

TRAUMA CARE

IN SOUTHEAST MISSISSIPPI



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Under The Management Of



TRAUMA CARE IN SOUTHEAST MISSISSIPPI

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INTRODUCTION

"Trauma Care in Southeast Mississippi" documents progress the Southeast Trauma Care Region (SETCR) has made over the past five years toward the development of a regional system for trauma victims' care. This report reviews developmental activities, provides information captured by the regional trauma registry, and describes strategies the future demands.

SETCR's mission remains two-fold:

- To develop and sustain a trauma system that assures injured victims get the highest quality care possible and
- To ensure existence of a continuum of care from initial injury detection through definitive care, including rehabilitation, thus decreasing injury and death from traumatic injury.

SETCR goals complement the mission:

- Develop and implement an inclusive regional trauma care system founded upon an existing pre-hospital emergency medical services (EMS) system and also upon in-region hospital facilities with support and commitment from the respective medical staffs;
- Establish an administrative structure able to plan and implement an inclusive trauma system, convinced that preventable trauma-related morbidity and mortality will decrease;
- Develop and implement a regional trauma registry to serve as the epidemiological basis upon which all trauma system processes can be founded; and
- Develop and implement public information, education, and prevention programs regarding accessibility to care, system support, and lifestyle changes toward reducing trauma injury.

SETCR remains dedicated to providing *the best* in trauma care services. Strong organizational support from the SETCR Board of Directors, the Clinical Committee, Trauma Nurse/Registrar Committee, and Pre-hospital Committee, as well as from regional staff and other allied groups, contribute to that dedication.

DEVELOPING A SYSTEM

The State of Mississippi claims a developing statewide system of caring for people who sustain **severe traumatic injuries**. *Severe trauma* refers to a major injury to one or more body systems and requires immediate medical, and often surgical, care to prevent permanent disability or death.

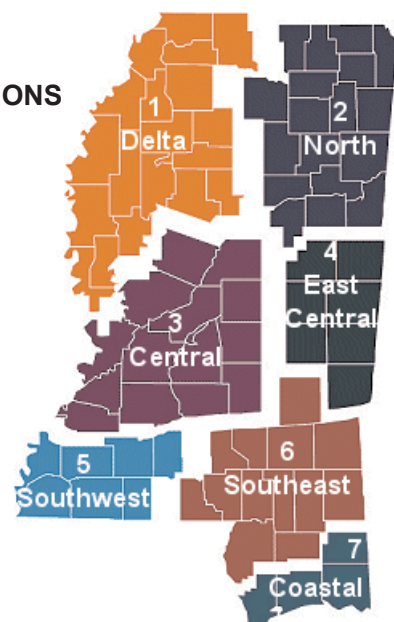
Trauma leads causes of death among people from age 1 through 44 years. Trauma occurs without discrimination; this societal disease affects everyone — young, old, healthy, frail, insured, un-insured. Society suffers years of productive lives lost and also incurs the serious burden of high-cost disability and rehabilitative care.

Mississippi's EMS program has since the 1970's publicized problems associated with the need for improved trauma care. Efforts in the early years after passage of the EMS Act of 1974 focused on improving pre-hospital EMS: better response in treatment and hospital delivery of individuals injured in automobile crashes, falls, assaults, and a larger number of intentional and unintentional causes. Public health and private sector health care providers identified problems associated with the need for better trauma care as major health *and* economic issues.

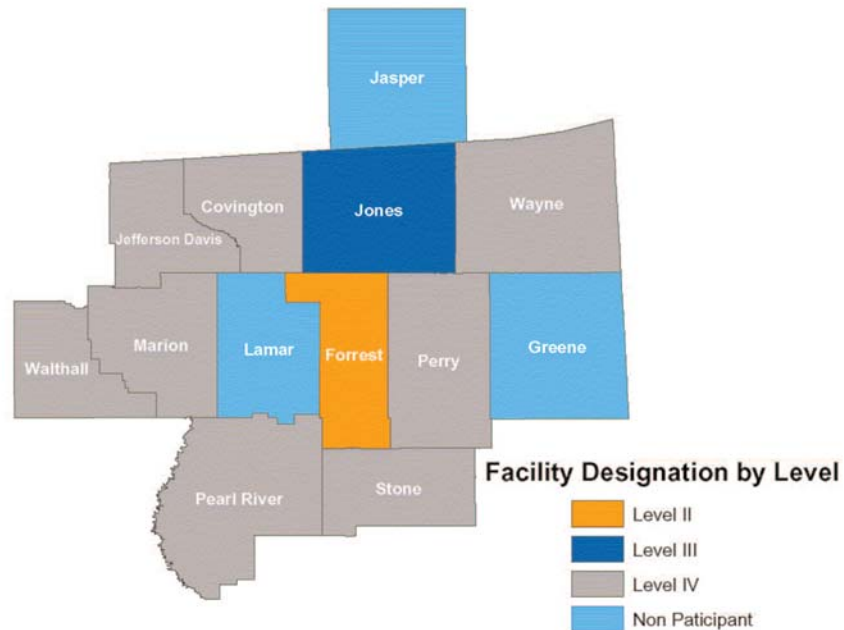
With legal authority established in 1998, Mississippi designed a regional approach to developing the statewide trauma system. The Trauma Care Law gave Mississippi its first stable chance to improve those problems associated with severely injured people. Within a year, regions initiated active trauma programs designed to develop better methods for response and care of all traumatic injury victims.

Southeast Trauma Care Region (SETCR) in 1999 became the first region officially designated by the Mississippi State Department of Health (MSDH). The Department designated six more regions later that year.

MISSISSIPPI TRAUMA CARE REGIONS



SOUTHEAST TRAUMA CARE REGION 6



The SETCR spans 13 southeast Mississippi counties.

Now SETCR claims one Level II facility, Forrest General Hospital, Hattiesburg; one Level III facility, South Central Regional Medical Center in Jones County; and eight Level IV facilities:

- Crosby Memorial Hospital, Picayune
- Covington County Hospital, Collins
- Jeff Davis Community Hospital, Prentiss
- Marion County Hospital, Columbia
- Perry County Hospital, Richton
- Stone County Hospital, Wiggins
- Walthall County Hospital, Tylertown, and
- Wayne General Hospital, Waynesboro.

Among other member counties, Wesley Medical Center, Hattiesburg, remains a non-participant; Jasper General Hospital, Bay Springs, has no emergency room; and Greene County has no hospital.

Through hospital and physician support over the past five years, the regional board structure, staff, and various committees, the SETCR has progressively developed a maturing regional trauma care system. The system is a multi-disciplinary effort to respond to the occurrence of injury by regional coordination of healthcare resources. The system involves many elements, including emergency medical services, designated trauma centers, physicians, nurses, hospital administrators, other healthcare provider groups, and programs aimed at injury prevention and rehabilitation.

NOTABLE PROGRESS

Four major factors synergistically overlap to improve or impair the system. Consideration of those factors reveals both notable progress and ongoing need regarding Mississippi's Trauma Care System:

- Authority And Responsibility
- Commitment
- Funding
- Surveillance

AUTHORITY AND RESPONSIBILITY

Comprehensive legislative authority exists for development of regional trauma care systems statewide, and the State has designated seven trauma regions. These regions provide the mechanism for development of a statewide trauma care system.

Trauma patients are getting to the right hospital quicker and are getting care more quickly than ever before. Physicians no longer need negotiate trauma transfers; they're prescribed and occur automatically. **The death rate has gone down.**

— Milestone Efforts —

Passage of legislation during the 1991 Mississippi legislative session designated the Division of Emergency Medical Services (DEMS), Mississippi State Department of Health (MSDH), as the lead agency to develop a trauma care plan for the state. The law provided that the State Department of Health develop and submit to the Legislature a plan for the triage, transport, and treatment of major trauma victims that, at a minimum, addresses the following:

- The magnitude of the trauma problem in Mississippi and the need for a statewide system of trauma care
- The structure and organization of a trauma care system for Mississippi
- Pre-hospital care management guidelines for triage and transportation of major trauma victims
- Trauma system design and resources, including air transportation services, and provision for inter-facility transfer
- Guidelines for resources, equipment, and personnel within facilities treating major trauma victims
- Data collection and evaluation regarding system operation, patient outcome, and quality improvement
- Public information and education about the trauma system
- Medical control and accountability

- Confidentiality of patient care information
- Cost of major trauma in Mississippi, and
- Research alternatives and recommendations for financial assistance of the trauma system in Mississippi, including, but not limited to, trauma system management and uncompensated trauma care.

In 1992, DEMS took the first steps toward developing a statewide trauma system by implementing a statewide trauma registry. In 1997, the Mississippi Legislature established a 17-member Trauma Care Task Force to review the status of trauma and its impact on the public's health.

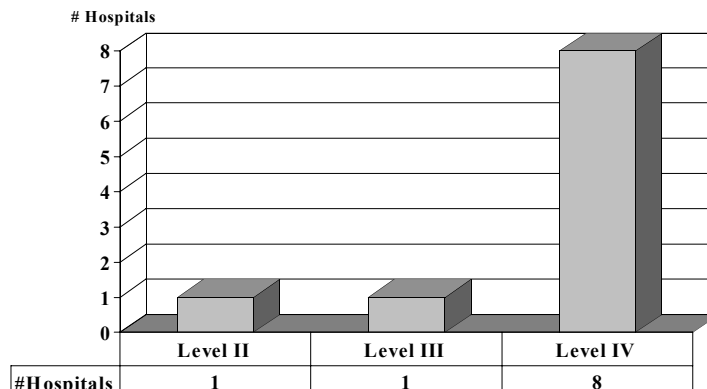
The 1998 Legislature, using information provided by the Trauma Care Task Force report, passed legislation that gave the Mississippi State Department of Health the authority *and the responsibility* to develop a statewide trauma care system.

COMMITMENT

Commitment to the development of a trauma system by hospital and physician stakeholders within the SETCR remains strong. Active involvement and networking continues among executives, doctors, nurses, trauma registrars and EMS personnel.

Although participation in the trauma system is voluntary, most of the hospitals within the SETCR do contribute. Of the 11 in-region hospitals with emergency rooms, 10 have sought trauma center designation at Levels II, III, or IV. The major difference among these levels is the type of injury a center can adequately and appropriately treat. Level II centers treat the most severely injured people, while less severe injuries are treated at Levels III or IV. Systematically, patients are being effectively triaged *in the right time, to the right hospital, for the right care.*

Southeast Trauma Care Region Hospitals By State Designation



In 1998 action, the Legislature expanded the Mississippi Emergency Medical Services Advisory Council to include trauma professionals, who comprise the Mississippi Trauma Advisory Committee (MTAC) and who developed the Mississippi Trauma Care Regulations. Mississippi State Board of Health subsequently adopted the regulations.

The regulations describe necessities for regional trauma plan development and the voluntary participant hospitals' trauma center designation process. Regulations declare the hospitals' requirements for trauma program development, including the entire continuum of care from injury through rehabilitation.

Such standardized criteria as trauma team activation, pre-hospital trauma treatment, and triage protocols have been implemented throughout the Region. But the insurance crisis within Mississippi plus the issues regarding tort reform have contributed to many trauma specialists' wavering in their support of the trauma system.

SETCR continues to support protection for physicians, nurses, EMS personnel, and other stakeholders — including individual citizens — who have committed to the trauma system.

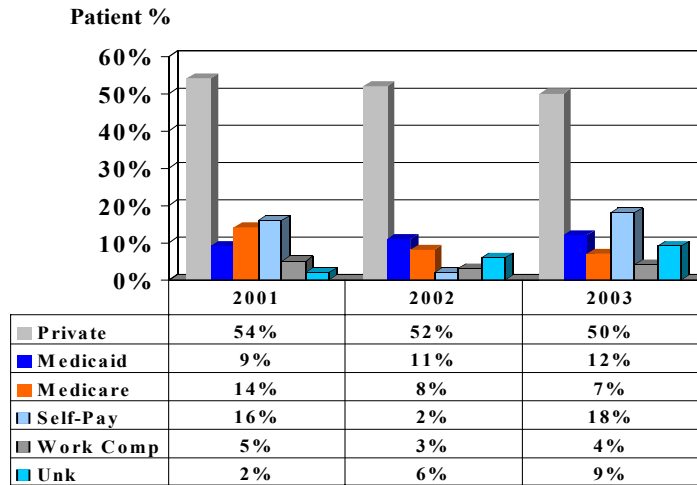
FUNDING

Unusual for most trauma systems, Mississippi established a special financial mechanism to assist trauma system development. A permanent funding source came via a \$5 assessment on all moving traffic violations, creating the Trauma Care Trust Fund (TCTF); a portion of the Tobacco Settlement supplements the TCTF to nearly \$8 million annually. The fund provides limited assistance for hospital- and physician-uncompensated trauma care.

Real-life operations throughout the Southeast Trauma Care Region reveal facts that replace long-believed myths. Two examples that deal with insurance coverage and access to care contradict the un-truths:

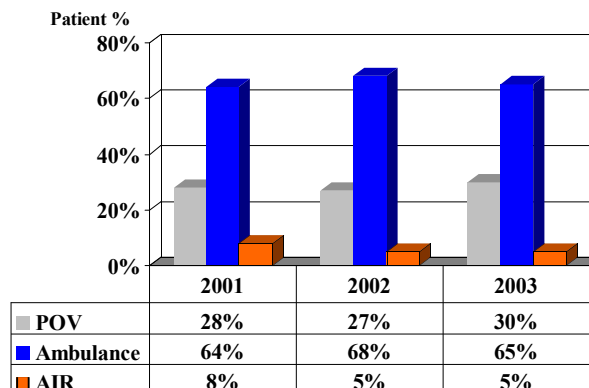
- Eighty-two percent of all trauma patients *do* have health insurance; indigent people comprise the minority among trauma victims. The figure on the following page summarizes payment data by percentage for Southeast Trauma Care Region patients and graphically denounces the “indigent” myth.

Financial Summary - SETCR



- People now come to the hospital for emergency trauma care because they know the system, including triaged transportation, is available; without the system, many would have no way to get the care they need. This graphic shows that most trauma victims within the Southeast Trauma Care Region get to the hospital via ambulance; fewer than 30 percent per year arrive by privately-owned vehicles and still less by air ambulance.

Mode Of Arrival To Hospital

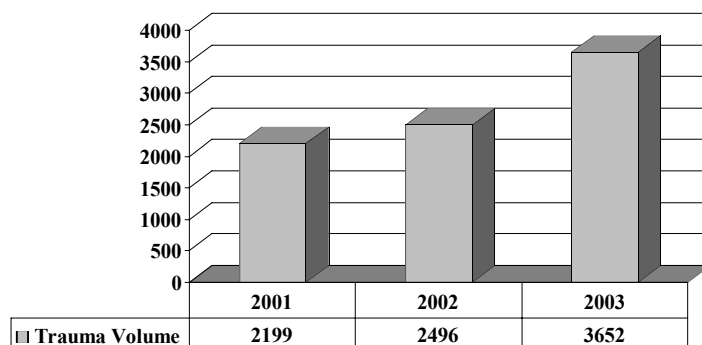


SURVEILLANCE

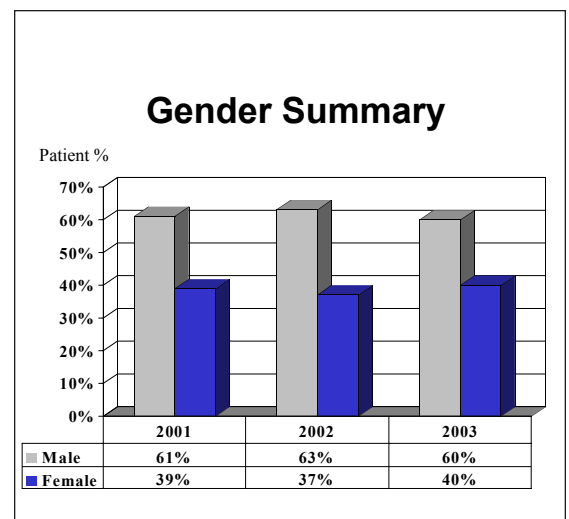
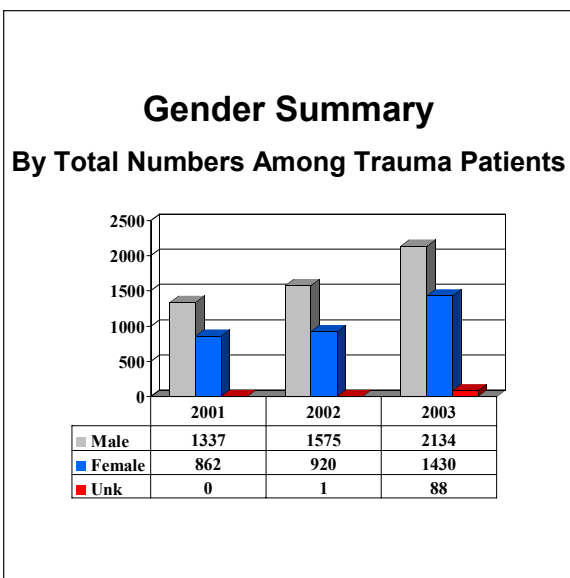
The SETCR maintains a regional trauma registry (database) on trauma patients. Information captured in the registry provides rich information that enable better decision-making about system improvements, injury prevention, and research.

The following graphs — all based on SETCR data — show increasing trauma patients for calendar years 2001 through 2003; figures also show trauma patients by age, gender, cause of injury, and whether the trauma victims used vehicle safety restraints.

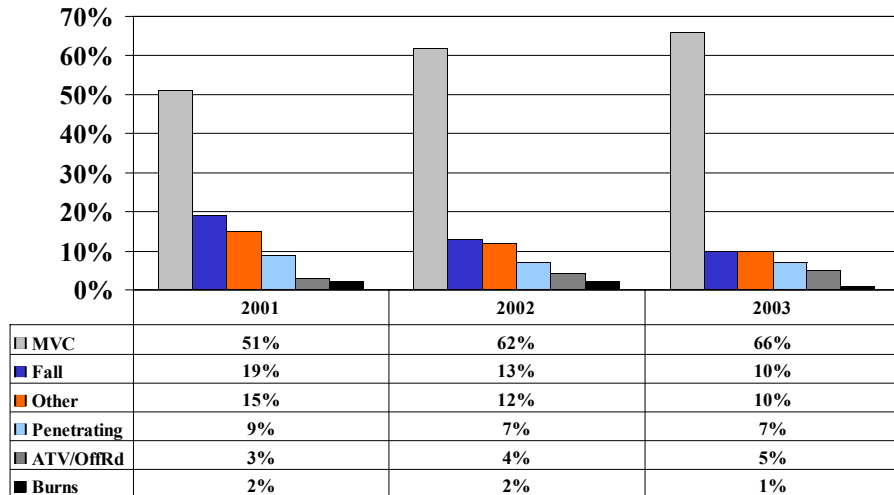
Total Trauma Volume



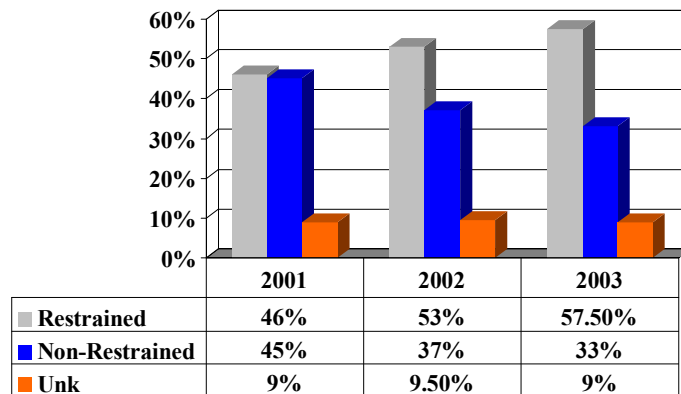
Volume increased as system developed and criteria changed



Cause Of Injury



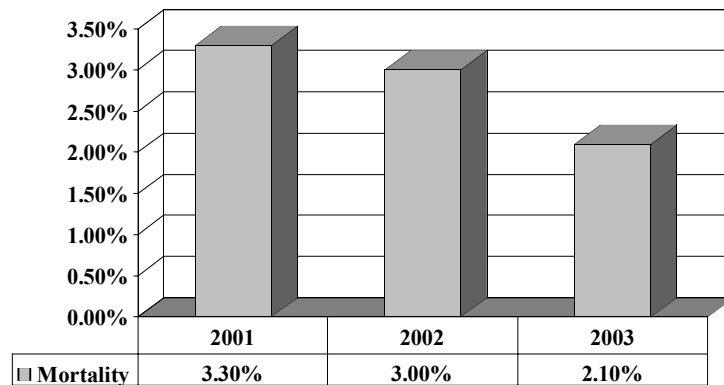
Motor Vehicle Crash Victims' Seat Belts Use



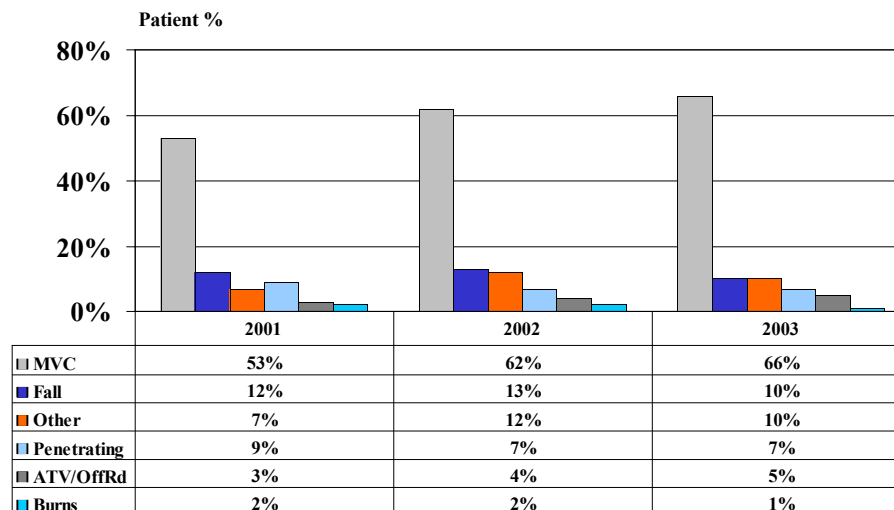
The top figure shows that, by far, motor vehicle crashes cause most traumatic injuries. Good news from the public health perspective shows in the bottom figure: ***use of seat belts among victims of trauma increased each year from 2001 through 2003.***

The following graphics show that the percentage of traumatically injured people who die has steadily dropped over the three-year period, but the percentage of people who die in motor vehicle crashes continues to increase.

Mortality (Death) Of Trauma Victims

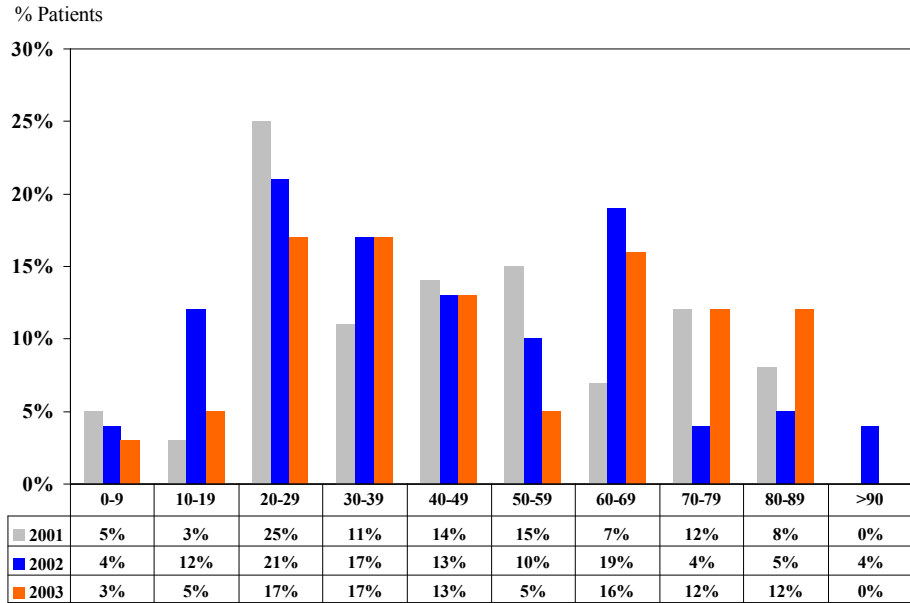


Deaths By Cause Of Injury

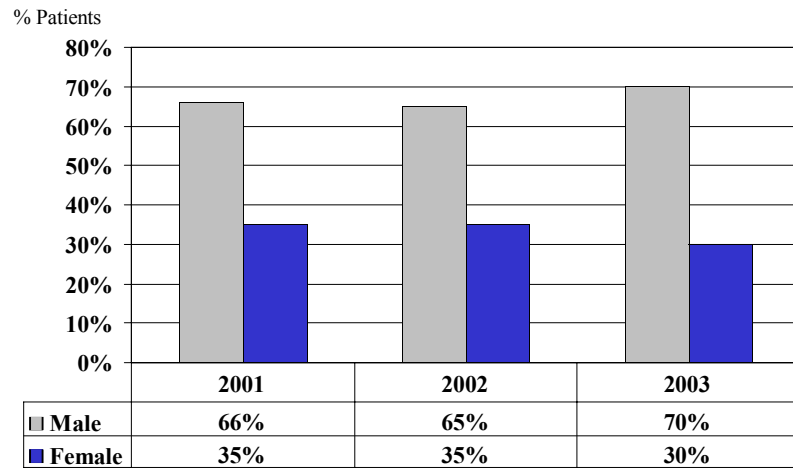


Death claims its highest percentage of victims in their 20's.
 Also, trauma claims more male than female victims

Deaths By Age



Deaths By Gender



FUTURE CHALLENGES

The future of the statewide trauma system appears to be fragile and requires new strength through renewed commitment at all participants' levels: local, regional, and state. Failure or collapse of the system for any reason would result negatively on everyone. Without a trauma care system, no one — rich, poor, young, old, healthy, frail — can be guaranteed the care they require for traumatic injury.

With this stern challenge in view, the SETCR elects to lead in trauma systems development in Mississippi. Five major challenges demand action for the future:

● ***AUTHORITY AND RESPONSIBILITY***

Public policy groups have received little information about the progress made toward the developing statewide trauma system. SETCR will aggressively share information with regional public bodies and political leaders while cooperatively working with the state lead agency to assure strong support statewide. The statewide system, however, will function optimally *only* when all regions *and* the lead agency work cooperatively to benefit the people of the State of Mississippi.

Strategic implementation of the desired statewide trauma care system requires routine review of the original plan and periodic updating of the goals and objectives based on accomplishments and needs for the future. Because health care remains dynamic, trauma system leaders must focus attention on change, effect, and new challenges.

● ***COMMITMENT***

Regrettably, no coordinated public information effort communicates the positive developments and changing challenges beyond the industry — that is, beyond the organizations and individuals professionally involved with the trauma care system development.

The lead agency — Mississippi State Department of Health — and trauma regions generally have failed to communicate with public policy groups about the progress made and needs emerging toward fully developing the statewide trauma care system.

● **FUNDING**

The TCTF has achieved its original design and purpose: to fund state and regional trauma system administration and limited facility- and physician-uncompensated trauma care.

But the evolving trauma system threatens to dilute the effectiveness of the fund as more hospitals and physicians participate.

Originally restricted to in-state trauma hospitals and to general practitioners, neurosurgeons, and orthopedists *only*, the fund has become a "claims" target of increasing numbers of other specialists and out-of-state hospitals. One out-of-state major trauma center has achieved inclusion; as such out-of-state referral trauma hospitals are invited and welcomed into the Mississippi trauma system, the fund will further diminish faster.

SETCR, therefore, will partner with the State toward expanding the fund so that the system can be protected and enabled to continuously progress.

● **SURVEILLANCE-BASED ACTION**

Ongoing maturity will include establishing a regional clearinghouse of statistical data for developing injury prevention and trauma registry-driven initiatives. Injury prevention programs will more precisely match the epidemiology of injuries treated within the trauma system.

SETCR will use registry data to target prevention of traumatic injuries, to assure better patient outcomes, and to adapt the region's objectives toward a mature system. This regional clearinghouse will be available to all.

● **LEADERSHIP**

Finally, SETCR will press for leadership — for people throughout Mississippi to recognize and address the scope of the problem of access to quality emergency medical health services in rural areas.

Former New York Mayor Rudy Giuliani in his 2002 book, **Leadership**, called the quality, the action, both a privilege *and* a responsibility. Mississippians must accept the responsibility *and* act decisively to protect the continued development of a fully functional Mississippi Trauma Care System.

Two Texas A&M University researchers wrote that trauma systems "primarily function as a statewide system, pulling together multiple health care components in an effort to ensure timely response and transport times of patients to facilities that, when patients are received, will provide adequate resources and personnel for their treatment."

SETCR will, therefore, continue this focus: to strengthen leaders' resolve to improve access to comprehensive high quality trauma system services. Such care must be available under the "umbrella" of a continuum of services: pre-hospital EMS, emergency services provided at the hospital or health center, and the statewide trauma care system that coordinates Mississippi's network of care facilities and providers.

Mississippi *must move forward* and become better for all citizens toward this ideal.

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