the burn center to expend 30% of their distributions on physicians' compensation, while the remaining 70% may be expended on other staff compensation, training, commodities, and equipment. All expenditures for Level I-III trauma centers must be related to the care of trauma patients.

Each Level IV trauma center receives an annual stipend and educational grant for its participation in the state's trauma care system. Such funds are intended to assist the Level IV trauma centers in covering administrative costs associated with entering data in the trauma registry and other trauma-related activities.

In FY 2010 through FY 2012,[3] emergency medical services providers and trauma centers expended approximately $50.6 million from the Trauma Care Systems Fund. The Department of Health has not yet audited these expenditures and has not required the burn center to provide expenditure information regarding its FY 2012 distribution.

[3] Expenditures for FY 2012 include only expenditures for the first of two fund distributions—i. e., they do not represent a full year of expenditures.

Monitoring of Trauma Care System Performance

After establishing performance measures for the trauma care system, the Department of Health utilizes state, regional, and hospital-based committees to monitor and evaluate the performance of the state's trauma care system.

State law charges the Department of Health with developing and administering trauma regulations that include, in part, "trauma care system evaluation and management." In order to monitor the effectiveness of the system, the department has established a performance improvement program. The goals of the department's performance improvement program are to:

- alleviate unnecessary death and disability from trauma by reducing inappropriate variations in care and improving patient care practices; and,
- promote optimal trauma care by performing ongoing cycles of evaluation of trauma care delivery and system components and implementing improvement initiatives based on optimal care practices when indicated.

The Department of Health utilizes performance improvement committees at the state, regional, and hospital levels to monitor the performance of the state's trauma care system.

Since 2000, the number of Mississippi's trauma-related deaths has remained fairly constant (a 14% increase), even though trauma-related injuries have risen significantly (a 196% increase). While factors such as motorcycle and bicycle helmet laws, seatbelt laws, and improved medical knowledge and technology have arguably played a role in controlling the number of trauma deaths, the percentage increase in trauma-related deaths from 2000 to 2010 in relation to the percentage increase in trauma-related injuries seems to indicate that the system has been effective in providing trauma care and reducing the number of deaths from trauma-related injuries.

Recommendations

1. The Department of Health should immediately begin auditing Trauma Care Systems Fund distributions that have been made to trauma regions, trauma centers, and EMS providers since FY 2010. In addition to auditing the data entered into the state's trauma registry, the department should review regions' and trauma centers' financial records to

verify the accuracy of expenditure information submitted on the semi-annual applications.

2. The Department of Health should require the Joseph M. Still Memorial Burn Center at Crossgates River Oaks Hospital to submit the same type of expenditure information required of Level I-Level III trauma centers.

For More Information or Clarification, Contact:

PEER Committee
P.O. Box 1204
Jackson, MS 39215-1204
(601) 359-1226
http://www.peer.state.ms.us

Senator Gary Jackson, Chair
Weir, MS

Representative Ray Rogers, Vice Chair
Pearl, MS

Representative Margaret Rogers, Secretary
New Albany, MS

A Descriptive Review of the Mississippi Trauma Care Systems Fund

Introduction

Authority

In response to a legislative request, the PEER Committee reviewed the revenues, distributions, and expenditures of the Mississippi Trauma Care Systems Fund. The Committee acted in accordance with MISS. CODE ANN. Section 5-3-51 et seq.

Purpose and Scope

In response to legislators' questions regarding the revenues, distributions, and expenditures of the Trauma Care Systems Fund, PEER sought to answer the following questions:

- What is the purpose of the state's trauma care system?
- Who are the participants in the state's trauma care system and what are their roles?
- What is the Mississippi Trauma Care Systems Fund?
- What are the sources of revenues deposited into the Trauma Care Systems Fund?
- How are amounts in the Trauma Care Systems Fund distributed and who receives the distributions?
- What expenditures do regulations allow from Trauma Care Systems Fund distributions to emergency medical services providers and trauma centers?
- What types of expenditures were made by emergency medical services providers and trauma centers from Trauma Care Systems Fund distributions during FY 2010 through FY 2012?
- How does the Department of Health monitor the performance of the state's trauma care system?

According to the Mississippi Trauma Care System Plan, the goal of the trauma care system is to provide optimal medical care to all injured persons throughout the

continuum of care, including prevention, pre-hospital care, acute care, and rehabilitation. While PEER notes that each component of care has many facets and possibly should be evaluated as to effectiveness, this descriptive review does not include an evaluation of these components. Instead, this report provides a descriptive review of the Trauma Care Systems Fund revenues (for FY 2009 through FY 2012) and distributions and expenditures (for FY 2010 through FY 2012). The report does not purport to address whether funding of the state's trauma care system is sufficient or whether the department's method of distributing available funding is fair or efficient. Again, those areas could be the focus of future evaluations by PEER.

Method

During the course of this review, PEER:

- reviewed sections of Title 41, Chapter 59, MISSISSIPPI CODE ANNOTATED (1972), regarding the state's trauma care system and the Trauma Care Systems Fund;
- interviewed appropriate Department of Health staff;
- reviewed the Department of Health's regulations related to the trauma care system, in particular those governing the Trauma Care Systems Fund, distribution of the fund's monies, and the trauma care system's performance improvement process; and,
- collected and reviewed financial information pertaining to the Trauma Care Systems Fund's revenues (FY 2009 through FY 2012) and distributions and expenditures (FY 2010 through FY 2012).

Background

- What is the purpose of the state's trauma care system?
- Who are the participants in the state's trauma care system and what are their roles?

What is the purpose of the state's trauma care system?

The Legislature created the state's trauma care system to "reduce the death and disability resulting from traumatic injury."

Title 41, Chapter 59, MISSISSIPPI CODE ANNOTATED (1972), addresses emergency medical services and the state's trauma care system. MISS. CODE ANN. Section 41-59-5 (1972) establishes a statewide trauma care system, the purpose of which is to "reduce the death and disability resulting from traumatic injury."

Who are the participants in the state's trauma care system and what are their roles?

Participants in the state's trauma care system are the Department of Health, the department's Trauma Care Advisory Committee, the trauma care regions and their boards of directors, hospitals that have qualified as trauma centers, a burn center, and emergency medical services providers. State law requires the Department of Health to develop the Trauma Care System Plan, which guides the system, and to develop regulations for the system. Data for the system is maintained in a statewide trauma registry.

Participants in the Mississippi trauma care system are:

- the state's Department of Health;
- the Trauma Care Advisory Committee;
- seven designated trauma care regions and their respective boards of directors;
- hospitals qualifying as trauma centers and a burn center; and,
- emergency medical services providers.

The system is guided by the Mississippi Trauma Care System Plan and data for the system is maintained in a statewide trauma registry.

Department of Health

State law designates the Department of Health as the lead agency for the state's trauma care system and requires the department to develop the Trauma Care System Plan and the system's regulations.

MISS. CODE ANN. Section 41-59-4 (5) (1972) designates the state's Department of Health as the lead agency for trauma care systems development. Most of this responsibility is vested in the department's Bureau of Emergency Medical Services/Trauma System Development (BEMS).

In accordance with MISS. CODE ANN. Section 41-59-5 (1972) and the *Mississippi Trauma Care System Regulations*, the department is responsible for:

- developing the Mississippi Trauma Care System Plan;
- managing and overseeing distribution of money in the Trauma Care Systems Fund (see pages 17 through 25);
- licensing trauma centers to provide trauma care, including enforcing mandatory participation in the trauma care system for eligible acute-care facilities;
- developing and administering trauma regulations;
- monitoring, evaluating, and improving the trauma care system and its outcomes through the performance improvement process; and,
- facilitating and implementing trauma education programs, including educational programs for professional training purposes (clinical training) and for educating the general public (injury prevention).

Trauma Advisory Committee

The Trauma Advisory Committee acts as the advisory body for trauma care system development and provides technical support for the system.

According to MISS. CODE ANN. Section 41-59-7 (2) (1972), the Mississippi Trauma Advisory Committee is a committee of the Emergency Medical Services Advisory Council, members of which are appointed by the Governor. The chair of the council, who is the State Health Officer or designated representative, appoints members of the council to serve on the Trauma Advisory Committee.

This committee acts as the advisory body for trauma care system development in Mississippi and provides technical support to the Department of Health regarding system design, trauma standards, data collection and evaluation, quality improvement, funding, and evaluation.

Trauma Care Regions and Their Boards of Directors

The Department of Health and the Trauma Care System Plan designate trauma care regions to address each area of the state's unique demographics and resources. Each region is a nonprofit organization with its own bylaws and board of directors. These boards develop the regions' own trauma plans, assist in the distribution of money from the Trauma Care Systems Fund, provide trauma-related training opportunities for the regions' health care providers, and monitor performance improvement.

The Department of Health and the Trauma Care System Plan (see pages 4 and 11) designate trauma care regions to address each area of the state's unique demographics and resources. The purpose of the regions is to develop a statewide trauma system design that is based on the resources available within each region while ensuring optimal care to trauma victims through transfer agreements when resources may not be available within a certain geographical area. Mississippi currently has seven trauma care regions, but the number of regions could change as trauma needs shift.

The seven trauma care regions are:

- Central Mississippi;
- Coastal;
- Delta;
- East Central;
- North Mississippi;
- Southeast Mississippi; and,
- Southwest Mississippi.

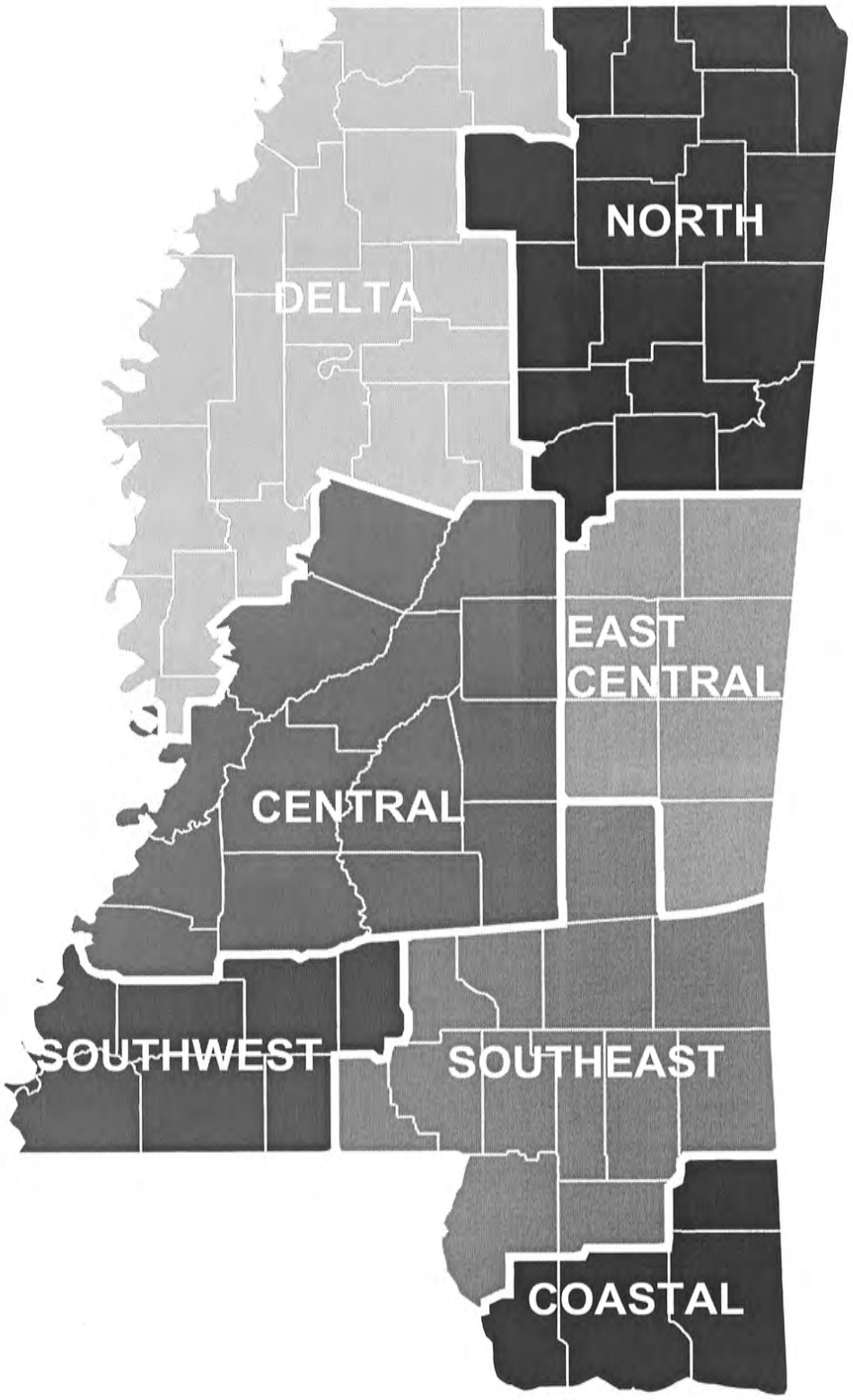
See Exhibit 1, page 6, for a map of the trauma care regions. Appendix A, page 39, lists the counties within each region.

Each trauma care region is a 501-C-3 nonprofit organization with its own bylaws and board of directors. The boards of directors are composed of the chief executive officers of each trauma center in the region and representatives of emergency medical services providers in the region.

The regional trauma boards' responsibilities include developing their own regional trauma plans, tracking and assisting in distribution of money from the Trauma Care Systems Fund to that region's trauma centers, providing trauma-related training opportunities for health care providers in the region, and monitoring the performance improvement program within the region.

Each regional trauma board appoints an administrator to have authority over operation of the trauma care region and programs. Such administrator may be an appointed manager or the position may be contracted.

Exhibit 1: Trauma Care Regions Map



SOURCE: *Mississippi Trauma Care System Regulations.* August 23, 2012.

The *Mississippi Trauma Care System Regulations* require the Department of Health to contract with the trauma care regions for trauma system development and regional operations. Contracts with the regions include financial support for administration of the regions (including regional medical director, regional administrative support, telephone, regional trauma committees, hospital trauma registry staff, and trauma registry computer hardware) and funding of documented trauma care as defined by the regulations. The financial support for the regions is provided through baseline funding plus weighted funding based on the number of counties and trauma centers in each region (see page 21).

Through these contracts, the regions are responsible for (a) distribution of money from the Trauma Care Systems Fund to trauma centers and EMS providers; (b) collection and analysis of data on trauma center costs and performance improvement; (c) establishment of regional treatment, triage, and patient destination protocols; and, (d) the regional performance improvement process.

The *Mississippi Trauma Care System Regulations* require that the regions' trauma care plans describe the policies, procedures, and protocols for a comprehensive system of prevention and management of major traumatic injuries within that specific region.

Trauma Centers

Mississippi's trauma care system includes seventy-eight in-state hospitals, one in-state burn center, and two out-of-state hospitals. These facilities are designated as Level I-IV trauma centers based on criteria defined in regulations.

MISS. CODE ANN. Section 41-59-5 (1972) requires every Mississippi licensed acute care facility to participate in the statewide trauma care system. Facilities are designated as Level I-IV trauma centers based on specific criteria, including the services each facility offers, defined in *Mississippi Trauma Care System Regulations*.[1] Exhibit 2, page 8, lists the services required by the regulations for each level of designation of trauma centers.

[1] *Mississippi Trauma Care System Regulations* for categorizing Level I through Level IV Trauma Centers closely follow published guidelines of The American College of Surgeons, Committee on Trauma and the American College of Emergency Physicians for the categorization of facilities providing care to trauma victims.

Exhibit 2: Required Services Trauma Centers Must Offer, by Level

	Level I	Level II	Level III	Level IV[#]
Emergency Medicine	X	X	X	X
General Surgery	X	X	X	
Orthopedic Surgery	X	X	X	
Anesthesia	X	X	X	
Post Anesthesia Care Unit	X	X	X	
Intensive Care Unit	X	X	X	
Neurological Surgery	X	X		
Surgical Residency Program	X			

According to Mississippi Trauma Care System Regulations Rule 1.3.12, for the purposes of the annual assessment, all clinical services cited above must be available at the trauma center twenty-four hours per day, seven days per week to be considered.

[#]According to the 2010 Mississippi Trauma Care System Plan, Level IV trauma centers are acute care facilities with a commitment to the resuscitation of the trauma patient and written transfer protocols in place to assure that those patients who require a higher level of care are appropriately transferred.

SOURCE: *Mississippi Trauma Care System Regulations.*

As of September 24, 2012, seventy-eight in-state hospitals, one in-state burn center, and two out-of-state hospitals were participating in the Mississippi trauma care system.[2] Exhibit 3, page 9, shows the number and level of trauma centers in each trauma care region. Appendix B, page 40, lists health care facilities in Mississippi's trauma care system and their participation level.

[2]University of South Alabama Hospital in Mobile, AL, and the Regional Medical Center at Memphis in Memphis, TN, provide Level I care for transferred patients.

Exhibit 3: Trauma Care Regions and Number of Trauma Centers in Each Region, as of July 1, 2012

Trauma Care Region	Number of Level I Trauma Centers	Number of Level II Trauma Centers	Number of Level III Trauma Centers	Number of Level IV Trauma Centers
Central MS	1	0	1	14
Coastal	1	2	3	2
Delta	1	0	2	12
East Central	0	0	2	7
North MS	0	1	4	10
Southeast	0	1	1	9
Southwest	0	0	1	6

SOURCE: Trauma Care Region Weighted Funding Process Region Distribution for FY 2013. Mississippi State Department of Health.

Any hospital that chooses not to participate in the trauma care system or that participates at a level lower than the level at which it is capable of participating, as determined by the Department of Health, must pay a non-participation fee as required by the *Mississippi Trauma Care System Regulations*. This is referred to as "play or pay." According to the department's regulations, non-participation fees range between $423,500 and $1,492,000, depending on the hospital's capability to comply with the department's requirements for a trauma center.

As of September 24, 2012, Mississippi had five hospitals categorized as *non-designated*, meaning either their trauma center designation had expired or they were currently in the application process. Also, an additional five hospitals are *non-participating*, meaning they chose not to participate in the trauma care system[3] (see page 15). Appendix C, page 43, lists Mississippi hospitals categorized as non-designated and non-participating in the state's trauma care system.

All facilities in the trauma care system, except Level I trauma centers, are required by regulation and the Trauma Care System Plan to have transfer agreements in place with higher-level facilities to expedite and facilitate the transfer

[3] Choctaw Health Center in Philadelphia, Mississippi, is also a non-participating hospital, but since the hospital is operated by the Mississippi Band of Choctaw Indians on reservation lands, it is not required to participate in the Mississippi trauma care system due to the sovereign character of the Mississippi Band of Choctaw Indians.

of patients in need of a higher level of care. Transfer agreements are also in place for specialty care patients such as burn and pediatric patients.

Inherent in an inclusive trauma system is the participation of all eligible facilities to ensure system effectiveness. In Mississippi, it is essential and part of the system design that all facilities that treat injured victims be considered part of the trauma system and participate as active members within their capabilities. In order to ensure a certain level of care to all trauma patients, facilities not participating as active members of the trauma system may be bypassed and trauma patients may be taken to a participating facility with a commitment to care of the trauma patient.

Emergency Medical Services Providers

One hundred and nine emergency medical services providers (i. e., ground and air ambulance services) provide pre-hospital emergency medical care for patients in the state's trauma care system. Departmental regulations require these providers to deliver trauma patients to the closest, most appropriate facility, regardless of the location of the nearest facility or the affiliation of the ambulance service.

Pre-hospital emergency medical care for trauma patients is provided by ground and air ambulance services. The air ambulances provide inter-hospital transfer and limited scene response.

While there are statewide requirements for emergency medical services (EMS), treatment protocols vary from provider to provider. In 2003, the MSDH/BEMS revised the regulations to require ambulance services to adhere to regional trauma plan treatment and destination policies. These destination policies are designed to deliver trauma patients to the closest, most appropriate facility, regardless of the location of the nearest facility or the affiliation of the ambulance service. The trauma care region's board of directors establishes destination protocols and reviews them periodically to assure that trauma patients receive access to the most appropriate care based on their injuries. Emergency medical services providers also must participate in the regional performance improvement program (see page 35). As of October 11, 2012, 109 EMS providers serviced Mississippi's eighty-two counties.

Trauma Care System Plan

State law requires the Department of Health to develop the Mississippi Trauma Care System Plan and regulations. The goal of the plan is to provide an optimal, coordinated continuum of care for trauma patients throughout the state.

MISS. CODE ANN. Section 41-59-5 (5) (1972) requires the Department of Health to develop the Mississippi Trauma Care System Plan and the *Mississippi Trauma Care System Regulations*. The regulations require each of the trauma care regions to submit a regional trauma care plan that corresponds with the statewide trauma care plan.

As noted on page 1, according to Department of Health staff, the goal of the Trauma Care System Plan is to assist in designing an optimal, coordinated continuum of care including prevention, pre-hospital care, acute care, and rehabilitation in order to provide optimal medical care to all injured persons throughout the state.

Statewide Trauma Registry

Departmental regulations require all designated trauma centers and hospitals with an organized emergency department to participate in the statewide trauma registry. The registry data is used to help assure that patients have access to and are transported to the closest, most appropriate trauma facility and also is used as part of the performance improvement process.

Departmental regulations require all designated trauma centers and hospitals with an organized emergency department to participate in the state trauma registry system. BEMS has identified criteria for patients that must be included in the registry at the local level and each trauma center's staff inputs data into the registry. Trauma centers must include all patients that meet the inclusion criteria, regardless of payment source or indigent status.

The registry data is used to help assure that patients have access to and are transported to the closest, most appropriate trauma facility and also is used as part of the performance improvement process. The data is reviewed and analyzed at the local, regional, and state levels and the injury severity score data for each trauma center is used in calculating each hospital's distribution from the Trauma Care System Fund (see page 23).

Sources of Revenues for the Trauma Care Systems Fund

- What is the Mississippi Trauma Care Systems Fund?
- What are the sources of revenue deposited into the Trauma Care Systems Fund?

What is the Mississippi Trauma Care Systems Fund?

The Legislature established the Mississippi Trauma Care Systems Fund for use by the Department of Health in the administration and implementation of a comprehensive state trauma care plan.

During its 1998 Regular Session, the Legislature enacted House Bill 966, which affected certain operations of the state's trauma care system. A portion of House Bill 966, now codified as MISS. CODE ANN. Section 41-59-75 (1972), created the Mississippi Trauma Care Systems Fund. House Bill 966 stated that the fund was to be available to the Department of Health for the:

> *. . .administration and implementation of the comprehensive state trauma care plan for distribution by the department to designated trauma care regions for regional administration, for the department's trauma specific public information and education plan, and to provide hospital and physician indigent trauma care block grant funding to trauma centers designated by the department.*

During its 2008 Regular Session, the Legislature enacted House Bill 1405, a portion of which amended MISS. CODE ANN. Section 41-59-75 and created the Mississippi Trauma Care Escrow Fund. House Bill 1405 stated that whenever the amount in the Mississippi Trauma Care Systems Fund exceeds $25 million in any fiscal year, the State Fiscal Officer shall transfer the amount above $25 million to the Trauma Care Escrow Fund. According to Department of Health staff, the amount in the Mississippi Trauma Care Systems Fund has not reached $25 million in any fiscal year, thus no monies have been transferred to the escrow fund.

What are the sources of revenues deposited into the Trauma Care Systems Fund ?

The Mississippi Trauma Care Systems Fund receives revenues from assessments and fees related to vehicles, penalties assessed against hospitals that choose not to participate in the state's trauma care system, and interest on the investment of the fund.

Revenues from Assessments and Fees Related to Vehicles

From FY 2009 through FY 2012, the Trauma Care Systems Fund received approximately $76.4 million from assessments (i. e., on moving traffic violations; speeding, reckless, and careless driving; vehicle license tags; and certain distinctive license plates) and fees (i. e., point-of-sale fees on all-terrain vehicles, and motorcycles).

House Bill 966, 1998 Regular Session, now codified as MISS. CODE ANN. Section 99-19-73 (1972), created the Trauma Care Systems Fund and required that $5 be imposed by the state for each traffic and implied consent law violation and deposited into the Trauma Care Systems Fund. In subsequent sessions, the Legislature enacted or amended state laws to designate additional funding sources for the Trauma Care Systems Fund. The general categories of revenues deposited into the fund are as follows:

- assessments on moving traffic violations (MISS. CODE ANN. Section 41-59-75 [an increase in the initial amount of the assessment]);
- assessments on speeding, reckless, and careless driving violations (MISS. CODE ANN. Section 99-19-73);
- fees on license tags (issuance and renewals) and certain distinctive license plates (MISS. CODE ANN. Section 27-19-43); and,
- point-of-sale fees on all-terrain vehicles, and motorcycles (MISS. CODE ANN. Section 63-17-171).

As shown in Exhibit 4, page 14, the Trauma Care Systems Fund received approximately $76.4 million from these assessments and fees from FY 2009 through FY 2012, providing the majority of recurring revenues (81%) for the fund.

Revenues from Hospitals' Non-Participation Fees

From FY 2009 through FY 2012, the Trauma Care Systems Fund received approximately $17 million from non-participation fees from hospitals.

As stated on page 11, Board of Health regulations require all Mississippi licensed hospitals with a functioning emergency department to apply for trauma center

Exhibit 4: Breakdown of Revenue by Source for the Trauma Care Systems Fund, FY 2009 to FY 2012

Source of Revenue	FY 2009	FY 2010	FY 2011	FY 2012	Total
Recurring Revenue					
Traffic Violation Assessments	$7,481,207	$8,401,551	$7,938,109	$7,438,953	$31,259,820
License Tag Issuance and Renewal Fees	7,843,864	11,187,828	10,205,172	10,451,772	39,688,636
Distinctive License Tag Fees	561,316	0	0	887,792	1,449,108
ATV/Motorcycle Fees	1,016,475	995,365	942,723	1,076,452	4,031,015
Sub-total statutory fees/assessments	$16,902,862	$20,584,744	$19,086,004	$19,854,968	$76,428,579
Non-Participation Fees	$4,589,000	$4,923,500	$3,742,000	$3,742,000	$16,996,500
Interest Earned	167,554	228,508	84,832	64,216	545,109
Total Recurring Revenue	**$21,659,416**	**$25,736,752** [1]	**$22,912,836**	**$23,661,184**	**$93,970,187**
Non-recurring Revenue					
Transfer from Other Funds	$4,500,000 [2]	$0	$0	$0	$4,500,002
Returns of Prior Year Disbursements	338,653	1,228,087	855,901	83,622	2,506,263
Total Non-recurring Revenue	**$4,838,653**	**$1,228,087**	**$855,901**	**$83,622**	**$7,006,265**
Total Revenue	**$26,498,069**	**$26,964,839**	**$23,768,737**	**$23,744,806**	**$100,976,453**

1) In response to the governor's FY 2010 budget cut, the Department of Health transferred $4 million from the Trauma Care Systems Fund to the state General Fund.

2) During the 2009 Regular Session, the Legislature authorized the Department of Finance and Administration to dissolve the medical malpractice insurance fund and transfer the $4,500,000 balance to the Mississippi Trauma Care Systems Fund.

SOURCE: Mississippi State Department of Health financial and programmatic information.

designation. The regulations further state that hospitals that potentially may be Level IV trauma centers may elect not to participate in the system.

MISS. CODE ANN. Section 41-59-5 (5) (1972) provides authority to the Department of Health to adopt a schedule of fees to be assessed for facilities that choose not to participate in the statewide trauma care system or that participate at a level lower than the level at which they are capable of participating, based on their services. As of September 24, 2012, the following acute care facilities did not participate in the statewide trauma system:[4]

- Baptist Medical Center (Jackson);
- Gilmore Memorial Regional Medical Center (Amory);
- Hardy Wilson Memorial Hospital (Hazlehurst);
- Trace Regional Hospital (Houston); and,
- Wesley Medical Center (Hattiesburg).

During FY 2012, Baptist Medical Center and Wesley Medical Center paid $1,492,000 and $758,000, respectively, in non-participation fees. Had the other three hospitals participated in the state trauma care system, they would have been designated as Level IV trauma centers. Because the department's regulations regarding the "play or pay" penalty only apply to Level I-Level III trauma centers, the department did not assess a penalty against the other three hospitals for non-participation.

Also, in FY 2012, the Department of Health assessed St. Dominic Memorial Hospital (Jackson) $1,492,000 in non-participation fees for participating in the statewide trauma care system at a level lower than the level at which they are capable—i. e., participating as a Level IV facility rather than a Level II facility.

As shown in Exhibit 4, page 14, the Trauma Care Systems Fund received approximately $17 million from hospitals' non-participation fees from FY 2009 through FY 2012. During this period, non-participation fees provided 18% of revenues for the fund.

[4] Choctaw Health Center in Philadelphia is also a non-participating hospital, but since the hospital is operated by the Mississippi Band of Choctaw Indians on reservation lands, it is not required to participate in the Mississippi trauma care system due to the sovereign character of the Mississippi Band of Choctaw Indians.

Other Revenues

From FY 2009 through FY 2012, the Mississippi Trauma Care Systems Fund received the following other revenues: interest income, returns of funds disbursed in prior years, and a transfer of funds from a State Treasury fund closed by the Legislature.

The Trauma Care Systems fund also received $545,109 in interest earned from FY 2009 through FY 2012. Non-recurring revenues included approximately $2.5 million in returns of prior year disbursements and a one-time transfer of $4.5 million authorized by the Legislature as a transfer from the dissolution of the medical malpractice fund. (See Exhibit 4, page 14.)

Distribution of Money from the Trauma Care Systems Fund

- How are amounts in the Trauma Care Systems Fund distributed and who receives the distributions?

How are amounts in the Trauma Care Systems Fund distributed and who receives the distributions?

From 1998 to 2008, the Department of Health used the fund to cover administrative expenses of the state trauma system, with the remaining balance distributed to participating trauma centers based on their provision of uncompensated care to patients. Beginning in FY 2010, the department continued to use the fund to cover administrative expenses of the system, but distributed the remaining balance in a formulated manner based on each hospital's specific designation as a trauma center.

Trauma Care Systems Fund Distributions, Calendar Year 1998 through Calendar Year 2008

Initially, the Department of Health distributed funds to hospitals that voluntarily participated in the state's trauma care system on the basis of their provision of uncompensated care to trauma patients.

As stated on page 12, during its 1998 Regular Session, the Legislature established the state's trauma system. The legislation authorized an assessment of $5 on each moving traffic violation to generate revenue for the Trauma Care Systems Fund, increasing the assessment on moving traffic violations to $10. The Legislature then began appropriating between $6 million and $8 million annually from the state's Health Care Expendable Fund[5] to the Trauma Care Systems Fund.

When the trauma care system was created, state law did not mandate participation by hospitals, but encouraged them to offer their services voluntarily as a trauma center. In return for their participation in the trauma care system, the hospitals and their physicians received distributions

[5]MISS. CODE ANN. Section 43-13-407 (1972) established the *Health Care Expendable Fund,* into which annual amounts were to be transferred from the Health Care Trust Fund. The Legislature established the Health Care Trust Fund to receive payments from the state's settlement of its lawsuit with tobacco companies. The tobacco settlement payments were to be used for health care purposes.

from the Trauma Care Systems Fund for providing uncompensated care to trauma patients.[6]

During this eleven-year period, department regulations required that after deducting administrative expenses associated with the state trauma care system, that funding for uncompensated trauma care be divided into two categories: 70% distributed to designated hospitals and 30% distributed to eligible physician specialties designated by the department. (For example, the department's 2004 regulations designated attending or admitting trauma/general surgeons, orthopedic surgeons, neurosurgeons or anesthesiologists as the physician specialties eligible to receive amounts from the Trauma Care Systems Fund.)

Department regulations established a reimbursement process for distributing funds to hospitals and physicians for providing uncompensated care. The regulations required hospitals and physicians to analyze data in the trauma registry to identify those trauma patients that qualified for uncompensated care. Based on this analysis and completion of applicable forms, hospitals and physicians could request reimbursements from the department to cover expenses for providing uncompensated care for trauma patients.

Trauma Care Task Force's Recommendations Regarding the Distribution Process

In its 2007 session, the Legislature created a Trauma Care Task Force to determine adequate funding requirements for the system. In 2008, the task force recommended a different method for distributing monies from the Trauma Care Systems Fund to trauma care regions, trauma centers, and EMS providers.

During its 2007 Regular Session, the Legislature enacted Senate Bill 2863, which created a Trauma Care Task Force to review the status of the state's trauma care system and determine adequate funding requirements for the system. Following completion of the task force's work, the Legislature identified other revenues to be deposited into the Trauma Care Systems Fund, which significantly increased the financial resources dedicated to the system (see page 13).

One action taken by the Board of Health in response to recommendations of the task force was a revision in the

[6] Department of Health regulations define *uncompensated care* as "care for which the provider has been unable to collect payment because of the patient's ability to pay. A claim is considered to be uncompensated if, after the provider's due diligence to collect monies due, total payment from all sources (including third-party payors) of five percent or less has been made on the total trauma-related gross charges."

methods used by the Department of Health to distribute balances of the Trauma Care Systems Fund. Rather than reimbursing hospitals and certain physician specialties for expenses associated with providing uncompensated care to trauma patients, the department adopted regulations to distribute funds based on each hospital's trauma center level designation and severity of trauma cases treated.

Trauma Care Systems Fund Distributions, FY 2010 to Present

Since FY 2010, the Department of Health has distributed monies in the Trauma Care Systems Fund to hospitals in a formulated manner based on each hospital's designated trauma center level and the populations served by the EMS providers.

Since FY 2010, the Department of Health has utilized a detailed formulated method to distribute amounts from the Trauma Care Systems Fund to the seven trauma care regions, the Level I-IV trauma centers, burn center(s), and emergency medical services providers. This section describes the steps involved in the department's distribution of Trauma Care Systems Fund balances. Also, Exhibit 5, page 20, presents a graphic depiction of this process.

Step 1: Determine Trauma Care Systems Fund balance to be distributed

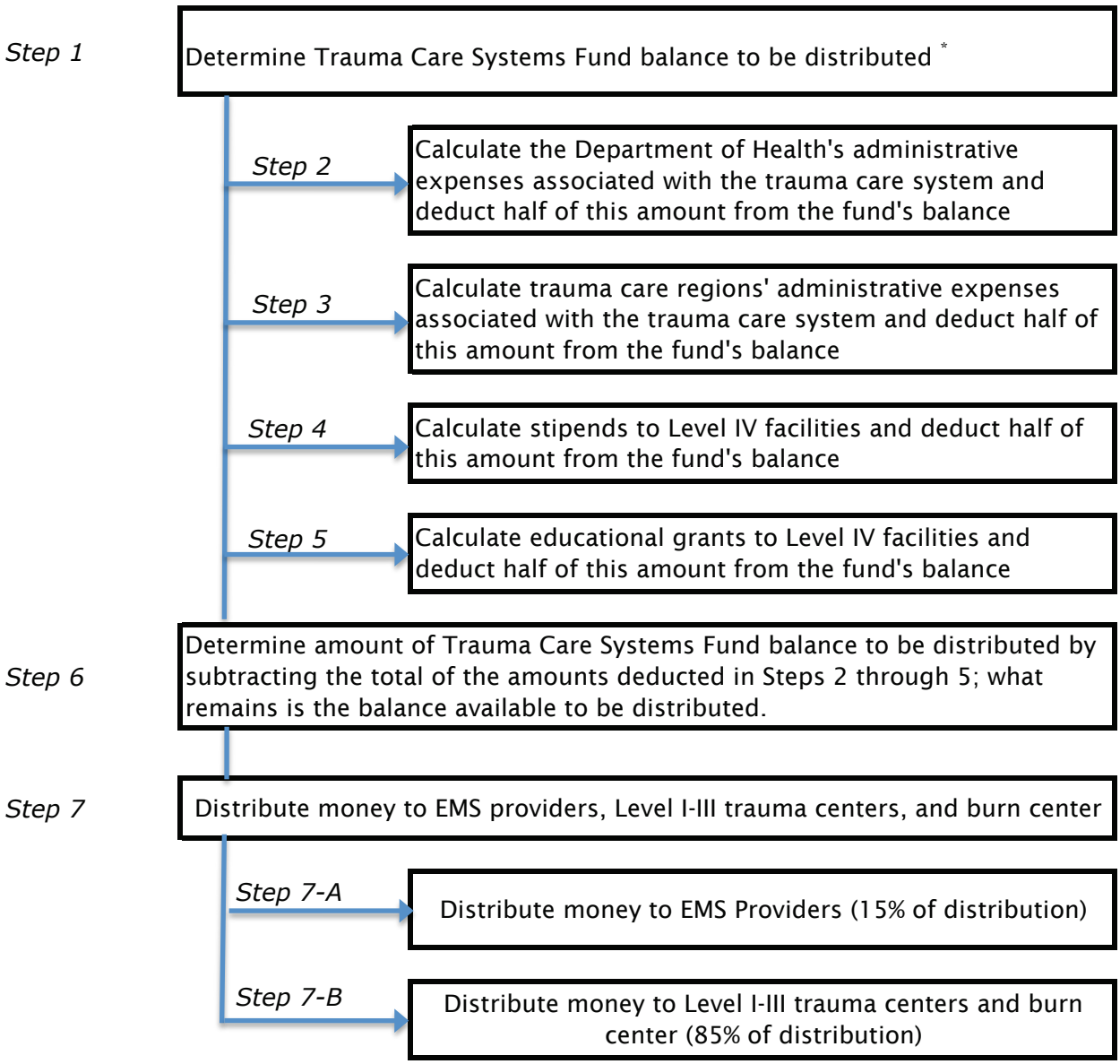
According to Department of Health regulations, on or about April 1 and October 1 of each year (or at such other times as the State Health Officer may direct), the department's Trauma System Administrator obtains a report from the State Treasurer showing the balance of the Trauma Care Systems Fund. Each year, fifty percent of the fund's balance is distributed after the April calculation and fifty percent is distributed after the October calculation.

Step 2: Calculate the Department of Health's administrative expenses associated with the trauma care system and deduct half of this amount from the fund's balance

In accordance with state law, the Department of Health's regulations provide that amounts from the Trauma Care Systems Fund may be used to cover expenses associated with the administration and development of the state's trauma care system at the departmental level. Examples of such costs include:

- salaries and benefits for personnel who expend a portion of their time in trauma care administration and/or development;
- travel and training costs for such personnel;

Exhibit 5: Trauma Care Systems Fund Distribution Method Since FY 2010



*According to Department of Health regulations, on or about April 1 and October 1 of each year (or at such other times as the State Health Officer may direct), the department's Trauma System Administrator obtains a report from the State Treasurer showing the balance of the Trauma Care Systems Fund.

SOURCE: *Mississippi Trauma Care System Regulations*.

- payments to trauma care physicians and/or other trauma professionals used in the development and/or maintenance of the trauma care system;
- development and/or maintenance of accounting and auditing of the use and distribution of the Trauma Care Systems Fund; and,
- other costs associated with the development and/or implementation of the trauma care system (e. g., telecommunications systems, data storage and/or retrieval systems, advertising, equipment).

Presently, the department has six employees whose salaries, benefits, and expenses are paid 100% from the Trauma Care Systems Fund. Two departmental employees have a portion of their salaries, benefits, and expenses paid by the fund. In addition, the department utilizes four contract employees to assist with administration of the state's trauma care systems, with two of these contract employees' compensation fully paid by the fund and two contract employees' compensation partially paid from the fund.

After the department identifies its trauma-related administrative expenses, the department deducts half of this amount from the fund's balance.

Step 3: Calculate trauma care regions' administrative expenses associated with the trauma care system and deduct half of this amount from the fund's balance

As stated on page 5, the department has established seven trauma care regions to oversee the statewide trauma system within their designated counties. Prior to FY 2011, the Department of Health annually distributed $85,000 to each region to cover its administrative expenses. Beginning with FY 2011, the department increased the annual distribution to $125,000 per region and established a weighted funding formula to distribute an additional $175,000 among the regions based on their number of counties and trauma centers. For FY 2012, distributions to the regions ranged from $137,950 for the Southwest Trauma Care Region to $160,175 for the Delta Trauma Care Region.

After the department determines the amount needed to cover the administrative expenses of the seven trauma care regions, the department deducts half of this amount from the fund's balance.

Step 4: Calculate stipends to Level IV facilities and deduct half of this amount from the fund's balance

In accordance with Board of Health regulations, the department annually provides $10,000 to each Level IV trauma center that has fully complied with the board's administrative and programmatic requirements to function as a trauma center—i. e., an annual stipend. (The stipends flow from the Department of Health to each trauma center's respective regional office to the individual trauma center.) To receive its annual stipend, each Level IV trauma center must meet and maintain licensing and participation requirements and submit an application to its respective trauma care regional office, including information to verify that the trauma center is current in submitting its trauma registry data.

After the department determines the amount needed to provide annual stipends to Level IV facilities, the department deducts half of this amount from the fund's balance.

Step 5: Calculate educational grants to Level IV facilities and deduct half of this amount from the fund's balance

In addition to annual stipends, the department annually provides another $10,000 in the form of educational grants to each Level IV trauma center that has fully complied with the board's administrative and programmatic requirements to function as a trauma center. The additional $10,000 is designed to reimburse Level IV facilities for providing trauma-related education to their staffs. (The education grants flow from the department to each trauma center's respective regional office to reimburse the individual trauma center.)

After the department determines the amount needed to provide educational grants to Level IV facilities, the department deducts half of this amount from the fund's balance.

Step 6: Determine remaining Trauma Care Systems Fund balance to be distributed to EMS providers, Level I-III facilities, and the burn center

Once the amounts calculated in steps 2 through 5 are deducted from the Trauma Systems Fund balance, the Trauma System Administrator knows the remaining amount that can be distributed to emergency medical services providers, Level I-III facilities, and the burn center.

Step 7: Distribute money to EMS providers, Level I-III facilities, and burn center

Once the Trauma System Administrator determines the amount of the Trauma Systems Fund balance that is available for distribution, Board of Health regulations require that the money be distributed to emergency medical services providers, Level I-III trauma facilities, and the burn center on the following basis.

Distribute money to trauma care regions for EMS providers (15% of balance)

The Trauma Systems Administrator distributes 15% of the net available balance to the seven trauma care regions to be provided to EMS operators for providing pre-hospital care to trauma victims. The department distributes such funds on the basis of county populations served by EMS providers. For example, in the department's June 2012 distribution from Trauma Care Systems Fund, EMS providers in counties with the smallest populations received $11,067, while EMS providers in the county with the largest population (Hinds County) received $185,392. If more than one EMS provider operates in a county, the trauma regional office determines the share to each EMS provider, typically in coordination with county officials.

Distribute money to trauma care regions for Level I-III trauma centers and burn center (85% of balance)

The Trauma Systems Administrator distributes 85% of the net available balance to the seven trauma care regions to be provided to Level I-III trauma centers and the burn center (if one is in operation within the state) in the following manner:

- The trauma care regions distribute 30% of the net available balance to the trauma centers according to a "fixed distribution" method based on their trauma designation—i. e., Level I, Level II, or Level III. The fixed distribution method involves a weighting of each type of facility and the number of each level of facility in the state.
- The trauma care regions distribute 50% of the net available balance to the trauma centers according to a "variable distribution" method. Using patient data collected in the state's trauma registry, the trauma care regions compute an injury severity score (ISS) index for each trauma center and use such index to make distributions to the centers—i. e., each trauma center's distribution is based on the number, type, and severity of trauma cases handled by the center.

- The Trauma System Administrator reserves 5% of the net available balance to be distributed to designated burn centers in the state. If more than one burn center is operating within the system, the 5% would be distributed to the burn centers based on a pro-rata share of patients treated based on information in the trauma registry. If no hospital had been designated by the Department of Health as a burn center at the time of the distribution, the Trauma System Administrator includes the 5% in the fixed distribution process. In FY 2010 and FY 2011, the state had no designated burn centers. During FY 2012, Crossgates River Oaks Hospital in Brandon operated a burn center and received $1,255,000 from the Trauma Systems Fund.

For FY 2010 through FY 2012, the Department of Health distributed approximately $74 million from the Trauma Care Systems Fund.

The goal of Department of Health staff is to limit the department's administrative expenses associated with the state's trauma care system to less than 10% of the amount available for distribution. For the fiscal years reviewed by PEER, the department incurred administrative expenses totaling approximately $906,000 (3.5%) in FY 2010, $922,000 (4.8%) in 2011, and $1,082,000 (3.8%) in FY 2012.

As shown in Exhibit 6, page 25, from FY 2010 through FY 2012, the Department of Health determined that it had approximately $74 million in the Trauma Care Systems Fund to distribute in accordance with the board's formulated method.

Exhibit 6: Trauma Care Systems Fund Distributions, by Recipient Category, FY 2010 - FY 2012

	FY 2010	FY 2011	FY 2012	Total
Trauma Care Systems Fund Balance in the State Treasury [1]	$26,161,429	$19,261,799	$28,472,169	$73,895,397
Department of Health Administrative Expenses	906,429	921,662	1,082,344	2,910,435
Trauma Care Regional Administrative Expenses	595,000	1,049,650	1,049,825	2,694,475
Stipends to Level IV Trauma Centers	660,000	660,000	600,000	1,920,000
Educational Grants to Level IV Trauma Centers	N/A	130,487	640,000	770,487
Trauma Care Systems Fund Balance Available for Distribution	$24,000,000	$16,500,000	$25,100,000	$65,600,000
EMS (15% of Distribution)	3,600,000	2,475,000	3,765,000	9,840,000
Hospital Fixed (35% of Distribution in FY 2010 & FY 2011; 30% of Distribution in FY 2012)	8,400,000	5,775,000	7,530,000	21,705,000
Hospital Variable (50% of Distribution)	12,000,000	8,250,000	12,550,000	32,800,000
Burn Centers	N/A	N/A	1,255,000	1,255,000

(1) According to Department of Health regulations, on or about April 1 and October 1 of each year (or at such other times as the State Health Office may direct), the department's Trauma System Administrator obtains a report from the State Treasurer showing the balance of the Trauma Care Systems Fund.

SOURCE: Mississippi State Department of Health financial and programmatic information.

Allowable Expenditures from Trauma Care Systems Fund Distributions

- What expenditures do regulations allow from Trauma Care Systems Fund distributions to emergency medical services providers and trauma centers?
- What types of expenditures were made by emergency medical services providers and trauma centers from Trauma Care Systems Fund distributions during FY 2010 through FY 2012?

What expenditures do regulations allow from Trauma Care Systems Fund distributions to emergency medical services providers and trauma centers?

Board of Health regulations specify the types of expenditures that emergency medical services providers and trauma centers may make from their Trauma Care Systems Fund distributions.

Board of Health regulations govern eligible expenditures from Trauma Care Systems Fund distributions to EMS providers and trauma centers.

Allowable Emergency Medical Service Provider Expenditures

Departmental regulations allow EMS providers to expend their distributions primarily on employee compensation, training, and equipment.

According to the *Mississippi Trauma Care System Regulations*, EMS providers may expend distributions from the Trauma Care Systems Fund for the following:

- compensation for paramedics, emergency medical technicians, and EMS drivers, including stand-by or call-back pay;
- compensation for other employees, including administration, dispatchers, maintenance, or other function that directly supports trauma and/or burn response;
- training and associated travel costs for trauma and/or burn education; and,
- equipment, including ambulances, defibrillators, and patient monitoring devices.

Also, an EMS provider may choose to escrow a portion of its Trauma Care Systems Fund distribution for up to three years in order to accumulate sufficient funds to purchase

equipment or capital investments. An EMS provider may escrow a portion of its distribution for longer than three years with approval of its Trauma Care Region Board.

Allowable Level I-III Trauma/Burn Center Expenditures

Departmental regulations require Level I-III trauma centers/burn center to expend 30% of their distributions on physicians' compensation, while the remaining 70% may be expended on other staff compensation, training, commodities, and equipment.

According to Department of Health regulations, trauma centers and burn center hospitals are required to expend a minimum of 30% of their total distribution from the Trauma Care Systems Fund on physician compensation, including stand-by, call-back, or trauma team activation pay. Under the previous uncompensated care distribution method (see page 17), only general surgeons, orthopedic surgeons, neurosurgeons, and anesthesiologists could receive reimbursements from the fund. (These were the health care professionals who were most financially affected when a patient could not or chose not to pay.) Under the current distribution model, a trauma center can use its Trauma Care Systems Fund distributions to make payments to any physician who directly supports the center's trauma services—e. g., maxillofacial surgeon, plastic surgeon, pediatric surgeon.

The department's regulations allow trauma centers and burn centers to expend the remaining 70% of their total distribution from the Trauma Care Systems Fund for:

- additional funding for trauma-related physician compensation, including stand-by, call-back, or trauma team activation pay;
- medical staff compensation, including nurses, nurse practitioners, certified registered nurse anesthetists, radiology technicians, laboratory technicians, and others (may also include stand-by, call-back, or trauma team activation pay);
- non-medical staff compensation, including administration, security, maintenance, or other function that directly supports the trauma and/or burn care program of the facility;
- training and associated travel costs for trauma education;
- equipment directly related to the immediate resuscitation and stabilization, and definitive acute care, of trauma and/or burn patients;
- commodities directly related to the immediate resuscitation and stabilization, and definitive acute care, of trauma and/or burn patients; and,

- capital investments directly related to the immediate resuscitation and stabilization, and definitive acute care, of trauma and/or burn patients (i. e., expansion of emergency treatment rooms, expansion of operating rooms, intensive care units).

As with EMS providers, a Level I-III trauma center may choose to escrow a portion of its distribution for up to three years in order to accumulate sufficient funds to purchase equipment or capital investments. A trauma center may escrow a portion of its distribution for longer than three years with approval of its particular Trauma Care Region Board.

Allowable Level IV Trauma Center Expenditures

Each Level IV trauma center receives an annual stipend and educational grant for its participation in the state's trauma care system.

As stated on page 22, the Department of Health annually distributes $10,000 in a stipend and $10,000 in an educational grant to each Level IV trauma center that satisfactorily participates in the state's trauma system. Such funds are intended to assist the Level IV trauma centers in covering administrative costs associated with entering data in the trauma registry and other trauma-related activities. Typically, trauma centers use the annual stipend to cover, in part, the salary of the administrative employee who enters the center's data into the trauma registry.

What types of expenditures were made by emergency medical services providers and trauma centers from Trauma Care Systems Fund distributions during FY 2010 through FY 2012?

In FY 2010 through FY 2012, EMS providers and trauma centers expended approximately $50.6 million from the Trauma Care Systems Fund. The Department of Health has not yet audited these expenditures and has not required the burn center to provide expenditure information regarding its FY 2012 distribution.

Expenditures from the Fund's Distributions

In FY 2010 through FY 2012, EMS providers and trauma centers expended approximately $50.6 million from the Trauma Care Systems Fund. The majority of these expenditures covered salaries of physicians and other health care provider workers who provided care to trauma patients.

As shown in Exhibit 7, page 30, in FY 2010 through FY 2012,[7] EMS providers and Level I-III trauma centers expended approximately $50.6 million of their distributions from the Trauma Care Systems Fund. The majority of those expenditures, 77.6%, covered salaries of physicians and other health care workers who provided care to trauma patients.

As stated on page 19, the Trauma System Administrator determines the Trauma Care Systems Fund balance that is available for distribution in the spring and fall of each calendar year. Once the administrator determines the formulated amounts to be received by EMS providers, trauma centers and burn centers, the administrator notifies the Trauma Care Region offices of specific amounts to be distributed.

Prior to such amounts being distributed to EMS providers, trauma centers and burn centers, the recipients must complete applications in order to receive distributions. The application verifies the hospital's eligibility as a trauma center, attests that the center is current with entering data into the trauma registry, and provides information regarding the hospital's expenditure of trauma care funds for the previous distribution period. The department's application requires that trauma centers provide expenditure information regarding trauma compensation, medical staff training/travel, commodities, capital outlay other than equipment, and equipment.

[7] Expenditures for FY 2012 include only expenditures for the first of the two distributions—i. e., these amounts do not represent a full year of expenditures.

Exhibit 7: Breakdown of Trauma Care Systems Fund Expenditures of Level I-III Trauma Centers, EMS Providers, and Burn Center for FY 2010 through FY 2012

	FY 2010	FY 2011	FY 2012*
EMS Expenditures			
Salaries	$ 1,510,000	$ 992,000	$ 576,000
Equipment	1,150,000	843,000	480,000
Escrow	774,000	496,000	320,000
Other	162,000	149,000	224,000
Total EMS Expenditures	**$ 3,596,000**	**$ 2,480,000**	**$ 1,600,000**
Trauma Center Expenditures			
Physicians' Salaries	$ 15,500,000	$ 10,400,000	$ 6,200,000
Nurses' Salaries	1,500,000	1,750,000	846,000
Administration/Non-Practitioner Staff	1,550,000	585,000	614,000
Other Trauma Center Expenditures	1,850,000	1,310,000	810,000
Total Trauma Center Expenditures	**$ 20,400,000**	**$ 14,045,000**	**$ 8,470,000**
Burn Center Expenditures	N/A	N/A	Does Not Report
Self-Reported Trauma Care Sytems Fund Expenditures by EMS, Level I-III Trauma Centers and Burn Center	**$ 23,996,000**	**$ 16,525,000**	**$ 10,070,000**

* Expenditures for FY 2012 include only expenditures for the first of the two distributions--i. e.,these amounts do not represent a full year of expenditures.

SOURCE: Mississippi State Department of Health financial and programmatic information.

Monitoring of Expenditures

To date, the Department of Health has not completed audits of expenditure of Trauma Care Systems Fund distributions to EMS providers, trauma centers, and the burn centers for the FY 2010 through FY 2012 distribution periods.

According to Department of Health staff, the department has completed all audits associated with the previous uncompensated care method of distributing Trauma Care Systems Fund monies (i. e., pre-FY 2010). Department staff have only recently finalized a formal work plan to audit distributions made using the current formulated method.

The department planned to initiate audits on FY 2010 and FY 2011 Trauma Care Systems Fund distributions during the latter part of 2012. Once begun, the department plans to conduct annual audits of the trauma care regions, Level I-III trauma centers, burn centers, and EMS providers that have received fund distributions. The primary purpose of the audit will be to verify compliance with allowable expenditures and to ensure that each of the Level I-III trauma centers spent at least thirty percent of its funding on physicians' compensation, as required. The department does not plan to audit expenditure of funds distributed to Level IV trauma centers.

To date, the Department of Health has not required the burn center to provide expenditure information regarding its FY 2012 Trauma Care Systems Fund distribution.

As stated on page 29, the Department of Health requires Level I-Level III trauma centers to complete an application semi-annually that includes expenditure information prior to receiving another distribution from the Trauma Care Systems Fund. The application process allows the department to be informed as to the expenditure of the semi-annual distributions within general reporting categories.

As shown in Exhibit 6, page 25, the Joseph M. Still Memorial Burn Center at Crossgates River Oaks Hospital received a distribution of $1,255,000 from the Trauma Care Systems Fund in FY 2012. Unlike the state's Level I-Level III trauma centers, the Department of Health did not require the burn center to submit expenditure information detailing how it used its Trauma Care Systems Fund

distribution. The department's staff stated that they planned to require the submission of expenditure information from the burn center in the future.

Monitoring of Trauma Care System Performance

- How does the Department of Health monitor the performance of the state's trauma care system?

How does the Department of Health monitor the performance of the state's trauma care system?

After establishing performance measures for the trauma care system, the Department of Health utilizes state, regional, and hospital-based committees to monitor and evaluate the performance of the state's trauma care system.

As stated in MISS. CODE ANN. Section 41-59-5 (5) (1972), the Department of Health is charged with developing and administering trauma regulations that include, in part, "trauma care system evaluation and management." In order to monitor the effectiveness of the system, the department has established a performance improvement program. The goals of the department's performance improvement program are to:

- alleviate unnecessary death and disability from trauma by reducing inappropriate variations in care and improving patient care practices; and,
- promote optimal trauma care by performing ongoing cycles of evaluation of trauma care delivery and system components and implementing improvement initiatives based on optimal care practices when indicated.

Procedurally, the department implements its performance improvement (PI) program through a state trauma PI sub-committee, regional PI committees, and trauma center multidisciplinary trauma committee. Internal monitoring and evaluation occur within the hospital or pre-hospital provider, while external review occurs at the regional and state PI committee level with oversight provided by the Department of Health.

Levels of Review for the Performance Improvement Program

The Department of Health utilizes performance improvement committees at the state, regional, and hospital levels to monitor the performance of the state's trauma care system.

State Trauma Performance Improvement Subcommittee

The State Trauma PI Subcommittee is responsible for establishing pre-defined measures or expectations of care based on evidence-based guidelines, state policy, and standards. The subcommittee is presently a separate committee of the Department of Health, but will become a component of a larger health-related steering committee of the department in the future. The subcommittee consists of medical professionals and representatives from the various trauma regions. The subcommittee self-selects its membership. Review at all levels includes comparison and benchmarking of services, hospitals, and region with state or national data obtained through injury databases and trauma registries, mortality studies, and outcome-related research. In an August 2012 meeting, the State Trauma PI Subcommittee established the following measures of performance:

- number of patient deaths occurring within twenty-four hours of transfer to a Level I-III trauma center;
- number of unexpected deaths occurring at Level I-III trauma centers with a trauma score/injury severity score of less than .5;
- emergency department length of stay for transfers of patients from Level III-IV trauma centers;
- emergency department length of stay for transfer of pediatric patients from all centers to tertiary pediatric centers;
- number of deaths occurring in Level IV trauma centers;
- time from emergency medical services dispatch to patient arrival at an emergency room;
- EMS delivery of a patient to a Level IV center and transfer to a trauma center with a higher level of care; and,
- number of transferred patients from a Level III or Level IV trauma center with a CT scan.

To monitor the trauma system's improvement in light of these measures, the State Trauma PI Subcommittee reviews trauma data, information reported by the regional PI committees, and pertinent issues or trends that are identified during on-site visits. These state-level reviews (as well as those conducted at the regional and trauma center level) could lead to revisions of performance improvement measures; trauma center, regional or state trauma plans; trauma system regulations; or, trauma center or EMS trauma operations.

Trauma Care Region Performance Improvement Committees

Department of Health regulations require each trauma care region to establish a performance improvement committee. Membership of the regional PI committees typically includes representation from trauma centers, EMS providers, non-trauma hospitals, county medical examiner/coroner, and air medical service provider within the region. Regional PI committees are responsible for analyzing region-specific trauma data to assess the effectiveness of the regional trauma system in reducing unnecessary death, disability, and cost.

Trauma Center Multidisciplinary Trauma Committee

Department of Health regulations require each trauma center to develop an internal trauma-specific performance improvement plan. The plan must include, in part, the creation of a multidisciplinary trauma committee to oversee performance efforts, goals, and objectives to reduce inappropriate variations in care, and a documentation system to monitor performance and corrective action.

Stabilization of Trauma-Related Death Rate

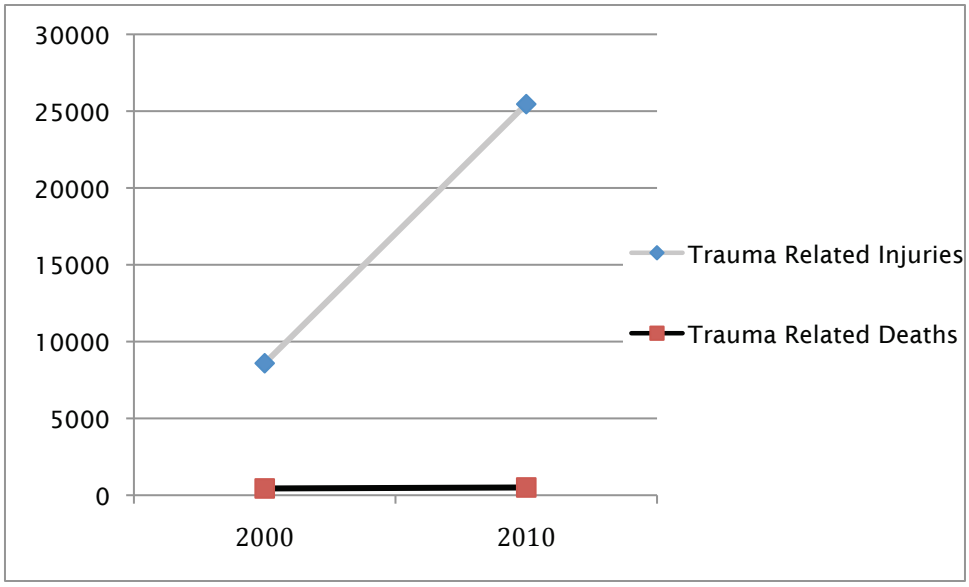
Since 2000, the number of Mississippi's trauma related deaths has remained fairly constant, even though trauma-related injuries have risen significantly.

As shown in Exhibit 8, page 36, Mississippi's trauma-related injuries have increased by 196% from 8,590 cases in 2000 to 25,457 cases in 2010 (the most recent year for which data is available). During the same period, the overall number of deaths due to trauma has remained fairly stable with the number increasing by 14% (from 440 to 504).

While factors such as motorcycle and bicycle helmet laws, seatbelt laws, and improved medical knowledge and technology have arguably played a role in controlling the number of trauma deaths, the Legislature created the state's trauma care system to manage and coordinate trauma care at the state, regional, and local levels and the slight increase in trauma-related deaths from 2000 to 2010

in relation to the 196% increase in trauma-related injuries seems to indicate that the system has been effective in providing trauma care and reducing the number of deaths from trauma-related injuries.

Exhibit 8: Mississippi's Trauma-Related Injuries and Trauma-Related Deaths, CY 2000-CY 2010



SOURCE: PEER analysis of "Mississippi Trauma Care System Fact Sheet 2012," Department of Health.

Recommendations

1. The Department of Health should immediately begin auditing Trauma Care Systems Fund distributions that have been made to trauma regions, trauma centers, and EMS providers since FY 2010. In addition to auditing the data entered into the state's trauma registry, the department should review regions' and trauma centers' financial records to verify the accuracy of expenditure information submitted on the semi-annual applications.
2. The Department of Health should require the Joseph M. Still Memorial Burn Center at Crossgates River Oaks Hospital to submit the same type of expenditure information required of Level I-Level III trauma centers.

Appendix A: Mississippi's Trauma Care Regions

Currently, the seven trauma care regions and their comprising counties are:

- *Central Mississippi Trauma Care Region:* Attala, Claiborne, Copiah, Hinds, Holmes, Jefferson, Madison, Leake, Rankin, Scott, Simpson, Smith, Warren, and Yazoo counties;
- *Coastal Trauma Care Region:* George, Hancock, Harrison, and Jackson counties;
- *Delta Trauma Care Region:* Bolivar, Carroll, Coahoma, DeSoto, Grenada, Humphreys, Issaquena, Leflore, Marshall, Montgomery, Panola, Quitman, Sunflower, Sharkey, Tallahatchie, Tate, Tunica, Washington, and Yalobusha counties;
- *East Central Trauma Care Region:* Clarke, Kemper, Lauderdale, Neshoba, Newton, Noxubee, and Winston counties;
- *North Mississippi Trauma Care Region:* Alcorn, Benton, Calhoun, Chickasaw, Choctaw, Clay, Itawamba, Lafayette, Lee, Lowndes, Monroe, Oktibbeha, Pontotoc, Prentiss, Tishomingo, Tippah, Union, and Webster counties;
- *Southeast Mississippi Trauma Care Region:* Covington, Forrest, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Pearl River, Perry, Stone, Walthall, and Wayne counties; and,
- *Southwest Mississippi Trauma Care Region:* Adams, Amite, Franklin, Lawrence, Lincoln, Pike, and Wilkinson counties.

For a map of the trauma care regions, see Exhibit 1, page 6.

Appendix B: Health Care Facilities in Mississippi's Trauma Care System, by Trauma Center Level, as of September 24, 2012

Trauma Center, By Level	Location
Level I	
University of Mississippi Medical Center	Jackson, MS
University of South Alabama	Mobile, AL
Regional Medical Center at Memphis	Memphis, TN
Level II	
Forrest General Hospital	Hattiesburg, MS
Memorial Hospital of Gulfport	Gulfport, MS
North Mississippi Medical Center (NMMC)	Tupelo, MS
Singing River Hospital	Pascagoula, MS
Level III	
Anderson Regional Medical Center	Meridian, MS
Baptist Memorial Hospital – DeSoto	Southaven, MS
Baptist Memorial Hospital – Golden Triangle	Columbus, MS
Baptist Memorial Hospital – North Mississippi	Oxford, MS
Biloxi Regional Medical Center	Biloxi, MS
Delta Regional Medical Center	Greenville, MS
Garden Park Medical Center	Gulfport, MS
Magnolia Regional Health Center	Corinth, MS
Ocean Springs Hospital	Ocean Springs, MS
OCH Regional Medical Center	Starkville, MS
River Oaks Hospital	Flowood, MS
Rush Foundation Hospital	Meridian, MS
South Central Regional Medical Center	Laurel, MS
Southwest Mississippi Regional Medical Center	McComb, MS
Level IV	
Alliance Healthcare System	Holly Springs, MS
Baptist Medical Center	Carthage, MS
Baptist Memorial Hospital – Booneville	Booneville, MS
Baptist Memorial Hospital – Union County	New Albany, MS
Bolivar Medical Center	Cleveland, MS
Calhoun Health Services	Calhoun City, MS
Central Mississippi Medical Center	Jackson, MS
Covington County Hospital	Collins, MS

Crossgates River Oaks Hospital	Brandon, MS
Field Memorial Community Hospital	Centreville, MS
Franklin County Memorial Hospital	Meadville, MS
George County Hospital	Lucedale, MS
Greene County Hospital	Leakesville, MS
Greenwood Leflore Hospital	Greenwood, MS
Grenada Lake Medical Center	Grenada, MS
H.C. Watkins Memorial Hospital	Quitman, MS
Hancock Medical Center	Bay St. Louis, MS
Highland Community Hospital	Picayune, MS
Holmes County Hospital and Clinics	Lexington, MS
North Mississippi Medical Center – Iuka	Iuka, MS
Jefferson Davis Community Hospital	Prentiss, MS
John C. Stennis Memorial Hospital	DeKalb, MS
King's Daughters Hospital – Yazoo County	Yazoo City, MS
King's Daughters Medical Center – Brookhaven	Brookhaven, MS
Laird Hospital	Union, MS
Lawrence County Hospital	Monticello, MS
Magee General Hospital	Magee, MS
Marion General Hospital	Columbia, MS
Montfort Jones Memorial Hospital	Kosciusko, MS
Natchez Community Hospital	Natchez, MS
Natchez Regional Medical Center	Natchez, MS
Neshoba County General Hospital	Philadelphia, MS
North Mississippi Medical Center – West Point	West Point, MS
North Oak Regional Medical Center	Senatobia, MS
North Sunflower County Hospital	Ruleville, MS
Northwest Mississippi Regional Medical Center	Clarksdale, MS
Noxubee General Critical Access Hospital	Macon, MS
Patient's Choice Medical Center of Humphreys County	Belzoni, MS
Pearl River County Hospital	Poplarville, MS
Perry County General Hospital	Richton, MS
Pioneer Community Hospital of Aberdeen	Aberdeen, MS
Pioneer Community Hospital of Newton	Newton, MS
Pioneer Community Hospital of Choctaw	Ackerman, MS
North Mississippi Medical Center – Pontotoc	Pontotoc, MS
Quitman County Hospital	Marks, MS
River Region Health System	Vicksburg, MS
S.E. Lackey Memorial Hospital	Forest, MS
Scott Regional Hospital	Morton, MS
Simpson General Hospital	Mendenhall, MS
South Sunflower County Hospital	Indianola, MS
St. Dominic Jackson Memorial Hospital	Jackson, MS
Stone County Hospital	Wiggins, MS
Tippah County Hospital	Ripley, MS
Tri Lakes Medical Center	Batesville, MS
Tyler Holmes Memorial Hospital	Winona, MS
Walthall General Hospital	Tylertown, MS
Wayne General Hospital	Waynesboro, MS
North Mississippi Medical Center – Eupora (previously Webster Health Services)	Eupora, MS
Winston Medical Center	Louisville, MS

Burn Center	
Joseph M. Still Memorial Burn Center at Crossgates River Oaks Hospital[8]	Brandon, MS

SOURCE: Mississippi Department of Health.

[8]The Joseph M. Still Memorial Burn Center at Crossgates River Oaks Hospital is affiliated with the Joseph M. Still Burn Center, Inc., in Augusta, Georgia, the largest burn care facility in the United States.

Appendix C: Mississippi Hospitals Categorized as Non-Designated and Non-Participating in the Trauma Care System

Non-Designated Hospitals[9]	
Jefferson County Hospital	Fayette, MS
Madison River Oaks Medical Center	Canton, MS
Patient's Choice Medical Center of Claiborne County	Port Gibson, MS
Sharkey – Issaquena Community Hospital	Rolling Fork, MS
Tallahatchie General Hospital	Charleston, MS
Non-Participating Hospitals[10],[11]	
Gilmore Memorial Regional Medical Center	Amory, MS
Hardy Wilson Memorial Hospital	Hazlehurst, MS
Baptist Medical Center	Jackson, MS
Trace Regional Hospital	Houston, MS
Wesley Medical Center	Hattiesburg, MS

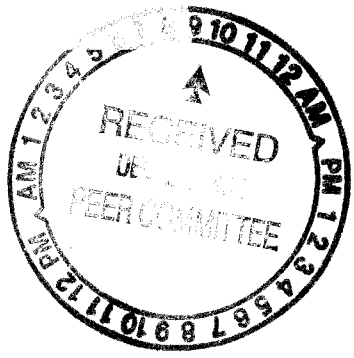
SOURCE: Mississippi Department of Health.

[9] A *non-designated hospital* is a licensed acute care hospital that that has applied for designation as a trauma center, but has not been designated by the Department of Health.

[10] A *non-participating hospital* is a licensed acute care hospital that has informed the Department of Health that it does not desire to participate in the trauma care system or a hospital that does not have a current designation or application for designation on file with the department.

[11] Choctaw Health Center in Philadelphia, MS, is also a non-participating hospital, but since the hospital is operated by the Mississippi Band of Choctaw Indians on reservation lands, it is not required to participate in the Mississippi trauma care system due to the sovereign character of the Mississippi Band of Choctaw Indians.

MISSISSIPPI STATE DEPARTMENT OF HEALTH



December 26, 2012

Max K. Arinder, PhD
Executive Director
Joint Committee on Performance Evaluation and Expenditure Review
P.O. Box 1204
Jackson, Mississippi 39215

Dear Dr. Arinder,

The response to the recommendations listed in the PEER report entitled *A Descriptive Review of the Mississippi Trauma Care Systems Fund* is attached for your review. In addition, supporting documentation requested by your staff during the exit conference is included with the response.

The professional demeanor, attention to detail, and courtesy extended by your staff, especially the lead evaluator, Mr. Matthew Holmes, during this review was greatly appreciated by the Trauma System staff.

If you should have questions, please feel free to contact me or Norman Miller, PhD, Trauma System Administrator at 601-576-8095.

Sincerely,

Mary Currier, MD, MPH
State Health Officer

ENCL

Response to PEER Committee report: A Descriptive Review of the Mississippi Trauma Care Systems Fund

Recommendations:

1. *The Department of Health should immediately begin auditing Trauma Care Systems Fund distributions that have been made to trauma regions, trauma centers, and EMS providers since FY2010. In addition to auditing the data entered into the state's trauma registry, the department should review regions' and trauma centers' financial records to verify the accuracy of expenditure information submitted on the semi-annual applications.*

   Audits of the Trauma Care Trust Fund distributions for FY10 and FY11 were initiated in July, 2012 and the last audit was completed on November 28, 2012. Five of the audit reports are attached as Attachments 1-5. The last audit is tentatively scheduled for February, 2013.

   Audits of the Trauma Registry submissions are conducted in two ways: Quality Assurance (QA) checks are made by the Trauma Registry staff at the time the data is received from the trauma center each month. These checks include formatting, entries in the allowable range, and completeness of the required fields. Audits of the accuracy of the Trauma Registry records are completed during the tri-annual on-site survey of the Level I-Level III Trauma Centers. Consultant surveyors (physicians and nurses) review randomly selected patient charts and compare the diagnosis related groups (DRG) in the patient charts to the data in the Trauma Registry record. Although it is a representative sampling, it does validate the overall accuracy of the Trauma Registry.

2. *The Department of Health should require the Joseph M. Still Memorial Burn Center at Crossgates River Oaks Hospital to submit the same type of expenditure information required of Level I-Level III trauma centers.*

   Starting will the Fall (December) 2012 Trauma Care Trust Fund (TCTF) distribution, Crossgates River Oaks Hospital/J.M Still Burn Center will report expenditures of the TCTF distribution received during the June 2012 TCTF distribution in the same manner required of Level I-Level III trauma centers. Previously, Crossgates River Oaks Hospital, as a Level IV Trauma Center, was not required to submit expenditures as they only received a $10,000 annual stipend.

PEER Committee Staff

Max Arinder, Executive Director
James Barber, Deputy Director
Ted Booth, General Counsel

Evaluation
David Pray, Division Manager
Linda Triplett, Division Manager
Kim Cummins
Matthew Dry
Brian Dickerson
Lonnie Edgar
Barbara Hamilton
Matthew Holmes
Kevin Mayes
Angela Norwood
Jennifer Sebren
Julie Winkeljohn

Editing and Records
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Administration
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Louwill Davis, Corrections Auditor