

# Trauma Plan 2017 to 2022



**BROWARD**  
COUNTY  
FLORIDA



Trauma Service Area Eighteen

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**Broward County Trauma Plan 2017 - 2022**

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# I. Introduction, Definition of Terms & Background

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**Broward County Trauma Plan 2017 - 2022**

# I. PREFACE

## INTRODUCTION

Since its inception in 1991, the Broward County Trauma Management Agency has continued to develop and implement strategies to ensure the citizens of Broward County are afforded a comprehensive, timely and uniform approach to trauma care.

The Agency's Strategic Plan has been developed in cooperation with Broward County government, the Broward County EMS Council and the Trauma Advisory Committee as well as input from the Broward Sheriff's Office Fire Rescue and Municipal Fire Rescue agencies.

The current document represents the dedicated effort of local experts in outlining the level of Trauma services available in Broward County, addressing the development of additional system components and presenting strategies for ongoing implementation of improvements to the trauma network in Broward County. The purpose is to provide information to inform strategies for the ongoing development, management and continual analysis of the County's trauma network and its impact upon the safety of Broward County's residents and visitors.

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## DEFINITION OF TERMS

**ACS:** American College of Surgeons

**AGENCY:** Broward County Trauma Management Agency

**AIR AMBULANCE:** Refers to either fixed-wing aircraft or rotary-wing aircraft (helicopter) used for or intended to be used for air transport of sick or injured persons requiring or likely to require medical attention during transport.

**ALS:** Advanced Life Support. A high level of medical care rendered by paramedics in the pre-hospital setting and physicians or qualified nurses in the hospital setting.

**BLS:** Basic Life Support: A moderate level of medical care provided by an EMT or certified First Responder.

**CONSOLIDATED OMNIBUS BUDGET RECONCILIATION ACT (COBRA):** Federal legislation passed in February 1988 that requires that if a hospital has certain facilities which another hospital lacks, that hospital must accept a patient transfer if requested. All hospitals in Broward operate under its guidelines.

**DEPARTMENT:** State of Florida, Department of Health (DOH).

**EMS:** Emergency Medical Service. A pre-hospital medical treatment and transportation system.

**EMT:** Emergency Medical Technician. A state-certified level of medical training required for ambulance personnel and BLS providers.

**EMTALA:** Emergency Medical Treatment and Active Labor Act is a U.S. Act of Congress passed in 1986 as part of the Consolidated Omnibus Budget Reconciliation Act (COBRA). It requires hospitals to provide care to anyone needing emergency healthcare treatment regardless of citizenship, legal status, or ability to pay. Participating hospitals may only transfer or discharge patients needing emergency treatment under their own informed consent, after stabilization, or when their condition requires transfer to a hospital better equipped to administer the treatment necessary.

**FIRST RESPONDER:** A certified level of basic first aid medical training. This level of training is usually provided to fire fighters and police officers as part of their initial education requirements.

**GOLDEN HOUR:** The hour following an incidence of blunt, penetrating, or burn traumatic injuries during which immediate treatment would significantly increase the patient's chances of surviving the injuries sustained.

**INITIAL RECEIVING FACILITY:** A hospital emergency room or designated trauma center where trauma patients are transported by the pre-hospital provider.

## DEFINITION OF TERMS

**LEVEL I TRAUMA CENTER:** A medical center (hospital) which has formal research and education programs for the enhancement of trauma care; is verified by DOH to be in substantial compliance with Level I Trauma center- Adult and Pediatric Trauma Center standards; and has been approved by DOH to operate as a Level I trauma center.

**LEVEL II TRAUMA CENTER:** A medical center (hospital) verified by DOH to be in substantial compliance with Level II trauma center standards and has been approved by the department to operate as a Level II trauma center.

**NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS):** A systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations and the private sector to work together seamlessly and manage incidents involving all threats and hazards, regardless of cause, size, location or complexity.

**PARAMEDIC:** Person who is certified by the department to perform basic and advanced life support (ALS).

**TRAUMA:** An umbrella term given to all forms of injury.

**TRAUMA CENTER:** A part of a hospital equipped and staffed to provide care for patients suffering from major traumatic injuries such as falls, motor vehicle collisions, or gunshot wounds.

**TRAUMA NETWORK:** A systematic approach to providing medical care to a victim of trauma that includes communications, pre-hospital care, patient transportation, trauma centers, and a well-defined management structure.

**TRIAGE:** The system of identifying and prioritizing patients' need for treatment.

**UNINTENTIONAL INJURIES:** Include falls, motor vehicle crashes, burns and pediatric injuries.



## STATEMENT OF FACTS

- Trauma continues to be the leading cause of death for individuals aged one to forty-four.
- 2.5 million individuals were hospitalized due to injuries in 2014.
- Approximately 199,800 people die from injury each year – 1 person every 3 minutes.
- Each year millions of people are injured and survive but face with life-long mental, physical and financial problems.
- In 2014, 26.9 million people were treated in emergency rooms for injuries.
- The total cost of injuries and violence in the United States was \$671 billion in 2013; with fatal injuries costing \$214 billion and non-fatal injuries costing more than \$457 billion. An increase of \$51 billion in the cost for non-fatal injuries since 2010.
- 75% of all deaths among young people are the result of injuries and violence, with unintentional injuries the leading cause of death among persons aged 1 to 34.
- Each year, 22 million children under the age of fourteen (one out of every four) are accidentally injured.
- Distracted drivers are a main contributor to vehicular deaths and injuries. The primary causes of distractions include: Visual: taking your eyes off the road; Manual: taking your hands off the wheel; and Cognitive: taking your mind off of driving. Distracted driving activities include using a cell phone, texting and eating.
- In the United States, for those aged 5 to 34, motor vehicle crashes are the leading cause of death, claiming the lives of over 18,000 individuals each year.

## BROWARD COUNTY STATISTICS.

- In 2015 there were 1,004 unintentional injury deaths, including 244 motor vehicle deaths. Motor vehicle deaths comprised 24% of the unintentional deaths in Broward County.
- In 2015, more people under the age of 45 in Broward County, died from unintentional injuries than from any illness.
- The unintentional injury death rate including motor vehicles for Broward County was 38.0 per 100,000. (The Healthy People Target is 36.0)
- In 2015, unintentional injuries were the fourth leading cause of death for all Broward County residents. [www.FloridaCharts.com2015AmericanCommunitySurvey](http://www.FloridaCharts.com2015AmericanCommunitySurvey)
- The vehicle traffic death rate for Broward County is 13.0 per 100,000 with the highest rate of deaths occurring amongst those age 18-44 years (18.0 per 100,000) and those 65 and over (18.3 per 100,000).

- Vehicle traffic death rates are much higher for males at 19.5 per 100,000 with the rate for females at 7.0 per 100,000.
- In 2015, there were 97 homicides committed in Broward County and 220 suicides.

\*Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [cited 2015-Mar 4] Florida Charts Broward County[cited 2015]

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## BACKGROUND

Trauma has been identified as a major cause of death and disability in the State of Florida. Numerous studies over the years by the National Research Council have documented that as many as one-in-three trauma deaths could be prevented. As part of the solution to improving the level of care provided to critically injured patients, the Council recommended the creation of trauma systems and the regionalization of trauma care.

With the passage of the Trauma Care Act in 1987, Florida expanded its statutes to establish a statewide trauma system, with additional components, in an effort to address these deficiencies on a statewide basis. Subsequent legislation supported system planning and developed a mechanism for trauma center designation and funding.

Recognizing the need for a regional approach to trauma care, the Broward County Board of County Commissioners established the Broward County Trauma Management Agency (BCTMA) in 1991 to act as the coordination point between its trauma centers, the emergency transport providers, and acute care hospitals.


The BCTMA continues to provide oversight for the Broward County Trauma System and serves a population of just under 1.9 million permanent residents, covering an area of approximately 1,320 square miles.

In 1996, the Broward County Commission consolidated similar government operations under one entity. This decision resulted in the BCTMA being joined with the operations of the County Medical Examiner's Office. Following this merger, BCTMA became a Section within Broward County's new Office of Medical Examiner and Trauma Services.

The Board of County Commissioners, in establishing the Trauma Agency, directed the Broward Regional Emergency Medical Services (EMS) Council, which serves as an appointed advisory board reporting directly to the County Commission, to facilitate the initial and continuing needs of the Trauma Agency. The EMS Council and its Trauma Advisory Committee have been effective in obtaining system cohesion and participation through the inclusion of a cross-section of service providers and community representatives.

The Trauma Advisory Committee is responsible for developing and updating trauma center standards for the County. The BCTMA, as the focal point for the County's trauma system planning, coordination and evaluation, provides support to both the EMS Council and the Trauma Advisory Committee. BCTMA has the legislative authority to manage the elements of the trauma system while ensuring each entity maintains their own constitutional and legislative authority.

The current document recognizes the dedicated efforts of local experts while outlining the level of trauma services currently available in Broward County, addressing the development of additional system components, and presenting strategies for ongoing implementation of improvements to the trauma network in Broward County.



## II. Physical Environment & Demographics

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**Broward County Trauma Plan 2017 - 2022**

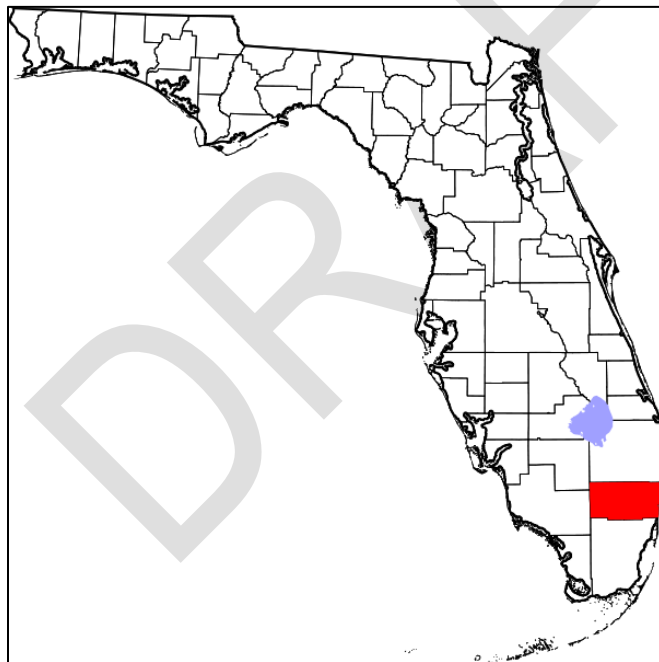
## II. PHYSICAL ENVIRONMENT AND DEMOGRAPHICS

### PHYSICAL DESCRIPTION

Broward County lies along a 25-mile stretch of the southeastern Florida coastline between Palm Beach County on the north, and Miami-Dade County on the south. From its eastern border on the Atlantic, the County extends westward some 50 miles to the Collier and Hendry County lines (See Map 1). Broward's land area totals approximately 1,320 square miles of which, 1,205 square miles is land and 115 square miles is water. The County contains approximately 471 square miles of developable land, the majority of which is built upon. The urban area is bordered by the Atlantic Ocean to the east and the Everglades National Park to the west. Within developable land, Broward County has an average population density of 3,740 per square mile. However, several sections of the County contain more than 4,000 to 6,000 residents per square mile.

Broward County consists of low-lying, flat terrain with nearly 23 miles of beach frontage and an extensive waterway system that includes the Atlantic Intracoastal Waterway and numerous private drainage canals. In recent years eroding beaches and saltwater intrusion have become significant issues for the area.

**Map 1. Broward County, Florida**



## **A. County Transportation Systems**

Broward County's international airport and seaport are among the leading drivers of the local economy.

**1. Air Travel** Fort Lauderdale/Hollywood International Airport (FLL) is ranked as the 21st busiest airport (in terms of passenger traffic) in the United States, as well as the nation's 14th busiest international air gateway and one of the world's 50 busiest airports. FLL is classified by the US Federal Aviation Administration as a "major hub" facility serving commercial air traffic. In 2016 with over 800 flights each day, the airport processed approximately *30 million passengers in 2016* (8.4% more than 2015 and 35% increase since 2010) with numbers anticipated to exceed 32 million for 2017. Travelers included 6,055,415 international passengers (10.1% more than 2015). In addition, three executive airports offer passenger and charter services. The airport has become an economic engine for Broward County with more than a \$13.2 billion annual economic contribution and is Broward County's largest employer.

The Broward Sheriff's Office (BSO) works with the Broward County Aviation Department, the Transportation Security Administration (TSA), the Airline Managers Association, airport tenants and ancillary federal agencies to provide law enforcement and fire rescue protection for 1,400 acre airport site and its 13,000 employees



### **Station 10: 250 Eller Drive Fort Lauderdale/Hollywood International Airport**

BSO is responsible for fire rescue services at the Fort Lauderdale/Hollywood International Airport, including structural fire-fighting, aircraft rescue fire-fighting, and emergency medical services. Personnel from the Fire Marshal's Office provide prevention services such as new construction plans review, annual fire inspections and the fuel inspection program that includes training classes for employees. The airport command is also active in CPR and safety classes for the Airport community.

Around the clock Fire Rescue services are provided with 1 Engine Company, 1 Rescue company, 3 Crash trucks, and a Battalion Chief. Members of the Airport Command are required to be compliant with FAA Part 139 Training requirements which include numerous specialized training topics as well as an annual live burn exercise.

The Airport response is complimented from surrounding BSO fires stations 32, 17, and 6.

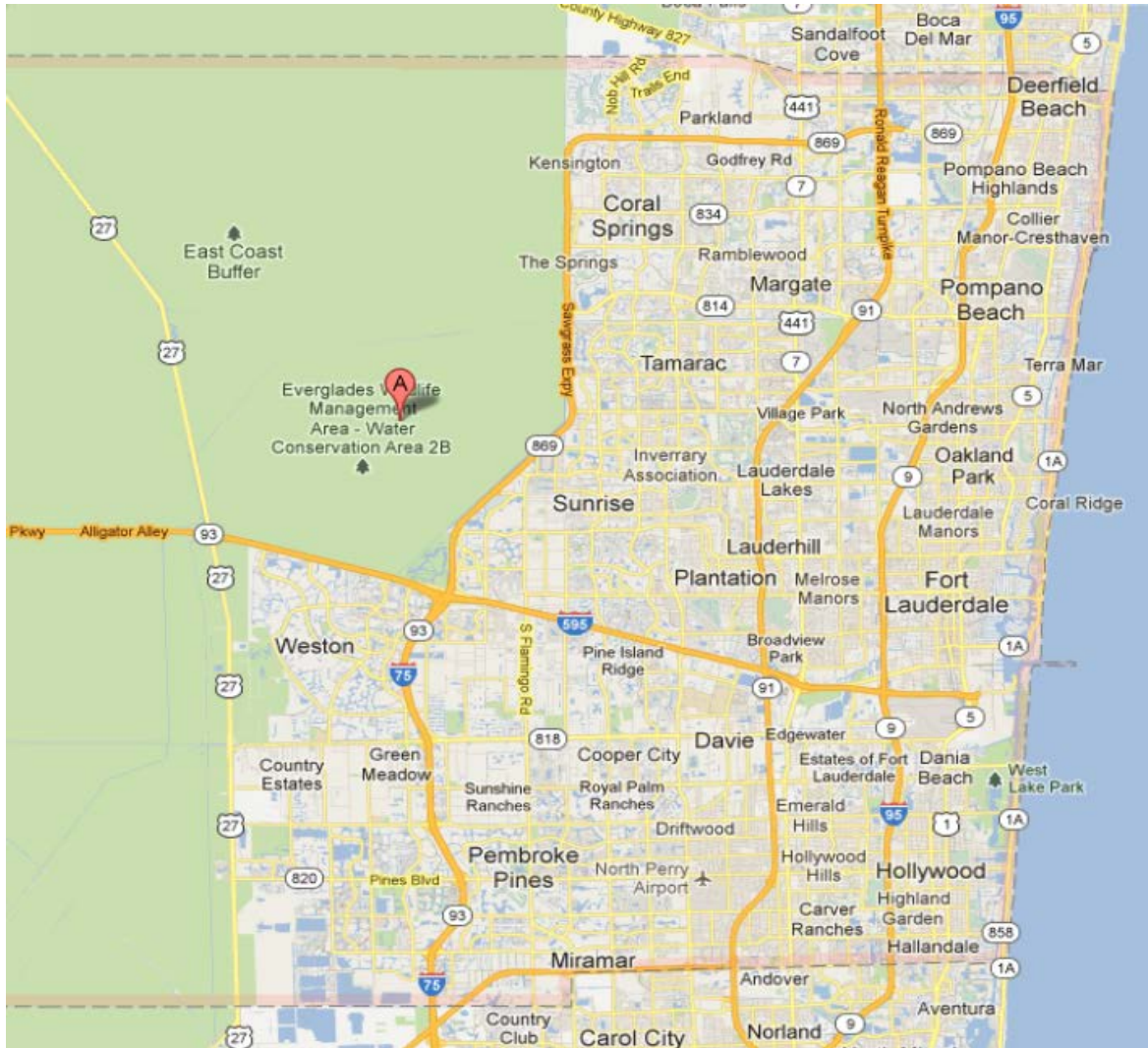
The Fort Lauderdale Executive Airport (FXE) is a general aviation airport located within the city of Fort Lauderdale. The airport serves over 165,000 aircraft operations per year, ranking it the eighth busiest General Aviation center in the United States. This airport is designated as a general aviation reliever facility for the Fort Lauderdale/Hollywood International Airport by the FAA. The airport also operates a 24-hours a day, seven days a week, ARFF facility that meets the requirements of index B, although not certified under FAR Part 139. Fort Lauderdale Fire Rescue's Station 53 provides ARFF services.

The ARFF team is trained to operate the department's specialized ARFF apparatus. The ARFF truck has pump and roll capabilities that help get close to the crash in a safe manner. Wearing special proximity suits, the team can advance on foot to the apparatus to perform search and rescue, followed by administering medical treatment.

**2. Highways:** The most highly utilized highways serving Broward County are I-95 and the Florida Turnpike, which run north/south through the County. I-75 links the western part of Broward County with Dade County and provides access to Florida's west coast. The Sawgrass Expressway traverses the western edge of the County north and east to Deerfield Beach. I-595 provides an east-west corridor to Port Everglades. State Road 84 (Alligator Alley), which parallels I-595 through eastern Broward, extends westward to Naples and is the only direct access to the Indian Reservation and conservation areas. These routes, along with other major thoroughfares within the County, are shown in *Map 2*.

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## Map 2. Street Map, Broward County

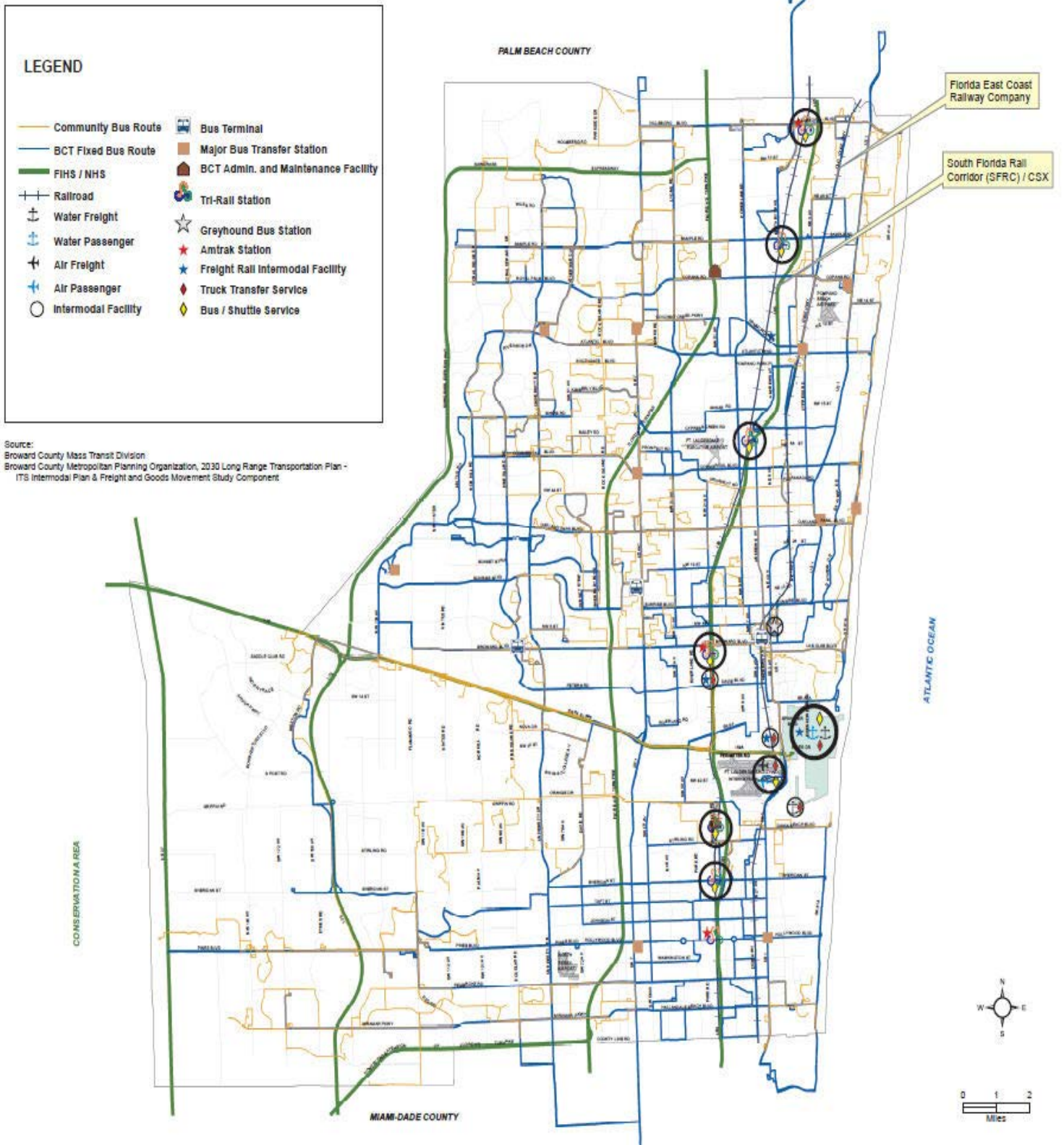


**3. Railroad System:** Two major rail systems have mainline tracks that run the length of Broward County, from the Palm Beach to Dade County lines. The FEC tracks, with 74 at-grade crossings, are used primarily for cargo, while the SFRC tracks, with 47 crossings, also carry Amtrak passenger trains and Tri-Rail commuter trains.

Additionally, beginning in late 2017, All Aboard Florida's "Brightline" service, planned to travel from Miami to Orlando, will commence its route from Miami to West Palm Beach. Rail systems, including the new "Brightline" rail, and two bus lines also provide service to other parts of the state and nation.



### Map 3. Barriers (Airports, Railroad Crossings, Bridges)



**4. Port Everglades** covers an area of 2,380 acres and ranks as the third busiest cruise port in the world behind Port Miami and Port Canaveral. It also serves as the leading container port in Florida in terms of volume of containerized cargo. The seaport includes 12 cruise terminals serving 16 cruise lines that launch more than 3,000 cruises each year and serves as the destination of U. S. Naval ships each year for Fleet Week held in conjunction with the annual Fort Lauderdale Air and Sea Show.

BSO Fire Rescue Station 6 provides specialized firefighting and emergency response capabilities geared to the unique environment of Port Everglades.

As part of this specialized response, the BSO Seaport Command has developed a multi-agency communication capability between the airport, seaport, and the United States Coast Guard.

Station 6 operates two engines, an ALS (Advanced Life Support) rescue unit and a specialized "chem-truck" that can deploy water, firefighting foam, or dry chemical extinguishing agents onto a fire.

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4. **Drawbridges:** Broward's waterways create a potential geographic barrier within the County, hindering the delivery of service in certain areas. There are currently twelve drawbridges across the Intracoastal Waterway, five New River crossings, and one inlet with a moveable bridge. High traffic flow, coupled with frequent bridge openings, can cause significant delays. As in the case with the rail system, many drawbridges are located in high traffic areas, which can negatively influence the delivery of emergency care. When transport vehicles are dispatched to areas with known drawbridges, the dispatcher notifies the bridge tender of the vehicle enroute, to provide adequate time to ensure that the bridge is not raised. Instances where the bridge is already raised or malfunctioning, transport personnel are instructed to take an alternative route. In those instances where a first responder vehicle is tied up in traffic associated with a drawbridge, alternate vehicles are also dispatched.

All of the barriers identified represent challenges to the fluid operation of the Broward County Trauma Trauma Transport System. In each case, the Trauma/EMS transport and communications system has been structured to accommodate and adjust to these challenges.

## POPULATION CHARACTERISTICS

Broward County is the second most populous County in Florida, and the sixteenth largest County in the United States. Broward County's population increased steadily from a population of 5,135 in 1920 to 1,623,018 in 2000 with a decrease in 2010 of 2%. However, in 2015 the population of Broward County increased once again to just under 1.9 million. (Table 1)

**Table 1 – Broward Population 1980-2015**

Year	Broward Population	% of State Population
1980	1,018,257	11.0%
1990	1,255,531	10.3%
2000	1,623,018	10.8%
2010	1,748,066	9.8%
2015	1,896,425	9.4%

While the population of Broward County *increased* to just under 1.9 million in 2015, Broward County's percentage of the State population has continued to *decrease slightly* since 2000 as noted in Table 1.

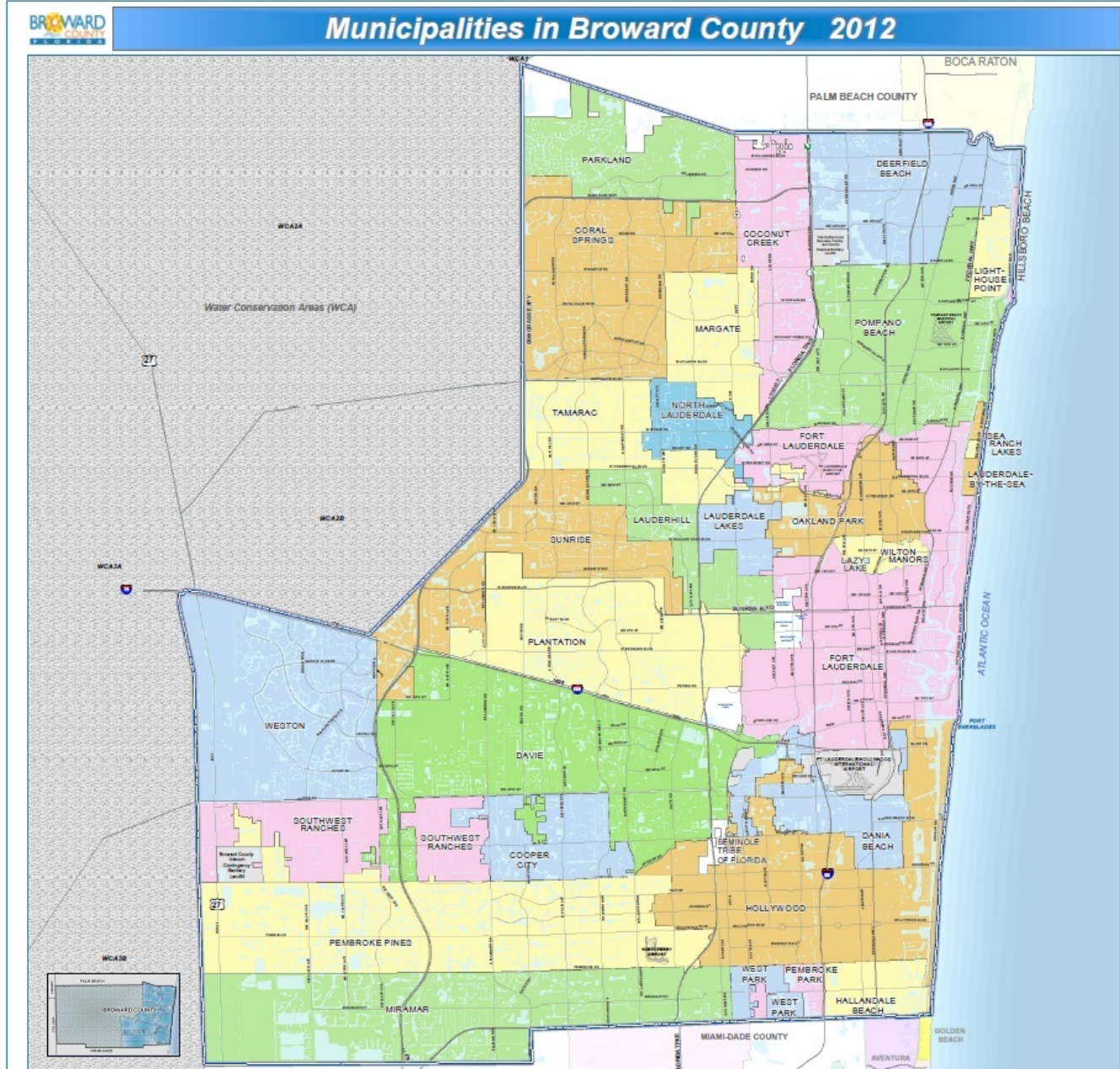
In addition to the increase in the County's *permanent* population over the past 5 years, tourism officials estimate that over 8.8 million people visit Broward County on an annual basis. According to the Greater Fort Lauderdale Convention and Visitors Bureau, the majority of individuals come either to visit friends or relatives (34%) or to vacation (44%). The remaining 22% visit Broward for business reasons.

Tourists are drawn primarily from the northeast and north/central United States. The average visitor stays for approximately two weeks. However, many "snow-birds" remain for as long as six months. This latter group is largely comprised of retired or semi-retired individuals who are significantly older than the average vacationer. Peak months for seasonal visitors are December through March. During the height of the tourist season, Broward County's population more than doubles. The presence of tourists and part-time residents are significant factors when planning for the seasonal impact on local medical service capabilities and response times.

## 1. Municipalities in Broward County

Broward County is divided into 31 municipalities with decreasing areas remaining unincorporated. Over the past 10-15 years, the majority of unincorporated areas have been incorporated within existing or newly created municipalities as outlined in Map 4.

Map 4. Municipalities in Broward County



The distribution of population in Broward County has changed considerably since the early 1970s. In 1970, the majority, over 84% of the population, lived east of Florida's Turnpike in the cities bordering the ocean. In recent years, with a few exceptions, the population center has continued to move westward and to the northern portions of the county. (*Table 2- Population by Municipality*)

An integral component of the Trauma Management Agency's ongoing planning efforts will be to continue tracking shifts in population throughout the County to assess any necessary updates to its trauma management network. Monitoring of the possible need for Trauma facilities to be located in the western portion of the County remains ongoing, with accessibility and demand being major factors in the decision-making process.

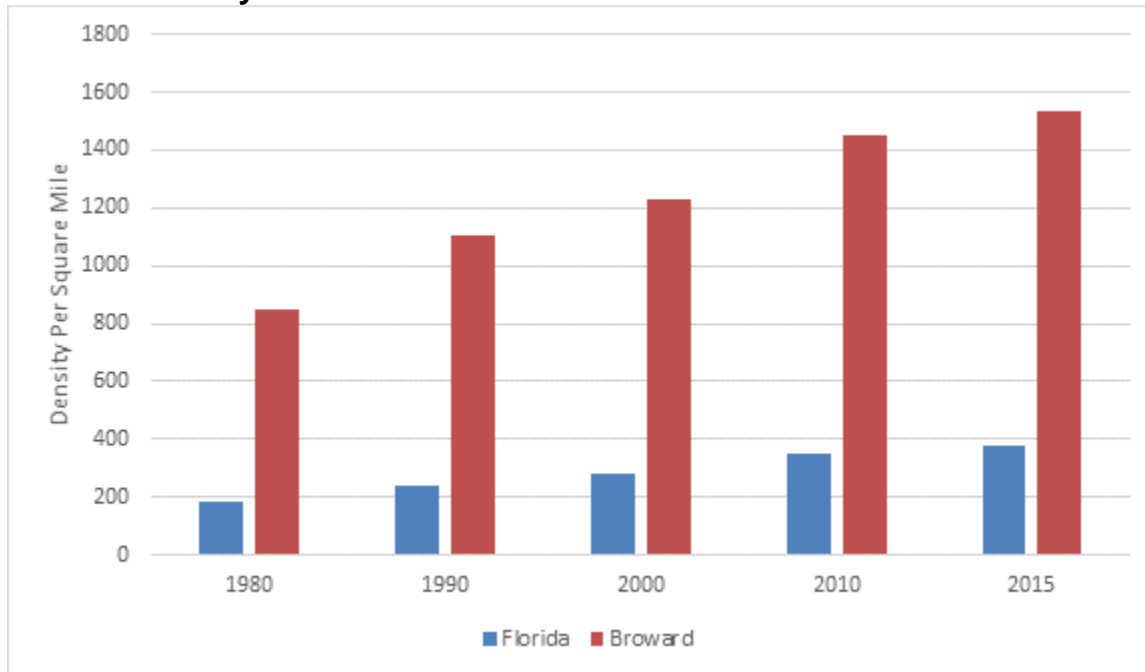
**Table 2. 2010 and 2013 Population Estimates by Broward County By Municipality**

<b>Municipality</b>	<b>2010</b>	<b>2013</b>	<b>Change</b>	<b>% Change</b>
Coconut Creek	52,909	56,792	3,883	6.8%
Cooper City	28,547	34,128	5,581	16.4%
Coral Springs	121,096	126,604	5,508	4.4%
Dania Beach	29,639	31,446	1,807	5.7%
Davie	91,992	96,830	4,838	5.0%
Deerfield Beach	75,018	78,041	3,023	3.9%
Fort Lauderdale	165,521	172,389	6,868	4.0%
Hallandale	37,113	38,632	1,519	3.9%
Hillsboro Beach	1,875	1,960	85	4.3%
Hollywood	140,768	146,526	5,758	3.9%
Lauderdale by the Sea	6,056	6,321	265	4.2%
Lauderdale Lakes	32,593	34,062	1,469	4.3%
Lauderhill	66,887	69,813	2,926	4.2%
Lazy Lake Village	24	25	1	4.0%
Lighthouse Point	10,344	10,826	482	4.5%
Margate	53,284	55,456	2,172	3.9%
Miramar	122,041	130,288	8,247	6.3%
North Lauderdale	41,023	42,757	1,734	4.1%
Oakland Park	41,363	43,286	1,923	4.4%
Parkland	23,962	26,518	2,556	9.6%
Pembroke Park	6,102	6,187	85	1.4%
Pembroke Pines	154,750	162,329	7,579	4.7%
Plantation	84,955	90,268	5,313	5.9%
Pompano Beach	99,845	104,410	4,565	4.4%
Sea Ranch Lakes	741	704	-37	-5.3%
Southwest Ranches	7,345	7,676	331	4.3%
Sunrise	84,439	90,116	5,677	6.3%
Tamarac	60,427	63,155	2,728	4.3%
West Park	14,156	14,758	602	4.1%
Weston	65,333	68,388	3,055	4.5%
Wilton Manors	11,632	12,108	476	3.9%
Unincorporated**	23,000	--	--	--
<b>BROWARD CNTY</b>	<b>1,754,780</b>	<b>1,824,812</b>	<b>70,032</b>	<b>3.8%</b>

Source: US Census Bureau, 2013.

Broward is the second most densely populated County in Florida with its neighbor, Miami-Dade County being the most populated. Since 2003, the population density has exceeded an average of 1,400 persons per square mile. However, many municipalities currently exceed this density, with several areas having a density of between 4,000 to 6,000 residents per square mile. The population density of Broward continues to increase as much of the remaining undeveloped land in the County is either uninhabitable (swamps or marshes) or designated for government-owned parks or services. As of 2016, only 471 square miles remained as developable.

**Table 3: Trends in Population Density for Broward County and Florida from 1980 to 2015**



**Table 4** illustrates the age distribution of Broward County’s population for 2015. For the period 2010 to 2015, the population demographics of Broward County indicate an overall increase of 148,359 residents (8% increase). The largest numeric increase was in the age group 20 – 34 (41,971) reflecting many municipalities efforts to attract a younger workforce.

**Table 4. Broward County Population by Age, 2015**

Age	Population	% of Total
0-19	448,352	24%
20-34	371,233	20%
35-54	534,020	28%
55-64	245,920	13%
65-84	251,835	13%
85+	45,071	2%
<b>Total</b>	<b>1,896,425</b>	<b>100.0%</b>

American Community Survey, 2015

According to the 2015 American Community Survey, there were 296,096 seniors (65 and older) residing in Broward County, approximately 46,672 more than in 2010. Table 4 reflects the latest available percentages for each age group. Changes in population since 2010 indicate a slight decrease in those under the age of 18 with a measurable decrease in seniors 85 years of age and older, from 4% to 2%. The age group 65-84 has shown a significant increase (3%) from 2010 to 2015. The largest increase since 2010 has been in the population ages 55-64, a group that will continue to increase the number of seniors living in the area in the future. As the County increases its population, it also is experiencing an increase in the aging of its population. This aging of the population will continue to impact the demand for accessible health care facilities and Emergency transport services.

Population changes naturally have an impact on the Trauma Network. The information gathered identifies several types of potential barriers to accessibility addressed by the trauma system. These barriers include:

1. The impact of tourism.
2. The distribution of population density.
3. The distribution of the elderly population.
4. Servicing the Indian reservation population.

In all instances, accommodations are in place to ensure that no significant population group is underserved or inappropriately served.

1. Seasonal Population Fluctuations (Tourism): Broward County is a major winter vacation spot for thousands of visitors from around the world (2015:8.8 million visitors). Persons whose illnesses are not critical generally return to their homes to deal with medical problems. However, trauma presents additional challenges not faced by the non-emergency patient.

The Broward County's pre-hospital and hospital system is staffed in winter months to accommodate additional patient demand. Additional rescue and transport capabilities are utilized in winter months when increased traffic tends to create situations that could slow response times. The availability of rescue helicopters provide an additional response assurance during high visitor, high traffic periods, and to accommodate increased rail usage.

2. Population Distribution: Hospital facilities have expanded their operations to the west to provide additional care to residents in the western portions of the County. In the case of pre-hospital providers, the County, in coordination with the EMS Council, maintains an active planning effort designed to locate additional pre-hospital providers in new or expanding population centers.

While there are no Trauma Centers currently located in the western portion of the county, for the purpose of trauma incidents, helicopter transport service ensures that no area of the county is beyond an acceptable transport time to a designated Trauma facility.



The financial considerations associated with the increase in population and trauma cases are met by Broward County's two tax-assisted hospital districts. In addition to insured patients, they also provide accessibility for all indigent residents, for both trauma and non-trauma hospital care, ensuring every individual has access to care.

3. Elderly Residents: There are significant concentrations of elderly residents in certain sections of the County. The pre-hospital emergency system responds to the existence of high concentrations of a variety of population groups through the distribution of emergency response vehicle sites.
4. Native American Population: The Seminole Indian Reservation, located in western Broward County, and the Miccosukee Indians, located in the Florida Everglades, offer challenges for the transport of emergency patients due to their limited highway access. In cases of traumatic injuries, where highway access or response time is compromised, rescue helicopter service is utilized as the situation dictates.

### **Impact of Potential Disasters on the Trauma Network**

Broward County's Emergency Management Agency has the responsibility for developing and implementing disaster planning, mitigation, and response activities within the County under provisions of Florida State Statutes. Emergency Management operates the County's Emergency Operations Center (CEOC), and functions within the scope of the National Incident Management System (NIMS). The CEOC serves as a Multi-Agency Coordination system within which there are a number of Emergency Support Functions (ESF's). Representatives of the Trauma Management Agency serve as members of ESF-8, Health and Medical, operating under the Human Services Branch of the CEOC.

ESF-8, Health and Medical, provides the mechanism for coordinated assistance to supplement County and local resources in response to a public health and medical disaster, potential or actual incidents requiring a coordinated response, and/or during a developing or potential health and medical emergency. Within South Florida, hurricanes pose a real and potentially devastating threat. Florida's Hurricane season runs from June 1<sup>st</sup> thru November 30<sup>th</sup>, requiring preparedness planning on the part of the Trauma Management Agency in its role as a member of ESF-8. Developing and implementing updates to the appropriate disaster plans is an ongoing function of the Agency.

In the event of any major disaster potentially involving large amounts of casualties, such as a hurricane Category 3 or higher, a coordinated plan of response automatically goes into effect using the Broward County Emergency Management Plan through the County's Emergency Management Agency. Plans, policies, and procedures are in place including mutual aid response from municipal agencies in addition to the Broward Sheriff's Office response teams.

In addition to the implementation of the strategies involved in response to a hurricane, the Broward County Emergency Management Plan includes the Plan for Hazardous Materials and Weapons of Mass Destruction, all of which delineate the procedures that would be implemented to help minimize suffering and the loss of life.

In response and preparation for incidents of mass shootings, such as occurred at the Fort Lauderdale/Hollywood International Airport, the Broward Emergency Management Division has initiated a review of all policies and procedures related to any form of terrorist attack. This review will also include a review of the Mutual Aid agreements in place for both the Broward Sheriff’s Office and the various municipalities. Copies of the Standard Operating Procedures for both Active Shooter and Hostile Violent Situations for the Broward Sheriff’s Office are available upon approved request through the County’s Trauma Management Agency.

**MEDICAL FACILITIES**

The County’s three busiest emergency departments - Broward Health Medical Center in Fort Lauderdale; Memorial Regional Hospital in Hollywood; and Memorial Hospital West in Pembroke Pines are facilities within the North and South Broward Hospital Taxing Districts.

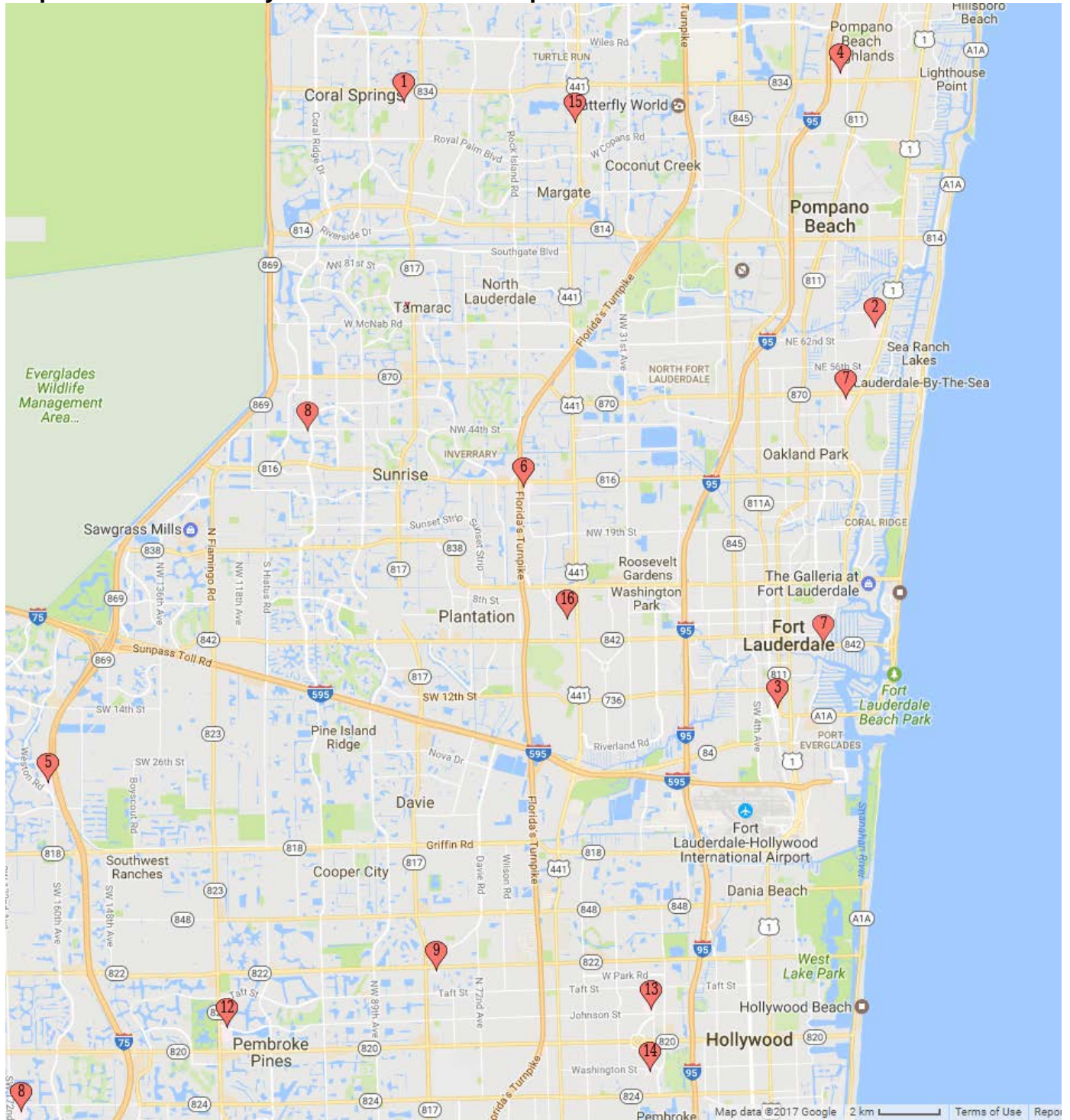
The following are locations and names of the sixteen (16) hospitals currently located in Broward County, including those belonging to the North and South Broward hospital taxing districts which are components of the Trauma Network.

Following is a listing of the sixteen hospitals, as noted in Map 5, that serve as components of the Broward County Trauma Network.

**Address of Hospitals noted in Map 5.**

1	Broward Health Coral Springs	3000 Coral Hills Dr, Coral Springs, FL 33065, USA	6	Florida Medical Center	5000 W Oakland Park Blvd, Lauderdale Lakes, FL 33313, USA	11	Memorial Regional Hospital	3501 Johnson St, Hollywood, FL 33021, USA
2	Broward Health Imperial Point	6401 N Federal Hwy, Fort Lauderdale, FL 33308, USA	7	Holy Cross Hospital	4725 N Federal Hwy, Fort Lauderdale, FL 33308, USA	12	Memorial Hospital South	3600 Washington St, Hollywood, FL 33021, USA
3	Broward Health Medical Center	1600 S Andrews Ave, Fort Lauderdale, FL 33316, USA	8	Memorial Hospital Miramar	1901 SW 172nd Ave, Miramar, FL 33029, USA	13	Northwest Medical Center	2801 N State Rd 7, Margate, FL 33063, USA
4	Broward Health North	201 Sample Rd, Pompano Beach, FL 33064, USA	9	Memorial Hospital Pembroke	7800 Sheridan St, Pembroke Pines, FL 33024, USA	14	Plantation General Hospital	401 NW 42nd Ave, Plantation, FL 33317, USA
5	Cleveland Clinic Hospital	3100 Weston Rd, Weston, FL 33331, USA	10	Memorial Hospital west	703 N Flamingo Rd, Pembroke Pines, FL 33028, USA	15	University Hospital and Medical Center	7201 N University Dr, Pompano Beach, FL 33321, USA
						16	Westside Regional Medical Center	8201 W Broward Blvd, Plantation, FL 33324, USA

# Map 5. Broward County Trauma Network Hospitals



Broward County currently has the second largest concentration of medical doctors in the state, surpassed only by neighboring Miami-Dade County.

**Table 5** indicates the Hospital Utilization rates as of 2016 for hospitals located within Broward County. These utilization rates increased from 51.9% in 2010 to just under 56% for 2016, an increase of 137 beds during this period of time. Reports on bed utilization are provided by the county’s medical facilities on a quarterly basis to the Florida Agency for Health Care Administration (AHCA).

**Table 5. 2016 Bed Utilization by Hospital**

<b>Hospital</b>	<b># Licensed Beds</b>	<b>Occupancy Rate</b>
Broward Health Medical Center*	716	59.9%
Cleveland Clinic	155	79.4%
Broward Health Coral Springs*	200	61.6%
Florida Medical Center	459	33.8%
Holy Cross Hospital	577	38.4%
Broward Health Imperial Point *	204	53.8%
Memorial Regional Hospital**	777	72.9%
Memorial Hospital Miramar**	178	51.7%
Memorial Hospital Pembroke**	301	28.4%
Memorial Regional South**	267	32.3%
Memorial Hospital West**	381	74.2%
Broward Health North*	409	51.6%
Northwest Medical Center	228	77.4%
Plantation General Hospital	264	50.7%
University Hospital	317	47.6%
Westside Regional Medical Center	224	80.1%
<b>TOTAL</b>	<b>5,657</b>	<b>59.2%</b>

Source: 2016 Annual Utilization Report, BRHPC

\* North Broward Hospital District Facilities

\*\* South Broward Hospital District Facilities

### **Impact of Tourism on Emergency Department Utilization**

Broward County continues to be a popular winter vacation spot for thousands of visitors from around the world. For the most part, these visitors arrive between December and April and stay limited amounts of time. Individuals, whose illnesses are not critical, generally return to their homes to deal with medical issues. During these peak tourist months, local hospitals must respond to the increased need for hospital beds by increasing staff and adjusting staffing patterns.

As noted in the section on *Population Characteristics*, tourism in South Florida has a major impact upon the Trauma Network, including the staffing of the County’s medical facilities. The population trend in recent years has had winter residents arriving earlier and staying later.

However, the largest population increase in Broward County still occurs during the months from December through April, thus increasing both emergency department visits and hospital admissions as well as the need for trauma transport.

Inherent in this increase in population is also the need for adequate response time for trauma situations when traffic patterns within the area become heavily congested. Also impacting trauma response is the projected increase in railway traffic as a result of the new “Brightline” rail coming online in late 2017. The “Brightline” rail will initially run from Miami to West Palm Beach with expansion of coverage to Orlando over the next several years

With the increase in rail line usage, review of Fire Rescue station locations will be an integral part of the planning process to ensure that response times continue to remain within acceptable time frames.

**Table 6** illustrates how emergency department visits and hospital admissions vary by month, with higher utilization rates occurring during Broward’s peak seasonal months: December through April. Emergency visits have continued to increase from 854,443 in 2010 to 1,081,077 in 2016.

**Table 6. 2016 Broward County Emergency Department Utilization by Month**

Month	ED Visits	Admissions From ED
January	91,152	13,936
February	94,522	14,021
March	101,129	14,335
April	92,469	13,423
May	91,445	12,869
June	84,459	12,461
July	84,799	13,229
August	85,957	13,603
September	87,590	13,314
October	87,254	13,437
November	86,949	13,461
December	93,352	14,162
<b>TOTAL</b>	<b>1,081,077</b>	<b>162,251</b>

Source: 2016 Annual Utilization Report, BRHPC

## **Impact of Opioid Epidemic on Trauma Services**

Drug overdose deaths and opioid-involved deaths continue to increase in the United States and Florida. The majority of drug overdose deaths (more than six out of ten) involve an opioid. According to statistics compiled by the Centers for Disease Control, since 1999, the number of overdose deaths involving opioids (including prescription opioids) and heroin have quadrupled. From 2000 to 2015 more than half a million people died from drug overdoses. *Every day 91 Americans die from an opioid overdose.*

Overdoses from prescription opioids are a driving factor in the 15-year increase in opioid overdose deaths. Since 1999, the amount of prescription opioids sold in the U.S. nearly quadrupled, yet there has not been an overall change in the amount of pain that Americans report. Deaths from prescription opioids, drugs like oxycodone, hydrocodone, and methadone, have more than quadrupled since 1999.

Heroin-related deaths have increased about 74 percent between 2014 to 2015 in South Florida. Deaths caused by fentanyl, a synthetic opioid pain medication, increased to approximately 69 percent within that time frame. These numbers were close to the high death rates in 2010 during the height of the state's pill-mill crisis.

In May, 2017, the governor of Florida officially declared the opioid epidemic a public health emergency. As part of the declaration, the state Surgeon General was authorized to officially begin distributing the anti-overdose treatment Naloxone to first responders.

In 2016, opioid abuse resulted in *582 deaths* in Broward County. The death toll is expected to reach over 1,000 in 2017. The Broward Sheriff's Office, through grant funding, is equipping an additional number of deputies with the anti-overdose drug Naloxone, thus expanding their existing program with fire-rescue and police personnel.

Broward County's population is served by sixteen (16) Acute Care Hospitals (Table 7) located throughout the county. These facilities provide a range of medical and psychiatric services. Reviews of bed utilization rates are conducted periodically as part of the county's overall medical services planning and budgeting activities to determine demand and accessibility.

**Table 7** lists the County's Acute Care Hospitals along with their respective number of licensed beds.

**Table 7. Broward County Licensed Hospital Beds Acute Care, 2016**

<b>Hospitals</b>	<b>Acute</b>	<b>MS</b>	<b>CCU</b>	<b>Other</b>	<b>OB</b>	<b>Neo</b>	<b>Ped</b>	<b>Rehab</b>	<b>Psych</b>
Broward Health Coral Springs*	190	88	16	35	24	10	26	0	0
Broward Health Imperial Point*	157	98	10	49	0	0	0	0	47
Broward Health Medical Center*	570	213	41	211	41	36	64	0	83
Broward Health North*	379	191	25	163	0	0	0	30	0
Cleveland Clinic Hospital	155	66	23	66	0	0	0	0	0
Holy Cross Hospital	500	356	54	68	22	9	0	48	0
Memorial Hospital Miramar**	178	54	18	40	50	16	0	0	0
Memorial Hospital Pembroke**	301	214	24	63	0	0	0	0	0
Memorial Hospital West**	384	291	33	0	39	21	0	0	0
Memorial Hospital Regional**	797	341	62	0	94	22	124	6	56
Memorial Hospital Regional South**	188	174	14	0	0	0	0	79	0
Florida Medical Center	385	154	53	178	0	0	0	0	74
Northwest Medical Center	217	43	24	113	31	6	6	0	0
Plantation General Hospital	209	53	14	41	55	13	46	0	24
University Hospital And Medical Center	257	135	15	107	0	0	0	0	52
Westside Regional Medical Center	224	115	32	77	0	0	0	0	0
<b>TOTAL</b>	<b>4,876</b>	<b>2,586</b>	<b>457</b>	<b>1,211</b>	<b>355</b>	<b>132</b>	<b>266</b>	<b>163</b>	<b>336</b>

Source: 2016 Annual Utilization Report, BRHPC

\*North Broward Hospital District (Broward Health) hospitals

\*\* South Broward Hospital District (Memorial Healthcare System) hospitals

The latest change taking place in health care is the opening of three (3) Freestanding Emergency Departments (FSEDs) serving Broward County. These FSEDs offer everything that is available at emergency departments that are physically connected to hospital complexes and are located only a few miles from their affiliated medical centers. These *emergency care centers* are similar to hospitals that handle basically everything, but may not have specialized capabilities, such as open heart surgery or comprehensive stroke care programs.

The FSED's have laboratory capabilities, imaging capabilities, a 128-slice CT, board certified emergency physicians, seasoned emergency room nurses, and paramedics. Patients requiring hospital admission are transferred to nearby hospitals as necessary by ambulance.

All sixteen of the County's acute care hospitals have emergency department capabilities. As illustrated in Table 8, during 2016, there were 1,081,077 emergency department visits to these facilities. This reflects an increase of 226,634 (27%) in Emergency Department visits since 2010. While there was a significant increase in the number of Emergency Department visits, the % of patients admitted to these facilities decreased from 18% in 2010 to 15% in 2016.

**Table 8. Broward County Emergency Department Utilization, 2016**

	E.D. Visits			E.D. Admissions		
	Adult	Pediatric	Total	Adult Admit	Pediatric Admit	Total Admit
Broward Health Coral Springs*	48,594	21,262	69,856	7,193	867	8,060
Broward Health Imperial Point*	38,564	2,084	40,648	6,731	0	6,731
Broward Health Medical Center*	93,176	25,606	118,782	15,846	3,267	19,113
Broward Health North*	56,995	7,126	64,121	11,527	0	11,527
Cleveland Clinic Hospital	37,119	2,207	39,326	5,405	9	5,414
Holy Cross Hospital	55,874	0	55,874	10,388	0	10,388
Memorial Hospital Miramar**	46,003	21,071	67,074	4,766	12	4,778
Memorial Hospital Pembroke**	40,241	2,829	43,070	5,368	0	5,368
Memorial Hospital West**	78,588	28,159	106,747	14,630	0	14,630
Memorial Regional Hospital**	107,886	71,139	179,025	13,672	3,009	16,681
Memorial Regional Hospital South**	21,768	929	22,697	1,142	0	1,142
Florida Medical Center	32,537	3,412	35,949	11,567	1	11,568
Northwest Medical Center	50,704	13,389	64,093	13,754	373	14,127
Plantation General Hospital	47,707	23,700	71,407	7,196	1,386	8,582
University Hospital And Medical Center	35,945	4,590	40,535	11,144	0	11,144
Westside Regional Medical Center	56,517	5,356	61,873	12,998	0	12,998
<b>TOTAL</b>	<b>848,218</b>	<b>232,859</b>	<b>1,081,077</b>	<b>153,327</b>	<b>8,924</b>	<b>162,251</b>

Source: 2016 Annual Utilization Report, BRHPC

\* North Broward Hospital District (Broward Health) hospitals

\*\* South Broward Hospital District (Memorial Healthcare System) hospitals



## **PRE-HOSPITAL SERVICES**

Nineteen (19) Advanced Life Support (ALS) providers serve Broward County. These providers have units stationed throughout the thirty-one municipalities and unincorporated area comprising Broward County.

The Broward County Trauma Management Agency is responsible for monitoring the licenses of the ALS providers and reviewing applications for any additional providers making application to serve areas of Broward County.

The Broward Sheriff's Office (BSO) currently provides the only emergency response rescue helicopter transportation in Broward County, with four (4) helicopters, one of which is available 24 hours a day, seven days a week available to respond to the County's needs . While only BSO operates the trauma response helicopters, funding for the helicopters is shared amongst the Sheriff's Office and both the North and South Broward Hospital Districts.


## **PATIENT REFERRAL PATTERNS**

Patients in the Broward County Trauma System are transported in accordance with established triage and transport protocols. If tertiary care is required and cannot be provided at the receiving hospital, the patient is referred and transportation is provided as necessary to a facility with availability of more specialized care.

At the present time, area hospitals are able to ensure the availability of the majority of surgical and medical services. However, there are no specialized units offering tertiary services for serious burns in Broward County. If necessary these cases are transferred to the University of Miami/Jackson Memorial Burn Center in South Florida. The Burn Center provides a comprehensive team approach for the care of burn victims.

Although the patients requiring higher levels of care or more specialized treatment may be treated locally (depending on physician availability), patients are frequently transferred to higher-level facilities elsewhere in the State.

Formal and informal transfer agreements exist between Broward County hospitals and the following facilities: Jackson Memorial Hospital, Miami; Shands Hospital, Gainesville; Orlando Regional Hospital, Orlando; and Tampa General Hospital, Tampa. These agreements allow for expedited transfers to hospitals with higher levels of care for patients requiring specialized services.



### III. Organizational Structure Of the Broward County Trauma Network

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**Broward County Trauma Plan 2017 - 2022**

### III. ORGANIZATIONAL STRUCTURE OF THE BROWARD COUNTY TRAUMA NETWORK

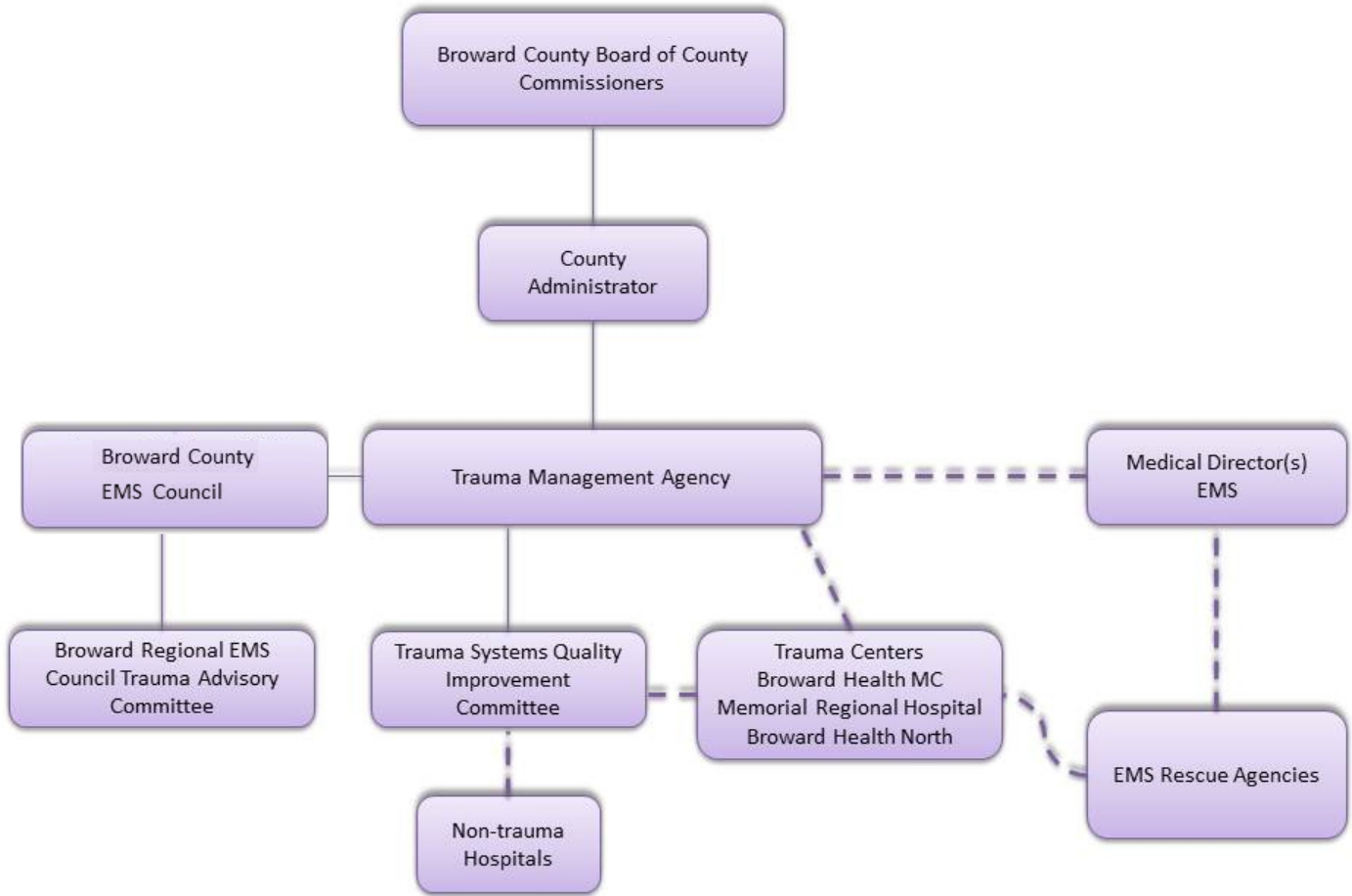
#### MANAGEMENT AND COORDINATION

The continued effectiveness and the long-term efficient operation of the Trauma Network requires a managerial agency to coordinate activities of the various trauma services, to act as liaison with state and federal governments and to provide a mechanism for system evaluation and monitoring. This function is currently the responsibility of the Broward County Trauma Management Agency, operated within the Office of Medical Examiner and Trauma Services of Broward County Government.

The Broward County Trauma Management Agency serves as the Local Trauma Agency and was created at the direction of the Broward County Board of County Commissioners to implement and manage the local trauma network. The Trauma Agency performs a number of additional functions for the State. Specific responsibilities of the Trauma Agency include:

- Facilitate the implementation and revisions of the local trauma plan
- Trauma system quality assurance and evaluation
- Coordinate pre-hospital care, including training, transportation, and communications
- Trauma system management and planning
- Assist state agencies in the certification and de-certification of local Trauma Centers
- Develop and monitor local protocols (i.e., inter-hospital transfer, trauma triage, system overload, etc.)
- Assist state in local trauma data reviews and help coordinate out-of-region expert reviews
- Monitor air transport system
- Provide staff support to the Local Trauma Advisory Committee and Trauma System Quality Improvement Committee (TSQIC)
- Coordinate with adjacent Regional, Local and State programs
- Develop and implement an injury prevention program
- Conduct community awareness campaigns
- Facilitate system funding
- Fulfill state-mandated requirements of a Trauma Agency
- Assist in development of mass casualty and disaster plans
- Assist in the coordination of hospital participation in the trauma system

Broward County Local Trauma Agency  
Areas of Coordination Flow Chart



The Trauma Agency operates as a section of the Office of Medical Examiner and Trauma Services (OMETs). The Trauma Management Agency fulfills its responsibilities by serving as the focal point for trauma system planning, coordination, and evaluation.

The Trauma Management Agency brings together the talents and expertise of participants in a number of agencies and organizations including the following:

- Broward County Board of County Commissioners
- EMS providers
- Acute care hospitals
- Medical community
- Trauma centers

- Broward Regional Health Planning Council
- Broward Regional Emergency Medical Services (EMS) Council
- Broward County Emergency Management Division
- Florida Department of Health, Bureau of Emergency Medical Oversight, Trauma Program
- General Public

The Broward County Trauma Management Agency (BCTMA) was created by the County Commission in accordance with Florida Statutes, Section 395.401 and designated as such by the Florida Department of Health (DOH). The Agency performs its duties as outlined under the goals and objectives section of this Plan. Data collection activities on behalf of the State are in accordance with guidelines established for trauma patients by DOH's Trauma Program.

The ability to ensure the quality of patient care depends on medical control throughout the system. This control ranges from the adoption of protocols to resolving jurisdictional disputes between participants in the local system. Designation of the BCTMA as the Local Trauma Agency has provided authority and guidance to manage the elements of the system. At the same time, however, the participants in Broward's trauma system continue to be independent corporate structures and local governments with their own constitutional and legislated authority. Therefore, the BCTMA has put into place a process to oversee the working agreements between participating agencies and local governments. These agreements are implemented through County ordinance and contracts, mutual aid agreements, and additional inter-governmental agreements and contracts.

A variety of entities exist to support the Office of Medical Examiner and Trauma Services in the successful completion of its objectives. While all elements of the trauma system as mentioned above will continue to play important roles, the following entities will serve specific administrative and supportive roles to the BCTMA.

**The Broward County Commission:** Broward County has a charter form of local government with a nine-member board of elected County Commissioners and a County Administrator. The Commission appoints the members to the EMS Council and has authority to designate the local agency responsible for the operations of the County's Trauma Network.

**Broward Regional Emergency Medical Services (EMS) Council:** The EMS Council is an appointed board serving in an advisory capacity to the Board of County Commissioners. Its charge is to coordinate and direct the providers of emergency medical care in Broward County.

The EMS Council, in cooperation with the BCTMA, oversees the Trauma Advisory Committee and reports to the County Commission on issues relating to the operation of the County's Trauma Network. The Council currently has 48 members representing: Physicians, Hospitals, Transport, Advanced Life Support, Police and Fire, Nurses, Basic Life Support and other organizational Agencies. Additionally, one County Commissioner is selected by a majority vote of the Commission to serve on the Council.

Appointees serve at the pleasure of the appointing Commissioner and except for the Medical Examiner and the directors (one each) of the Emergency Departments for Broward Health and Memorial Healthcare System, members must be residents of Broward County. (See Appendix iii. for the list of current council members and the agency each represents.)

**Trauma Advisory Committee (TAC):** The local Trauma Advisory Committee, previously a committee of the EMS Council, is comprised of representatives from the following categories:

- Broward County Fire Chiefs' Association
- Broward County Medical Association
- Broward Health Medical Center, Administration
- Broward Regional Health Planning Council, Inc.
- Emergency Department Physician
- Fire Chiefs' Association of Broward County, EMS Subcommittee Chair
- Memorial Regional Hospital, Administration
- Broward Health North, Administration
- Hospital, Administration
- Office of Medical Examiner and Trauma Services, Chief or Deputy Chief
- Office of Medical Examiner and Trauma Services, Trauma and EMS Manager
- Pre-Hospital Medical Director, EMS Council
- TSQIC Committee, Chair or Vice Chair
- University Representative

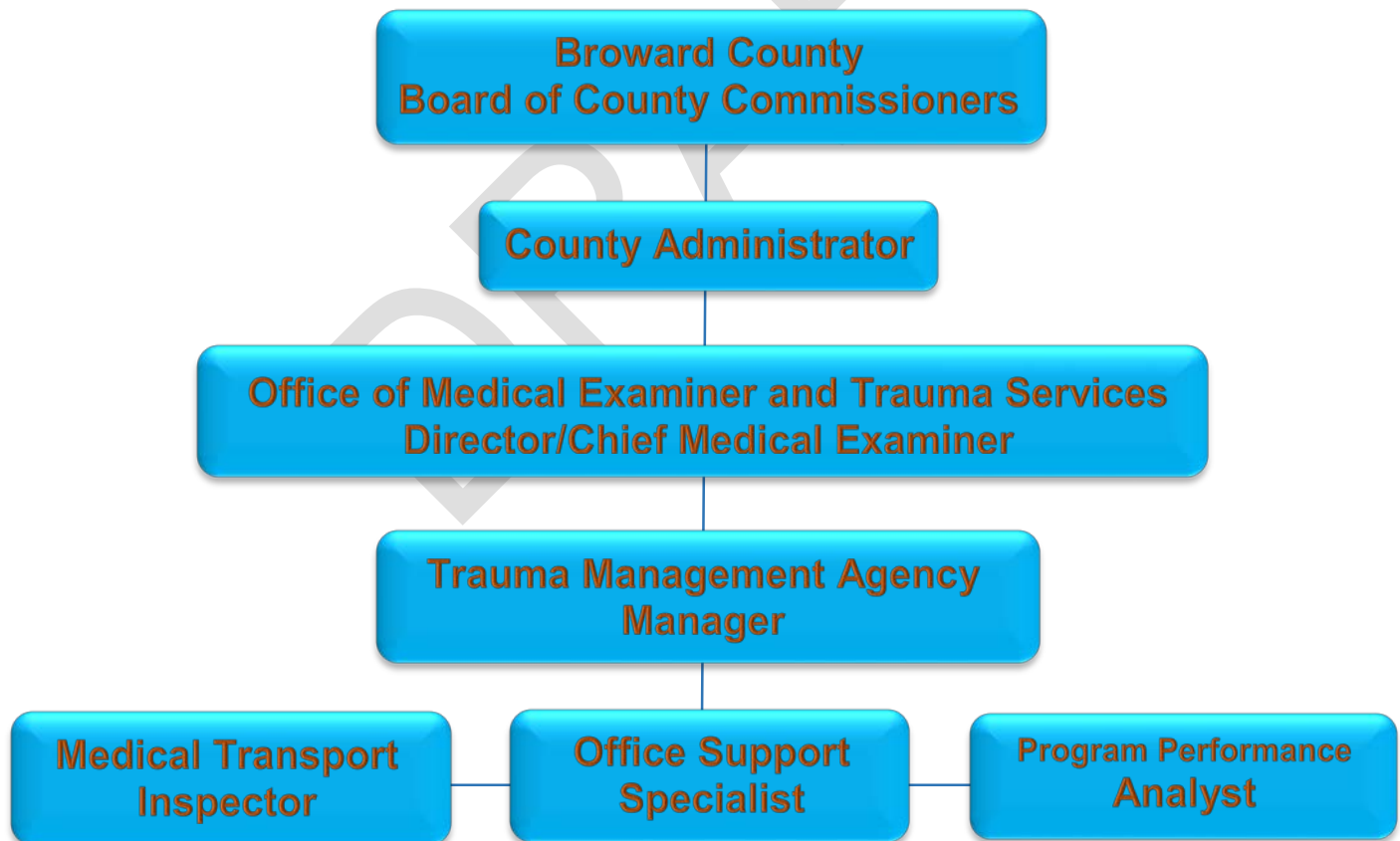
The Trauma Advisory Committee, using recommendations from BCTMA staff, approves appointments to the individual categories above and each member of the Committee may designate one alternate to represent them. A quorum of the Advisory Committee consists of one-third of the voting members. As neither the EMS Council nor the Trauma Advisory Committee has permanent staff, staffing needs are facilitated by the Broward Regional Health Planning Council through its contract with the BCTMA.

**Trauma System Quality Improvement Committee (TSQIC):** Advises the Manager of the Trauma Management Agency in matters associated with the monitoring and evaluation of the trauma network's medical performance. The TSQIC is comprised of individuals from trauma centers, emergency departments, and pre-hospital EMS providers and their respective medical directors.

**Quality Improvement Committee:** Individual Quality Improvement Committees, representing members of the Trauma Network, report to the Trauma System Quality Improvement Committee as part of the oversight and monitoring of care function: Pre-hospital Trauma CQI, Memorial Regional Hospital Trauma CQI, Broward Health Medical Center CQI, and the Broward Health North CQI.

**Broward Regional Health Planning Council, Inc. (BRHPC):** Broward Regional Health Planning Council served as a catalyst for the initiation of the trauma planning activities and continues to provide services through its contract with OMETS. These services include planning, evaluation of specific system components, representative serving on the EMS Council and Trauma Advisory Committee, assistance with preparation of both the Annual and 5 Year Trauma Management Plans and any other support services deemed necessary by the Trauma Agency. (See appendix for list of BRHPC members)

**Trauma Management Agency Staffing:** Although the organizational structure of the BCTMA is limited, additional resources are available through the staff of the Office of Medical Examiner and Trauma Services for items such as administrative support, medical direction from staff pathologists, public information, and education. Injury Prevention activities are provided with assistance from system participants and the Broward Regional EMS Council.



The Trauma Management Agency operates within the Office of Medical Examiner and Trauma Services. Noted below are the positions assigned to provide ongoing management of the Local Trauma Network. These include:

Medical Director: The Medical Director is responsible for ensuring that medical care provided in all phases of the trauma network meets with established standards. This position has the responsibility of evaluating and providing medical direction for the system and serving as liaison between the BCTMA Manager and the medical community. This role is provided by the Chief Medical Examiner/designee.

Manager: This is a professional level managerial position responsible for the implementation and operation of the Broward County Trauma Network. The Manager serves as a liaison between the Trauma Advisory Committee of the Broward County EMS Council, the Broward Regional Health Planning Council, the Trauma System Quality Improvement Committee, and the Department of Health, Bureau of Emergency Medical Oversight, Trauma Program. This position supervises the Trauma Agency staff, coordinates the day-to-day activities of the evolving Trauma Network, and maintains its relationship with other emergency medical services. The Manager is responsible for monitoring and evaluating the Network's performance, in accordance with accepted standards of care. The Trauma Agency Manager reports directly to the Director of the Office of Medical Examiner and Trauma Services.

Program Performance Analyst: This position is designed to assist in the medical direction of the system by monitoring and evaluating system-generated data against Agency standards and criteria, as determined by the Medical Director and State law. The Analyst is responsible for data collection activities of the system.

Office Support Specialist: Clerical support to maintain records, correspondence and minutes of the Quality Improvement meetings is essential. This support is provided by an administrative position that also provides secretarial support to the Broward Regional EMS Council and the Office of Medical Examiner and Trauma Services.

Medical Transport Inspector: Performs basic and advanced life support ambulance inspections on vehicles authorized to perform emergency and nonemergency ambulance transportation; performs inspections on vehicles permitted for nonemergency (wheelchair/stretchers) transportation; reviews staff credentials for requirements of service the vehicle is permitted to perform and to ensure certification is current. Provides quarterly reports on inspection process and assists in the development of policies to monitor and increase safety in EMS and NEMTS transportation services. Provides annual reviews of providers' vehicle maintenance logs, staffing logs, and personnel files for required documentation. Collects and reviews application for licenses or certificates and oversees application process.

Sensitive to public concern about the quality of trauma care, the Broward County Board of County Commissioners is committed to maintaining an effective and efficient Trauma Network in our region.

As an example of this commitment, the Trauma Management Agency provides a mechanism to ensure optimal Trauma Network participant performance. It assists members of the Quality Improvement Committee to review selected cases, coordinates with the Trauma Advisory Committee to monitor and update system standards through the implementation of the Broward County Trauma Plan, and assists members of the Trauma Network in the ongoing development and implementation of system standards for the care and transport of trauma victims.





## IV. Trauma System Structure

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**Broward County Trauma Plan 2017 - 2022**

## IV. TRAUMA SYSTEM STRUCTURE

### DESCRIPTION

The Broward County Trauma System is designed to handle the needs of the critically injured patient in all phases of care: from the scene of an accident through hospitalization and rehabilitation. Uniform Trauma Transport Protocols have been collectively developed and adopted by all involved agencies in Broward County. As a living document, these protocols are reviewed and updated bi-annually or as deemed necessary. With ever changing medical breakthroughs on the care and transport of the trauma patient, a “position paper” (regarding enhanced treatment/transport) can also be rapidly formulated and provided to the medical community to initiate the new treatment/transport protocol without the need to wait for the bi-annual review.

### TRAUMA SYSTEM COMPONENTS

Comparative studies from communities throughout the nation have shown that successful trauma systems are based on four major components: 1) good pre-hospital care; 2) the capability of local hospitals to treat injured patients and trauma centers to treat severely injured patients; 3) a sound organizational structure that provides strong leadership; and 4) adequate financial support.

The establishment of a trauma network in Broward County has served to coordinate and enhance the existing EMS system response and the implementation of the Trauma Plan has resulted in:

- The development of standardized protocols for the triage and transport of trauma patients
- The adoption of a system-wide quality assurance mechanism that better integrates the pre-hospital phase of patient care into the overall trauma system structure
- Expanded use of helicopter service for the transport of major trauma patients
- Improved communications among providers of trauma care

#### 1. Pre-hospital Care

At present, a network of public and private services provides a high level of pre-hospital care to the citizens of Broward County.

Three (3) Freestanding Emergency Departments (FSEDs) are currently serving Broward County. These FSEDs offer everything that is available at emergency departments that are physically connected to hospital complexes and are located only a few miles from their affiliated medical centers.

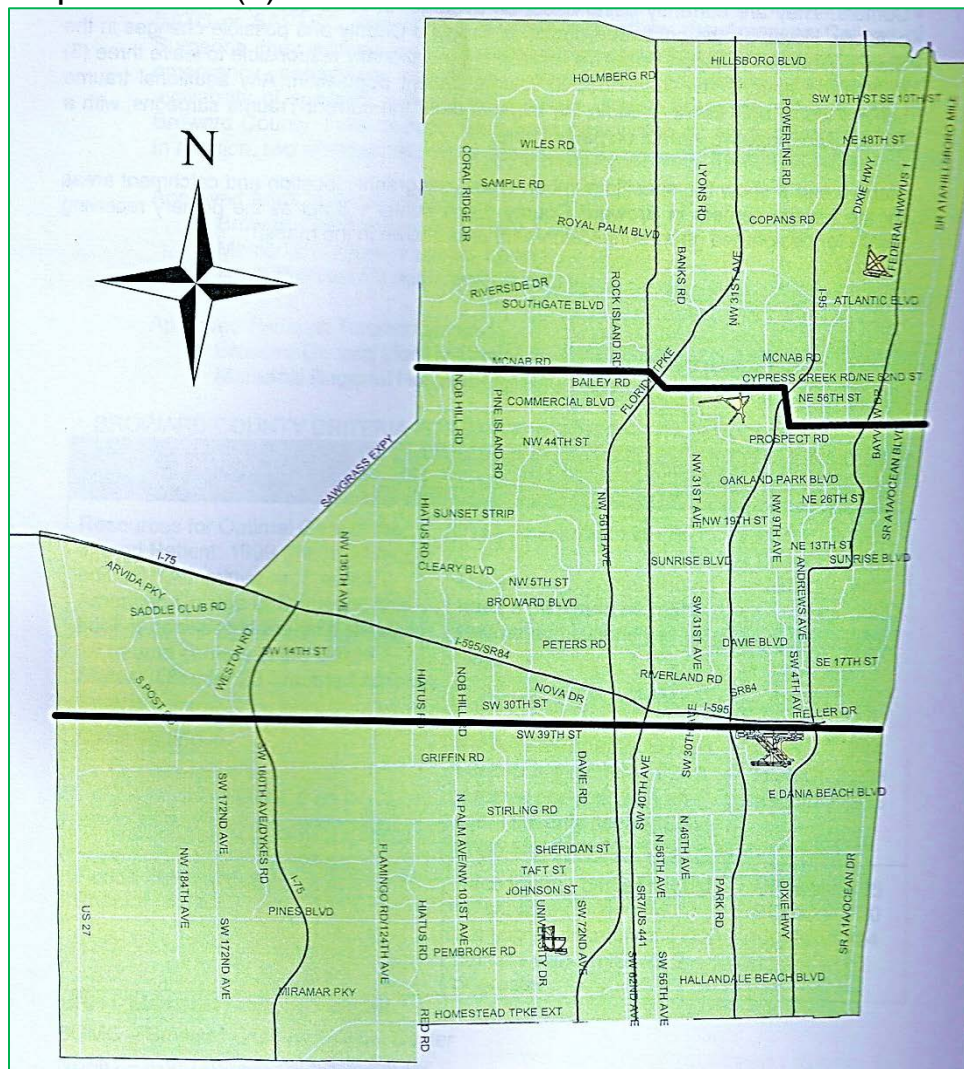
#### 2. In-Hospital Care Capabilities

Sixteen (16) acute care hospitals offer emergency department services in Broward County. During 2016, local facilities reported that 1,081,077 patients visited their emergency departments. Of these, 162,251 persons were admitted to the hospital.

In 1993, three (3) Broward hospitals were designated by DOH, Trauma Program, as verified Trauma Centers, allowing each to treat trauma patients. Two (2) of these facilities also received designation as Verified Pediatric Trauma Centers, thereby authorizing them to treat pediatric trauma patients.

These designated trauma centers receive patients triaged at the scene of the injury using Broward County's Uniform Trauma Treatment and Transport protocols. Transport to the appropriate Trauma Center is determined by established catchment areas originally designed by a team of pre-hospital personnel, EMS Medical Directors, and the County. These transport catchment areas are reviewed bi-annually to ensure they reflect the ongoing population shifts within each area. (See Maps 6 and 7 for the adult and pediatric trauma catchment areas).

Map 6. Three (3) Adult Trauma Catchment Areas



**Adult Catchment Areas Include:**

1. Broward Health North – 201 East Sample Road, Deerfield Beach
2. Broward Health Medical Center – 1600 S. Andrews Avenue, Fort Lauderdale
3. Memorial Regional Hospital – 3501 Johnson Street, Hollywood

Map 7. Two Pediatric Trauma Catchment Areas



**Pediatric Catchment Areas Include:**

1. Broward Health Medical Center – 1600 S. Andrews Avenue, Ft. Lauderdale
2. Memorial Regional Hospital – 3501 Johnson Street, Hollywood

Broward County’s trauma network, using state of the art triage and transport protocols, allows pre-hospital providers to bypass a “closer” hospital in favor of transporting directly to one of the County’s Trauma Centers. Major trauma patients are transported to Trauma Centers, while less seriously injured patients are transported to community hospitals that meet the needs of that particular patient.

The standards for Trauma Center designation were established by the State of Florida, Department of Health. These standards are routinely reviewed to assure the public that the most comprehensive trauma care will be provided by those hospitals that are designated a "Trauma Center."

The establishment of three trauma centers three (3) for adults and two (2) for pediatrics was determined to be the correct complement for the County's needs at the time the system was initiated. Bi-annual review of the system still clearly identifies this number of facilities as a "best practice" level of care and coverage for comprehensive trauma care in Broward County.

Since the implementation of the Broward County Trauma System, trauma patients have benefitted from timely and appropriate treatment. In addition, the Trauma Centers have attracted and retained qualified experts in trauma care and sharpened the skills of the entire trauma team. In turn, implementation of the trauma network has significantly upgraded the level of tertiary services available in Broward County.

### **3. Management and Organization**

The success of a regional trauma network ultimately depends on whether the various elements of the system are able to function in an integrated and unified manner.

EMS systems and hospitals in Broward County are independently managed and operated. Direct oversight for their management is the responsibility of the respective entity. However, system integration comes together in a number of ways, as discussed throughout this Plan.

The creation of the Broward Regional Emergency Medical Services (EMS) Council in 1981 provided a forum for representatives from all of the County's EMS providers to come together and develop cooperative arrangements to continually update and improve the system.

As a result of this cooperation, changes have been implemented which have resulted in a more integrated and coordinated approach to patient care, treatment, and transport. Among these are:

- Use of a common source of training - Broward College, in cooperation with several area hospitals, serves as the primary training institution for paramedics and emergency medical technicians
- Development and implementation of local triage, treatment and transport protocols - Medical protocols have been incorporated into one uniform set of protocols which are utilized by all area providers
- Adoption of Countywide mutual aid agreements for EMS providers - Inter-local agreements permit pre-hospital providers to respond to a call outside of their primary response zone in the event of a disaster or if the adjacent area is left without adequate emergency response capability.

Over the years, individual providers have recognized the value of working together and have developed a relationship that allows them to function as a system. This sense of cooperation continues to be evident in their positive response to the need for enhanced regional trauma care.

Representatives from all components of the local EMS system, including pre-hospital providers, hospital administrators, physicians, County government officials, municipalities, and consumers have been actively involved in the development of Broward's Trauma Plan.

BCTMA provides the leadership to allow the Trauma System to continue development in a comprehensive, coordinated fashion. It functions as the important link between pre-hospital care systems, Trauma Centers, acute care hospitals and rehabilitative programs. In order to ensure appropriate input from all levels of care, the BCTMA has two Committees associated with it and the EMS Council:

- Trauma Advisory Committee (TAC) – to develop system policies and procedures
- Trauma System Quality Improvement Committee (TSQIC) - to evaluate the quality of regional trauma care

The Trauma Management Agency provides the Trauma Network System participants with a centralized base for data collection, assimilation and analysis, as well as the dissemination of public awareness information concerning trauma and safety issues.

#### **4. Financial Support**

An integral component of any organizational structure is the availability of ongoing, dedicated funding for its operations. Designated funding for the Local Trauma System Network is outlined in Section VII – Budgetary Information and Fiscal Impact.

## **PARTICIPATION**

Currently, all acute care hospitals and pre-hospital providers participate in the Broward County Trauma Network System. (See Table 7 on page 26)

## **COORDINATION**

The Trauma Management Agency serves as the lead coordinating and managing entity, facilitating the operation of the local trauma network. Trauma Centers, and other network participants, serve their own independent role in other service delivery models such as the provision of basic life support transportation and in the implementation of disaster and mass casualty strategies. In this regard, BCTMA coordinates with the Broward County Emergency Management Division to develop procedures for treating the trauma patient in times of disaster.

## TRAUMA CENTERS - TYPES AND LOCATIONS

The State of Florida has established stringent guidelines for designation as a State Verified Level I, Level II, or Pediatric Trauma Center. Based on guidelines outlined by the American College of Surgeons, the State addresses issues such as: facility commitment, trauma service and emergency department capabilities, equipment and staffing requirements, availability of specialty and support services, and quality assessment plans. As noted in *Table 9*, within Broward County, three facilities have been designated as adult trauma facilities with two facilities designated as pediatric trauma facilities.

**Table 9. State Verified Trauma Centers**

<b>Adult Trauma Centers</b>
<b>Broward Health Medical Center, Level I</b>
<b>Memorial Regional Hospital, Level I *</b>
<b>Broward Health North, Level II</b>
<b>Pediatric Trauma Centers</b>
<b>Broward Health Medical Center</b>
<b>Memorial Regional Hospital *</b>

\*American College of Surgeons Accreditation

### Designated Trauma Centers

**Level I:** Facilities verified as Level I Trauma Centers must be in compliance with Florida Statute Chapter 395, Hospital Licensing and Regulation (see Appendix v). These facilities must also meet all standards as published in Department of Health Pamphlet (DHP) 150-9, January 2010 Trauma Center Standards, which is incorporated by reference, Rule 64J-2.011 Florida Administrative Code (F.A.C.), and available from the Department as defined by Subsection 64J-2.001(4), F.A.C.

**Level II:** Facilities verified as Level II Trauma Centers must be in compliance with Florida Statute Chapter 395, Hospital Licensing and Regulation (see Appendix vi). These facilities must also meet all standards as published in DHP 150-9, January 2010 Trauma Center Standards, which is incorporated by reference, Rule 64J-2.011 F.A.C., and available from the Department as defined by Subsection 64J-2.001(4), F.A.C. and available from the Department as defined by Subsection 64J-2.001(4) F.A.C.

It should be noted that stringent criteria is in place to ensure that the level and number of trauma centers meets or exceeds the needs of Broward's residents and visitors. The Broward County Criteria for Allocation of Trauma Centers is reflected in Table 10, page 42. The needs of the community are evaluated bi-annually, using injury severity data collected from the three current trauma centers, so the community can be assured that adequate trauma care is available as needed.

Based upon the criterion identified in Table 10, it has been determined that Broward County requires the availability of three (3) Trauma Centers. These designated Trauma Centers are located in the North, Central and South portions of the County. At this time, the addition of Trauma Centers would only serve to dilute the experience of the current Trauma surgeons and respective staff, resulting in a possible negative impact on patient care.

**Table 10. Broward County Criteria for Allocation of Trauma Center**

SOURCE	STANDARD	2016 STATISTICS
Resources for Optimal Care of the Injured Patient 2014: Committee on Trauma, American College of Surgeons, Chapter 2, Descriptions of Trauma Center Levels and Their Roles in a Trauma System	A Level I trauma center must admit at least 1,200 trauma patients yearly; or	MRH: 2,577 BHMC: 1,653
Same as above	240 admissions with an Injury Severity Score (ISS) of more than 15	MRH: 345 BHMC: 284
Florida State Statutes Chapter 395.402(1)	<p>Level I and Level II trauma centers shall each be capable of annually treating a minimum of 1,000 and 500 patients, respectively, with an ISS of 9 or greater.</p> <p>Level II trauma centers in counties with a population of more than 500,000 shall have the capacity to care for 1,000 patients per year.</p>	<p>Level I: MRH: 1,128 BHMC: 852</p> <p>Level II: BHN: 1,211</p>

MRH – Memorial Regional  
BHMC - Broward Health Medical Center  
BHN -Broward Health North





## V. Goals, Objectives & System Review

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**Broward County Trauma Plan 2017 - 2022**

## V. GOALS, OBJECTIVES & SYSTEM REVIEW

Each medical emergency incident requires specific and appropriate medical care. In the most severe cases, death will certainly occur if no definitive care is provided within specific time constraints. In trauma, mortality may be forestalled by early and sustained resuscitation. However, corrective surgery and intensive care management is the definitive, discriminating lifesaving factor.

To this end, the Trauma System must be accountable to the public it serves by ensuring that:

1. Medical care provided in all phases: pre-hospital, hospital, critical care and rehabilitation meets established standards
2. The patient outcomes are the result of severity of injury, not system failure
3. Each patient reaches definitive and appropriate care in the shortest possible time
4. The system is medically monitored and a physician is ultimately responsible
5. The system design is medically sound
6. Patient triage and the protocols under which all providers operate are medically determined
7. All medical personnel involved in care of the critically injured are competent and obtain continuing education to maintain competencies

Broward County's Trauma System was first implemented in 1993. In addition to informal ongoing review, its goals and objectives are reviewed bi-annually and system updates are implemented, as necessary, to meet the ever-changing community needs and medical advancements.



## VI. Trauma System Budgetary Information and Fiscal Impact

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**Broward County Trauma Plan 2017 - 2022**

## **VI. TRAUMA SYSTEM BUDGETARY INFORMATION AND FISCAL IMPACT**

### **FINANCING OF THE TRAUMA SYSTEM IN BROWARD COUNTY**

The purpose of this section is to outline the financial arrangement for the funding of the Trauma System in Broward County.

### **FUNDING FOR SYSTEM COMPONENTS**

A complete Trauma System consists of several components. Those components and the respective funding sources are outlined below.

#### **Pre-hospital EMS Providers**

A critical element of the Trauma System is rapid transportation of the victim to the appropriate Trauma Center. In Broward County, nineteen (19) Advanced Life Support agencies provide patient transportation. Funding to support these providers is via the respective operational agencies.

#### **Helicopter Services**

Helicopter service is a requirement for effective Trauma Systems. Helicopters have access to hard to reach locations throughout the county (especially during peak traffic periods). Broward Sheriff's Office (BSO) Fire Rescue is currently the only emergency response helicopter service in Broward County. The Aviation Unit currently operates with four (4) helicopters, one of which is always on duty 24/7. The utilization of helicopters also assists in ensuring that emergency medical response times are within acceptable limits for trauma patients. Helicopter transport is indicated whenever the ground transport time is expected to exceed twenty (20) minutes.

In Broward County, BSO provides the rescue helicopters for transport and BSO personnel serve as the pilots. The BSO Department of Fire Rescue provides the paramedics to staff the helicopters. The two hospital taxing districts, Broward Health and Memorial Healthcare System, contribute to the funding of this necessary service.

#### **Hospitals**

The successful operation of a Trauma Center depends on several factors:

- ✓ The availability of specialized surgeons
- ✓ A full complement of medical specialists to assist the surgeons
- ✓ Nursing personnel and other support staff with appropriate training
- ✓ Specialized supplies and equipment for patients with traumatic injuries

Major capital costs are associated with preparing and maintaining a facility to serve as a Trauma Center. Designated operating rooms and intensive care units, which must be maintained and available for use at a moment's notice in order to meet State recognized Trauma Center standards, are examples of these capital expenses.

In Broward County, both the Adult and Pediatric Trauma Centers are operated by the two local hospital taxing districts, North Broward Hospital District (Broward Health) and the South Broward Hospital District (Memorial Healthcare System). Some costs are recouped through other means, such as: patient fees, taxes, state grants, and traffic light revenues.

**Trauma Management Agency**

The Trauma Management Agency (BCTMA) is responsible for the coordination, monitoring, and regulation of the trauma system network, including the review and approval of ambulance contracts. The BCTMA functions within the Office of Medical Examiner and Trauma Services and is funded by general revenue funds of the Broward County Board of County Commissioners. Funding for the BCTMA does not directly influence costs related to providing trauma patient care nor does the BCTMA receive any reimbursement from the two (2) hospital taxing districts.

In addition to their duties as part of the County's Trauma Network, all BCTMA personnel have additional responsibilities related to the administration and day-to-day operations of the Office of Medical Examiner and Trauma Services.

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## VII. Transportation System Design

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**Broward County Trauma Plan 2017 - 2022**

## **VII TRANSPORTATION SYSTEM DESIGN**

### **GROUND TRANSPORTATION**

Broward County is served by nineteen (19) Advanced Life Support (ALS) providers. Inter-local agreements allow units to cross municipal boundaries in response to a request for mutual aid. These agreements ensure that back-up coverage will be available in mass casualty situations, or if an area is without adequate coverage, or response time is significantly delayed.

### **AIR TRANSPORTATION**

There are numerous areas within Broward County where air transportation would expedite the transport of injured patients to an appropriate medical facility. The Broward Sheriff's Office, Department of Fire Rescue (BSODFR) provides on scene pre-hospital air transportation within Broward County. BSODFR flight paramedics are highly trained in advanced critical care procedures such as resuscitation, as well as pediatric and adult trauma care.

BSODFR currently operates a fleet of four (4) helicopters staffed with one pilot and two flight paramedics twenty-four hours a day, seven days a week. BSODFR helicopters also engage in inter-facility transports and are routinely called upon to fly patients from one medical center to another in or out of Broward County.

The decision to transport trauma patients by helicopter is based on Broward County's Unified Trauma Transport Protocols. Trauma Alert patients in which ground transports may exceed 20 minutes and Level II patients in which ground transports may exceed 30 minutes require air transportation.

Due to Broward County's geographic configuration and growing population, pre-hospital providers must cope with increasing traffic congestion. The County also has many remote areas, making air transport the most appropriate means of transportation for injured patients requiring transport from these areas.

### **WATER TRANSPORTATION**

If an accident occurs on the water, rescue units may be sent from the U.S. Coast Guard, Florida Marine Patrol, Broward Sheriff's Office, or local municipal departments. These units provide basic care and transport to land, where the patients are transferred to an appropriate unit for continued transport to the designated Trauma Center.

The United States Coast Guard Station Fort Lauderdale was commissioned in 1975. The Station carries out its mission with two 45 foot Response Boat-Medium (RB-M) and two Special Purpose Craft-Law Enforcement (SPC-LE) boat types. Station Fort Lauderdale is host to two other commands, including an 87 foot patrol boat, the USCGC GANNET, and the Aids to Navigation Team Fort Lauderdale.

There are currently 60 active duty members attached to the Station, frequently augmented by 30 reservists and more than 200 volunteer members of the Coast Guard Auxiliary.

Coast Guard Station Fort Lauderdale works regularly with many partner agencies, including local police and fire rescue departments, Broward Sheriff's Office, environmental and wildlife organizations, and other federal law enforcement agencies.

The U.S. Coast Guard routinely patrols the Intracoastal Waterway while also responding to emergencies offshore. While there is no U.S. Coast Guard *air station* specifically for Broward County, there is always a unit on standby with the ability to get to an accident scene if necessary. For severe injuries, a helicopter with at least an emergency medical technician on board is sent to the scene. All Coast Guard rescue swimmers have basic EMT training

## CATCHMENT AREA

Three (3) medical facilities in Broward County have been designated to treat adult trauma patients. Two (2) medical facilities are part of the North Broward Hospital District: Broward Health and North, Broward Health Medical Center. One (1) facility is located in the South Broward Hospital District: Memorial Regional Hospital. Two (2) medical facilities are designated for pediatric trauma patients, one in each taxing district: Broward Medical Center and Memorial Regional Hospital (Joe DiMaggio Children's Hospital)

Uniform Trauma Transport protocols have been implemented and reflect the current Trauma Center catchment areas. These protocols are reviewed and updated bi-annually or as needed to reflect advancements in medical procedures, population changes, and barriers to transport. The coordination of this review and implementation activity is the responsibility of the BCTMA.





# VIII. Uniform Broward County Trauma Transport Protocol



**Broward County Trauma Plan 2017 – 2022**

## VIII. UNIFORM BROWARD COUNTY TRAUMA TRANSPORT PROTOCOL

### COMMUNICATION (DISPATCH) CENTER PROCEDURE

1. All EMS systems utilize the 911 phone system. The call taker confirms all emergency information, including address and callback data prior to the end of the telephone conversation. Emergency information is immediately transmitted to the Fire-Rescue/EMS Dispatcher who selects the nearest available unit(s) for response, dispatches the call and provides all unit(s) with all available information concerning the incident.
2. Call taker personnel/dispatchers shall make every attempt to obtain the following information from the 911 caller:
  - Nature of the emergency
  - Location of the incident
  - Call back number
  - Number of patients
  - Severity of the illness/injury
  - Name of the caller
3. Should on scene personnel recognize a need for other emergency agencies (e.g., law enforcement, fire, EMS, Coast Guard) they shall notify Dispatch immediately. On scene personnel must identify the agencies needed and the specific amount of personnel, equipment, etc. required. The communications center shall make contact with the appropriate services (mutual aid/automatic aid).

### ON SCENE PROCEDURE - Ground

1. Upon arrival at the scene, EMS personnel shall conduct a size up of the scene, including, but not limited to, Trauma Alert Criteria (Section IV), safe entry, severity and number of patients, the need for extrication, and the need for additional assistance. Dispatch and the nearest appropriate Trauma Center will be notified, as soon as possible, of "Trauma Alert" patient(s). Dispatchers shall immediately transfer this information, using the phrase "Trauma Alert", to the supervisor on duty.
2. EMS personnel shall transport patient(s) to the nearest appropriate Trauma Center. If the nearest appropriate facility is outside of the Trauma Agency's geographical boundaries, the Trauma Alert patient will be transported to the nearest appropriate facility. EMS personnel shall submit the treatment data for each trauma patient to the Trauma Center as required in 64J-1.014, F.A.C. and their respective agency.

## TRANSPORT PROCEDURE (Rescue Helicopter)

When the Broward Sheriff's Office Dept. of Fire Rescue's (BSODFR) Helicopter is used for rapid transport of the trauma patient, the following steps are followed:

1. Weather Assessment - severe weather at scene, helicopter hanger, landing zone (LZ), or Trauma Center reduces the use of the Rescue Helicopter.
2. Safety considerations for landing zone (if any of 4 below, use ground transport or **move** the landing zone):
  - a. Power lines around landing zone
  - b. Trees, signs, poles, or other obstacles in immediate landing area
  - c. Pedestrians and large gatherings of civilians in the area
  - d. An expectation that the area may not remain safe
3. Flight decision - Rescue helicopter to be used if:
  - a. The Trauma Center that the patient would be transported to by ground, is farther away than twenty (20) minutes (**30 Minutes for Level II patients**) driving time
  - b. Ground transportation is not available and is not expected to be available within a reasonable time
  - c. The helicopter is needed to gain access to a patient for transport from an inaccessible area
  - d. Extrication time greater than twenty (20) minutes
4. Operational Guidelines by ground EMS crews for Rescue helicopter use:
  - a. Secure a TAC radio channel through the County's dispatch center and keep open until helicopter has left scene
  - b. Ground Crew **PRE-ALERT** Trauma Center
  - c. Start **CUTT REPORT** (County Unified Trauma Telemetry Report) or respective agency's modified patient treatment form
  - d. Airway - advise Air Crew on airway status and if airway assistance or **RSI** (Rapid Sequence Intubation) is required

**NOTE: (for pediatric patients only) if using the landing pad at Broward Health North and crew feels that the patient requires immediate attention, advise helicopter crew that the patient will be seen by the Trauma Services physicians prior to transport to the pediatric trauma center (BHMC or Memorial Regional)**

- e. Begin Packaging Patient (remove shoes and clothes from vital areas). Advise Air Crew of the weight of the patient
- f. Have a minimum of three (3) unobstructed lanes of traffic for roadway landings whenever possible
- g. Pilot may require traffic stopped in both directions
- h. Landing Zone units must remain at their post until helicopter has left the scene
- i. Headlights should be turned off at night
- j. Only clear landing zone upon direction of Air Rescue crew and law enforcement on scene

## TRAUMA ALERT CRITERIA

The following guidelines are to be used to establish the criteria for a "Trauma Alert" patient and determine which patient(s) will be transported to a Trauma Center. Any patient that meets any **one** of the **"Red"** criteria will be a Trauma Alert, while any patient that meets any **two** of the **"Blue"** criteria will be a Trauma Alert.

## ADULT TRAUMA SCORECARD METHODOLOGY

1. Each EMS provider shall ensure that upon arrival at the location of an incident, EMS personnel shall:
  - a. Assess the condition of each adult trauma patient using the adult trauma scorecard methodology to determine if the patient should be a trauma alert
  - b. In assessing the condition of each adult trauma patient, the EMS personnel shall evaluate the patient's status for each of the following components: airway, circulation, best motor response (a component of the Glasgow Coma Scale), cutaneous, long bone fracture, patient's age, and mechanism of injury. The patient's age and mechanism of injury (ejection from a vehicle or deformed steering wheel) shall only be assessment factors when used in conjunction with assessment criteria included in # 3 (**Level II**) of this section. (NOTE: Glasgow Coma Scale included for quick reference.)

2. The EMS personnel shall assess all adult trauma patients using the following “Red” criteria in the order presented and if **any one** of the following conditions is identified, the patient shall be considered a Trauma Alert patient:
  - a. **Airway:** Active ventilation assistance required due to injury causing ineffective or labored breathing beyond the administration of oxygen.
  - b. **Circulation:** Patient lacks a radial pulse with a sustained heart rate greater than 120 beats per minute or has a blood pressure of less than 90mmHg.
  - c. **Best Motor Response (BMR):** Patient exhibits a score of four or less on the motor assessment component of the Glasgow Coma Scale; exhibits the presence of paralysis; suspicion of a spinal cord injury; or the loss of sensation.
  - d. **Cutaneous:** 2<sup>nd</sup> or 3<sup>rd</sup> degree burns to 15 percent or more of the total body surface area; electrical burns (high voltage/direct lightning) regardless of surface area calculations; an amputation proximal to the wrist or ankle; any penetrating injury to the head, neck, or torso (excluding superficial wounds where the depth of the wound can be determined).
  - e. **Longbone Fracture:** Patient reveals signs or symptoms of two or more long bone fracture sites (humerus, radius/ulna, femur, or tibia/fibula).
  - f. **Paramedic Judgment:** In the event that none of the conditions are identified using the criteria above, during the assessment of the adult trauma patient, the paramedic may call a trauma alert if, in his or her judgement, the patient’s condition warrants such action.
  
3. Should the patient not be identified as a trauma alert using the “Red” criteria listed in #2 of this section, the trauma patient shall be further assessed using the “Blue” criteria in this section and shall be considered a Trauma Alert patient when a condition is identified from **any two** of the seven components included in this section.
  - a. **Airway:** Respiratory rate of 30 or greater
  - b. **Circulation:** Sustained heart rate of 120 beats per minute or greater
  - c. **Best Motor Response (BMR):** BMR of 5 on the motor component of the Glasgow Coma Scale
  - d. **Cutaneous:** Soft tissue loss from either a major degloving injury, or a major flap avulsion greater than 5 inches, or has sustained a gunshot wound to the extremities of the body
  - e. **Long bone Fracture:** Patient reveals signs or symptoms of a single long bone fracture resulting from a motor vehicle collision or a fall from an elevation of 10 feet or greater.
  - f. **Mechanism of Injury:** Patient has been ejected from a motor vehicle, (excluding any motorcycle, moped, all-terrain vehicle, bicycle or the open body of a pick-up truck), or the driver of the motor vehicle has impacted with the steering wheel causing steering wheel deformity.

4. If the patient is not identified as a Trauma Alert after evaluation, using the criteria in #2 or #3, the trauma patient will be evaluated using all elements of the Glasgow Coma Scale. If the score is **12 or less**, the patient shall be considered a Trauma Alert (excluding patients whose normal Glasgow Coma Scale Score is 12 or less, as established by medical history or pre-existing medical condition when known).
5. Where additional Trauma Alert criteria has been approved by the Emergency Medical Services (EMS) Medical Director and approved for use in conjunction with Broward County Trauma Alert criteria as the basis for calling a Trauma Alert, the Trauma Alert shall be documented as required in section 64J-1.014, F.A.C. of the patient care record. Such local trauma assessment criteria can only be applied after the patient has been assessed as provided in sections #2, #3, and #4 above of the Adult Trauma Alert Criteria.
6. In the event that paramedic judgment is used as the basis for calling a Trauma Alert, it shall be documented on all patient data records as required in section 64J-1.014, F.A.C.
7. The results of the patient assessment shall be recorded and reported on all patient data records in accordance with the requirements of section 64J-1.014, F.A.C.

Patients found to meet Trauma Alert criteria upon arrival, or subsequent to arrival, at a non-trauma center will be expeditiously transferred to the appropriate Trauma Center (See Section VIII: Uniform Trauma Transport Protocols)

#### PEDIATRIC TRAUMA SCORECARD METHODOLOGY

(Pediatric patients are those age 15 or younger) Pediatric Trauma Alert patients will be transported to the nearest appropriate Pediatric Trauma Center.

1. The EMS personnel shall assess all pediatric trauma patients using the following **"RED"** criteria and if **any** of the following conditions are identified, the patient shall be considered a pediatric Trauma Alert patient:
  - g. **Airway:** Active ventilation assistance required due to injury causing ineffective or labored breathing beyond the administration of oxygen.
  - h. **Consciousness:** Patient exhibits an altered mental status that includes: drowsiness, lethargy, inability to follow commands, unresponsiveness to voice or painful stimuli, or suspicion of a spinal cord injury with/without the presence of paralysis or loss of sensation.
  - i. **Circulation:** Faint or non-palpable carotid or femoral pulse or the patient has a systolic blood pressure of less than 50mmHg.
  - j. **Fracture:** Evidence of an open long bone (humerus, radius/ulna, femur, or tibia/fibula) fracture or there are multiple fracture sites or multiple dislocations (except for isolated wrist or ankle fractures or dislocations).

- k. **Cutaneous:** Major soft tissue disruption, including major degloving injury; or major flap avulsions; or 2<sup>nd</sup> or 3<sup>rd</sup> degree burns to 10 percent or more of the total body surface area; electrical burns (high voltage/direct lightning) regardless of surface area calculations; or amputation proximal to the wrist or ankle; or any penetrating injury to the head, neck or torso (excluding superficial wounds where the depth of the wound can be determined).
  - l. **Paramedic Judgment:** In the event that none of the conditions are identified using the criteria above, during the assessment of the pediatric trauma patient, the paramedic may call a trauma alert if, in his or her judgement, the patient's condition warrants such action.
2. In addition to the criteria listed above in (1) of this section, a Trauma Alert shall be called when **"Blue"** criteria is identified from **any two** of the components included below:
    - a. **Consciousness:** Exhibits symptoms of amnesia, or there is loss of consciousness.
    - b. **Circulation:** Carotid or femoral pulse is palpable, but the radial or pedal pulses are not palpable or the systolic blood pressure is less than 90 mmHg.
    - c. **Fracture:** Reveals signs or symptoms of a single closed long bone fracture. *Long bone fractures do not include isolated wrist or ankle fractures.*
    - d. **Size:** Pediatric trauma patients weighing 11 kilograms or less, or the body length is equivalent to this weight on a pediatric length and weight emergency tape (the equivalent of 33 inches in measurement or less).
  3. In the event paramedic judgment is used as the basis to call a Trauma Alert, it shall be documented as required in the 64J-1.014, F.A.C. on the patient report and the County Unified Trauma Telemetry Report (CUTT), if used.

#### LEVEL II TRAUMA PATIENTS: (ADULT AND PEDIATRIC)

Persons who sustain injury with any of the following Mechanisms of Injury shall be classified as a Level II Trauma:

1. Falls > 12 feet (adults); falls > 6 feet (pediatrics)
2. Extrication time > 15 minutes
3. Rollover
4. Death of occupant in the same passenger compartment
5. Major intrusion into passenger compartment
6. Separation from bicycle

7. Fall from any height if anti coagulated older adult > 55
8. Paramedic judgment

## **PROCEDURES FOR EMERGENCY INTER-HOSPITAL TRAUMA TRANSFERS**

Any hospital in Broward County may transfer a patient meeting Trauma Alert criteria by:

1. Calling 911 and reporting a Trauma Alert in their Emergency Department
2. Calling the closest Trauma Center (adult vs. pediatric) and advising the trauma section of the Trauma Alert. The Trauma Alert call should be from the sending emergency department physician to the receiving trauma center.
3. The Fire-Rescue/EMS Provider that is responsible for the area where the sending hospital is located shall respond to the emergency department and transport the patient to the nearest trauma center as identified by the sending hospital.
4. At the start of the transport, the Fire Rescue/EMS Provider shall notify the receiving trauma center that the unit is enroute to their facility and provide the Trauma Center with an estimated time of arrival.



## GLASGOW COMA SCALE SCORING

The Glasgow Coma Score (GCS) measures cognitive abilities. It is composed of three parameters, (eye, verbal, and motor responses) and uses numerical scoring to assist in the correlation of brain injury. Those scores are as follows:

### Best Eye Response (adult):

1. No eye opening
2. Eye opening to pain
3. Eye opening to verbal command
4. Eyes open spontaneously

### Best Verbal Response (adult):

1. No verbal response
2. Incomprehensible sounds
3. Inappropriate words
4. Confused
5. Oriented

### Best Motor Response (adult):

1. No motor response
2. Extension to pain
3. Flexion to pain
4. Withdrawal from pain
5. Localizing pain
6. Obeys commands

A GCS is scored between 3 and 15, 3 being the worst and 15 the best. A coma score of 13 or higher correlates with a mild brain injury, 9 to 12 is a moderate injury, and 8 or less is a severe brain injury. (Note: A phrase "GCS of 11" is essentially meaningless. It is important to break the figure down into its components, such as eye 3+verbal 3+ motor 5=GCS 11)

**Pediatric GCS:**

Eye Opening	<1 Year	>1 Year	
4	Spontaneously	Spontaneously	
3	To verbal command	To verbal command	
2	To pain	To pain	
1	No response	No response	
Motor Response	<1 Year	>1 Year	
6		Obeys	
5	Localizes pain	Localizes pain	
4	Flexion – normal	Flexion – withdrawal	
3	Flexion abnormal (decorticate rigidity)	Flexion – abnormal (decorticate rigidity)	
2	Extension (decerebrate rigidity)	Extension (decerebrate rigidity)	
1	No response	No response	
Verbal Response	0-23 Months	<2-5 Years	>5 Years
5	Smiles, coos, cries appropriately	Appropriate words and phrases	Oriented and converses
4	Cries	Inappropriate words	Disoriented and converses
3	Inappropriate crying and/or screaming	Cries and/or screams	Inappropriate words
2	Grunts	Grunts	Incomprehensible
1	No response	No response	No response

## DESIGNATED FACILITIES

Trauma Alert patients will be transported to the nearest appropriate Trauma Center. If the nearest appropriate Trauma Center is outside of the Trauma Agency's geographical boundaries, the Trauma Alert patient will be transported to the nearest appropriate facility. If that Trauma Center is temporarily unable to provide adequate trauma care, the patient will be transported to the next closest Trauma Center.

Listed below are the Trauma Centers in Broward County designated for *adult* Trauma Alert patients:

Broward Health North  
201 E. Sample Road  
Deerfield Beach, Florida 33064

Broward Health Medical Center  
1500 S. Andrews Avenue  
Fort Lauderdale, Florida 33316

Memorial Regional Hospital  
3501 Johnson Street  
Hollywood, Florida 33021

Listed below are the Trauma Centers in Broward County designated for *pediatric* Trauma Alert patients:

Broward Health Medical Center  
1500 S. Andrews Avenue  
Fort Lauderdale, Florida 33316

Memorial Regional Hospital  
3501 Johnson Street  
Hollywood, Florida 33021

## RUN REPORTS

The EMS provider issuing the Trauma Alert shall provide the Verified Trauma Center or Verified Pediatric Trauma Referral Center or hospital with information required under section 64J-2.002(5), F.A.C. In addition, the EMS crew will complete the County Unified Trauma Telemetry (CUTT) Report form and leave a copy of this report with the Trauma Staff. (See Appendix iv- CUTT Report)

## TRANSPORT DEVIATION

Any deviation from these Trauma Transport Protocols (TTP) must be documented and justified on the patient-care incident report.

Pre-hospital providers covered under these Uniform Trauma Transport Protocols are:

American Medical Response	American Ambulance Service
Broward Sheriff's Office Fire Rescue	Century Ambulance
Coral Springs Fire Rescue	Davie Fire Rescue
Fort Lauderdale Fire Rescue	Hallandale Beach Fire Rescue
Hollywood Fire Rescue	Lauderhill Fire Rescue
Lighthouse Point Fire Rescue	Margate Fire Rescue
MCT Express d/b/a Tri-County Ambulance	Miramar Fire Rescue
National Health Transport, Inc.	North Lauderdale Fire Rescue
Oakland Park Fire Rescue	Pembroke Pines Fire Rescue
Plantation Fire Rescue	Pompano Beach Fire Rescue
Seminole Tribe Fire Rescue	Sunrise Fire Rescue
Tamarac Fire Rescue	



## IX. Medical Control and Accountability

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**Broward County Trauma Plan 2017 - 2022**

## IX. MEDICAL CONTROL AND ACCOUNTABILITY

For a Trauma System to deliver the highest quality patient care, medical control and accountability are essential elements.

Medical control assures that all patient care will be under the supervision of a qualified physician. This authority extends throughout all phases of trauma care. Each local EMS service has a Medical Director to provide medical leadership. Their responsibilities include:

- Supervision and assumption of direct authority for the performance of the medical personnel operating within their agency
- Medical treatment advisement
- Training
- Quality assurance review

Medical control creates a mechanism where each provider is ultimately responsible to a medical director and, thus, accountable for their actions. This concept of accountability also extends to the services themselves.

At the pre-hospital level, medical control guides the performance of emergency medical personnel in the field. This may be accomplished directly (on-line) through voice communication, with instructions relayed via radio or telephone from local emergency department physicians; or indirectly (off-line), relying on standing medical procedures contained in accepted triage and transport protocols for trauma patients. Physician-approved training and quality assurance activities further guarantee the delivery of optimal patient care.

The American College of Emergency Physicians suggests that pre-hospital EMS agencies should be managed by physicians who meet the following criteria:

- Board certified in emergency medicine
- Familiar with the design and operation of pre-hospital EMS systems
- Experienced in pre-hospital emergency care of the acutely ill or injured patient
- Participate in radio control of pre-hospital emergency units
- Experienced in emergency department management of the acutely ill or injured patient
- Active participant in emergency department management of the acutely ill or injured patient
- Active involvement in the training of pre-hospital personnel
- Active involvement in the medical audit, review, and evaluation of pre-hospital personnel

- Participation in the administrative and legislative process affecting the regional and/or state pre-hospital EMS system

In order to ensure the availability of both on-line and off-line medical control in Broward County, the 19 ALS services have identified qualified Medical Directors through the Certificate of Public Convenience and Necessity (COPCN) process.

Although the Medical Directors for each system work independently, a new degree of coordination has evolved into the Greater Broward Emergency Medical Directors Association (GBEMDA). The Trauma Agency works with the GBEMDA, all pre-hospital service providers, emergency physicians, and trauma surgeons to develop and implement standardized triage and treatment protocols on a County-wide basis.

The Director of each hospital's emergency department is responsible for the medical management of that facility's emergency physicians. Hospitals with emergency rooms are as follows:

Broward Health Coral Springs	Memorial Hospital Miramar
Broward Health Imperial Point	Memorial Hospital Pembroke
Broward Health Medical Center	Memorial Hospital South
Broward Health North	Memorial Hospital West
Cleveland Clinic	Northwest Regional Hospital
Florida Medical Center	Plantation General Hospital
Holy Cross Hospital	University Hospital
Memorial Regional Hospital	Westside Regional Medical Center

Each hospital is currently responsible for performing its own quality assurance program, in accordance with the Joint Commission (formerly the Joint Commission on Accreditation of Healthcare Organizations) requirements. Trauma Center Verification Standards also require designated hospitals to conduct their own quality assurance audits of significant trauma cases.

In addition to the hospital facility emergency departments, the following Free Standing Emergency Departments serve Broward County:

- 1) Florida Medical Center Free Standing ED
- 2) West Boca Medical Center Free Standing ED
- 3) Westside Regional Medical Center ED

The County's Office of Medical Examiner and Trauma Services (OMETS), Pathology Section, is responsible for performing autopsies on all trauma deaths. OMETS develops statistics on trauma mortality, which are available to the public and integrated into the data system.

The following Committees serve as a system wide control mechanism for the Trauma Management Agency.

1. Trauma System Quality Improvement Committee (TSQIC)

The Trauma System Quality Improvement Committee (TSQIC) is comprised of individuals from various groups concerned with quality improvement and assurance, including: the BCTMA, representatives from the Trauma Center(s), acute care hospitals, emergency medical services, helicopter transport system, and OMETS.

The TSQIC is responsible for monitoring and evaluating the trauma network on a continuous basis. The Committee reviews select cases from all aspects of the system to determine the appropriateness of the medical care given to patients with traumatic injuries. Incidences of unexpected or preventable deaths are reviewed, any system inadequacies are identified, and recommendations for improvement are made. BCTMA, in concert with TSQIC, contacts the pre-hospital provider, Trauma Center, hospital, or other entity addressed by the recommendation and a corrective action plan is drafted and implemented. Upon conclusion, this plan and its results are reported back to TSQIC.

Data reported under requirements of the State of Florida Trauma Registry and gathered from the trauma center's registry is utilized to screen cases for review at the monthly TSQIC meetings. Additionally, the collected morbidity and mortality data of the trauma patient serves as a means of comparison, based on injuries, between different populations and age groups at the TSQIC meetings.

2. Local Trauma Advisory Committee (TAC)

The Trauma Advisory Committee serves as a general advisory board to the Board of County Commissioners and the BCTMA in matters of operation and policy. Currently, the TAC works in conjunction with BCTMA to develop and modify Trauma Center standards, field triage and treatment protocols, and inter-facility transfer criteria. In addition, they mediate any administrative disputes referred from the Quality Improvement Committee. Committee members may also become actively involved in public education programs. BCTMA convenes meetings of the TAC to determine procedures and mechanisms that will assist it in the completion of its charge.





X. Emergency Medical Services  
Communication

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**Broward County Trauma Plan 2017 - 2022**

## X. EMERGENCY MEDICAL SERVICES COMMUNICATION

It is the intention of Broward County Trauma Management Agency that Broward County's EMS communications system operates in full compliance with the State of Florida's Emergency Medical Services Communication Plan (EMSCP), Volume I (2015), and Volume II (2013).

The communications required for health and medical operations have always been pertinent to the success of emergency response in Broward County. Medical services rely heavily on the ability to receive, as well as deliver, lifesaving information between multiple agencies, hospitals, and EMS responders. An Emergency Medical Services (EMS) communications system must provide the means by which emergency medical resources can be accessed, mobilized, managed, and coordinated. This system must therefore employ sufficient communication paths and operational capabilities among all participants to facilitate functional communications.

Section 401.015.(Emergency Medical Services Telecommunications Act) and Section 395.1031 (Hospital Licensing Regulations), Florida Statutes, mandates a statewide plan for emergency medical telecommunications within the state. The purpose of the EMSCP is to establish and regulate EMS radio communications (voice or data) to licensed EMS agencies and hospital emergency departments.

EMS Communications Plan (EMSCP) is broken into two sections, each with specific information for use by hospitals, trauma centers, and emergency medical services. Those sections are:

- **Volume I** provides general administrative and regulatory information as well as compliance standards for radio communications equipment needed by the public safety organizations involved in EMS operations. This volume also outlines the basic concepts for local medical coordination communication systems within Broward County and throughout the State of Florida.
- **Volume II** was developed as an operational "field manual" to be carried as standard equipment on all permitted advanced or basic life support vehicles within the State. It lists contact information for Level I and II Trauma Centers and EMS ground and air transport services within Broward County, as well as, acute care designated hospitals, thus providing the data necessary to enable radio communications during transport of a trauma patient.

The communications plan states that in order for Trauma Centers and EMS resources to be accessed, mobilized, managed, and coordinated in both normal and adverse situations, Broward County's communications system must include the following components:

- Citizen Access
- Vehicle Dispatch and Response
- Medical Coordination

## **CITIZEN ACCESS**

The communication system must have the ability to receive and process incoming requests that report emergencies and require emergency medical assistance.

Broward County has a single access E-911 (Enhanced 911) system that provides direct citizen access to police, fire, and EMS services. E-911 calls are received through primary PSAP's (Public Safety Answering Points).

During receipt of the call, the PSAP operator obtains the necessary information regarding the type of request and relays calls for EMS assistance to medical dispatchers at the appropriate responding agency, depending on local jurisdiction.

The enhanced system provides an automatic visual display of the caller's telephone (landline or cellular) number and the location from which the call is originating. Another innovation, "caller aid," provides a computer display of emergency medical instructions, which can be read to the caller to provide medical interventions that the caller might accomplish for the victim until EMS units arrive.

The Broward Communications System, comprised of five regional communication centers, also enables citizens who have unique communications barriers the ability to communicate their needs through specialized services, such as, TDD for deaf residents and translation services for persons who do not speak English.

## **VEHICLE DISPATCH AND RESPONSE**

Broward County is organizationally complex with multi-jurisdictional responsibilities. EMS dispatch is operated by a number of distinct systems that operate independently. Broward Sheriff's Office Department of Fire Rescue provides EMS and fire dispatch to the majority of Broward's municipal providers.

In 2002 Broward County voters approved a charter amendment calling for coordination between Broward County and municipalities to establish a countywide communications infrastructure for fire and emergency medical services to enable closest unit response for life-threatening emergencies and support for regional specialty teams. Effective October 1, 2014, all Broward County cities, except Plantation and Coral Springs, are now part of Broward County's Regional Consolidated E911 Dispatch System.

The Broward County Commission has approved a \$60 million upgrade to the police and fire radio communications system for Broward County to be implemented during 2018.

Private providers utilize their own communication systems. During the dispatch process, all of the dispatch centers have the capability and training to render medical assistance over the phone at the time of the call.

Dispatchers are able to route EMS vehicles to the scene of an emergency by using the vehicle communications' two-way radio channel assigned by the FCC. This two-way radio capability also allows

them to communicate with the responding vehicle enroute to the medical incident, at the scene, on the way to the hospital, and during the unit's return to availability.

Broward County operates on a Countywide 800 MHz trunked radio system. This technology utilizes a centralized computer to coordinate radio frequency assignments thus allowing a mobile unit to be automatically switched to a free channel. This reduces the need for units to override the communications of another unit or be unable to communicate their needs in a timely manner. Additionally, all ground and air EMS units have hospital communications using the statewide medical channels as well as local medical resource channels which are a direct link into area hospitals and Trauma Centers.

## **MEDICAL COORDINATION**

All EMS vehicles in Broward County communicate with local hospitals via the medical communications (MEDCOM) channels. In this way, the EMS units on the scene may exchange treatment information with the medical control physician or other emergency department staff or alert the receiving facility that a trauma patient is on the way. Additionally, the EMS units have the ability to use the statewide medical channels as well as local medical resource channels, which directly link into area hospitals and Trauma Centers. (*State of Florida's Emergency Medical Services Communication Plan (EMSCP), Volume I (2015), and Volume II (2013) for further information and frequency listings*)

If any traumatically injured patient meets the Trauma Scorecard Methodology criteria (Chapter 64J, Florida Administrative Code), the on-scene EMS unit issues a Trauma Alert to the receiving hospital.

Of the medical resource channels, MED-8 is available for local medical coordination during a large scale casualty event, but is reserved for state-wide medical coordination. MED-8 serves as the Medical Resource Coordination Channel allowing hospitals and EMS providers to communicate directly in a disaster or mass casualty situation. Additionally, this frequency allows paramedics and emergency department personnel to communicate even if a vehicle travels outside the County or is unable to access its local channels.

The MEDCOM system possesses telemetry capability allowing paramedics to transmit data relating to a patient's biological functions from the incident to a trauma surgeon or emergency department physician.

If the responding units determine that they require assistance from other agencies or need to contact specialty treatment centers, they advise their medical dispatcher via radio. The dispatch center then makes the appropriate contact via telephone.

Broward County has a comprehensive emergency medical communications system that meets the requirements of the State of Florida's Communication Plan. This includes: in-service training for all communications personnel, analysis of the need for additional equipment, integration of the communication components into evaluation activities, procedures for alerting Trauma Center(s), and procedures for communicating with the trauma team staff.



## XI. Data Collection

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## XI. DATA COLLECTION

Historically, statistical data reflecting the status of emergency trauma care in the State of Florida was not collected with a uniform approach. Patient records were maintained by each agency or service and no standardized reporting format existed among the various providers.

As the importance of coordinated and uniform collection of data became more relevant to presenting a reliable statistical picture of the incidence of trauma related injuries, patient flow patterns, or the effectiveness of existing trauma system(s) for both planning and funding, EMS providers throughout the state developed and implemented a system to integrate this important data amongst healthcare providers. With the implementation of integrated data it is now possible to track trauma patients through the system and document treatment outcomes.

Additionally, as victims of blunt, penetrating injury, or burns must be included in the Trauma/Head-Injury, Spinal Cord-Injury Registry, this data is being combined with the EMS data collected, resulting in the availability of valuable reports on the efficacy of trauma care throughout the County.

### DATA SYSTEM

The Florida Trauma Registry collects patient data from the state's verified and provisional trauma centers, as authorized by Section 395.404(1), *Florida Statutes*. To be a state verified trauma center, the facility must maintain a comprehensive database of all injured patients treated in the hospital as a result of a traumatic injury. The trauma registry supports the trauma centers' required activities, including performance improvement, outcome research, and resource utilization, as well as providing the state public health system with the necessary data for statewide planning and injury prevention initiatives.

#### Next Generation Trauma Registry and Data Collection

The reporting requirements for trauma centers are listed in *The Florida Trauma Registry Manual, Data Dictionary, 2016 Edition*. The current registry manual is compliant with the National Trauma Data Bank® and the Trauma Quality Improvement Program (TQIP).

Data collected from the Florida trauma centers is submitted through the Next Generation Trauma Registry (NGTR). The NGTR can be accessed after appropriate credentialing has occurred at [www.fltraumaregistry.com](http://www.fltraumaregistry.com).

#### Acute Care Hospital Participation

Beginning in 2015, all acute care hospitals have been required to submit data to the registry for trauma cases that are treated within their facility. The Next Generation Trauma Registry allows for acute care hospitals to enter the required information directly or to upload the raw data through the web application. Patients discharged on or after January 1, 2016 fall under the reporting requirements of the *Florida Acute Care Trauma Registry Manual, Data Dictionary, 2016 Edition*.

Following to be added based upon new #'s for 2016 or latest year information is available. Illustrated in Table 11 are the Trauma Alerts received by the Designated Trauma Centers for both adult and pediatric trauma cases for the period 2012 through 2016.

Table 11 illustrates the number of **Trauma Alerts by Category for Broward County 2012-2016.**

**Table 11. Broward County Trauma (Level I & II) Alerts, 2012-2016**


Trauma Center	2012	2013	2014	2015	2016	5 year Total		
Broward Health Medical Center	1950	1934	2068	2170	2185	10307		
Broward Health North	1123	1149	1256	1236	1211	5975		
Memorial Regional Hospital	1349	1382	1453	1509	1655	7348		
<b>Totals</b>	<b>4422</b>	<b>4465</b>	<b>4777</b>	<b>4915</b>	<b>5051</b>			

The following Table 12 illustrates the number of Trauma Injuries by Category for Broward County by year (2012-2016).

**Table 12. Broward County Trauma Injuries by Category, 2012-2016**

Year	2012	2013	2014	2015	2016		% change over 5 years
<b>Blunt Trauma Totals</b>	<b>4578</b>	<b>4689</b>	<b>5427</b>	<b>6315</b>	<b>6297</b>		37.50%
<b>Bicycle</b>	249	253	280	286	274		10%
<b>Fall</b>	1728	1869	2385	2841	3077		78%
<b>Motor Cycle Crash</b>	483	449	489	544	523		8.20%
<b>Motor Vehicle Crash</b>	1256	1297	1339	1384	1477		17.60%
<b>Pedestrian</b>	402	393	372	379	397		-1.24%
<b>Other Blunt</b>	460	428	562	882	549		19.30%
<b>Penetrating Trauma Totals</b>	<b>477</b>	<b>545</b>	<b>595</b>	<b>640</b>	<b>647</b>		35.60%
<b>Gunshot Wound</b>	219	225	216	264	293		33.80%
<b>Stab Wound</b>	207	247	241	233	215		3.90%
<b>Other Penetrating</b>	51	73	138	143	139		172.50%
<b>Burn Trauma Totals</b>	<b>55</b>	<b>94</b>	<b>115</b>	<b>104</b>	<b>83</b>		50.90%





## XII. Trauma System Evaluation and Quality Improvement

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**Broward County Trauma Plan 2017 - 2022**

## **XII. TRAUMA SYSTEM EVALUATION AND QUALITY IMPROVEMENT**

Trauma system evaluation, the process for assessing the effectiveness of all system components is essential. Its purpose is to monitor the delivery of services, determine whether regionalization of trauma care is effective in reducing death and disability, and identify areas where improvement can be made.

The regional evaluation program provides an integrated perspective on how system components function as a whole. It offers a unique forum for experts from all levels of care to exchange ideas and evaluate strategies.

The role of the Trauma Agency is to:

1. Evaluate the quality of medical care within Broward County's Trauma System to include:
  - a. Medical audit of patient records (hospital, pre-hospitalization, and EMS transport including inter-hospital transfers)
  - b. Identification of problem areas
  - c. Propose corrective actions
2. Study the epidemiology of trauma within the community
3. Measure the impact of regionalized trauma care on patient outcomes
4. Identify trends and educational needs
5. Monitor system compliance with State and County standards through:
  - a. Trauma transport protocols
  - b. Trauma scorecard methodology
  - c. Registry reporting requirements
6. Refer to State EMS Office any providers who are non-compliant with submission of data if they do not respond to requests for submission

Individual and systematic approaches are utilized to evaluate the quality of medical care provided within the system, as well, as the availability and use of resources.

### **INDIVIDUAL MEDICAL AUDIT**

Evaluation of treatment rendered begins with a thorough review of individual patient records. All pre-hospital EMS providers and hospitals routinely conduct medical audits as part of their internal quality assurance activities. Each agency or facility determines which cases are selected for review, using treatment and transport audit filters to identify patients who fail to meet specified quality limits.

To maintain a "Trauma Center Verification," certain standards are required for quality assurance activities, utilizing a specified list of audit filters. Designated facilities must review all trauma deaths and conduct regular morbidity and mortality conferences using "peer review" methods during open discussion of each case.

Under the auspices of the Trauma System Quality Improvement Committee (TSQIC), the Trauma Management Agency's (TMA) medical audit uses a combination of pre-hospital and Trauma Center audit filters for case review. The TMA reviews accidental deaths occurring in non-trauma hospitals using parameters to identify whether the patient required treatment at a Trauma Center. If the case should have been handled as a Trauma Alert, all parties involved with the care of the patient are advised that the patient should have been transported for treatment to the nearest Trauma Center. The TMA works with the agencies (pre-hospital and hospital) to ensure that all have a clear understanding of the guidelines of the trauma system and the criteria utilized to designate a case as a Trauma Alert within Broward County.

## SYSTEM EVALUATION

### Quality Management Review

System-wide evaluation involves the accumulation of data from many patients such as: type and severity of injuries, mortality rates, patient triage, specific care rendered, etc. Compilation and evaluation of group statistics help to determine whether the trauma system as a whole is meeting its stated objectives.

Evaluation of trauma care requires a systematic quantitative approach to offset concerns associated with self-review. In order to understand the epidemiology of trauma and objectively judge the quality of care provided, reliable indexes must be chosen to quantify injury severity.

The Trauma Agency uses the TRISS (Trauma Score/Injury Severity Score) methodology to evaluate patient outcome. This technique uses anatomic, physiologic and age characteristics, along with trauma score and severity of injury to estimate the probability of survival.

The trauma score is essentially a field scoring system that uses physiologic parameters such as systolic blood pressure, capillary refill, respiratory rate, and the Glasgow Coma Scale score to evaluate injury severity at the scene of an accident. The trauma score helps separate major trauma victims from those with non-life-threatening injuries and helps determine whether a patient should be sent to the nearest available facility or triaged to a Trauma Center.

The ISS "injury severity score" is assigned by the hospital and represents the overall degree of severity for a patient with a discharge diagnosis reflecting traumatic injury.

Trauma experts generally agree that an ISS of nine (9) or greater indicates serious injury that should be evaluated at a Trauma Center. A patient with an ISS score of fifteen (15) or greater is considered to be severely injured and at risk of dying without prompt, definitive care.

By using the Trauma Score and ISS Score, it is possible to calculate the probability of survival (greater or less than 50%), based on national data. The TRISS methodology can further differentiate those patients who predictably should have lived, from those who should have died. Comparison of actual survival rates for Broward County patients provides a meaningful measurement of system effectiveness.

Other variables commonly associated with patient outcome such as: transport time, proper patient triage, and availability of specialized teams are monitored on an ongoing basis to determine whether they have a significant impact on morbidity and mortality.

Information from pre-hospital providers, Trauma Centers, non-designated facilities, and the BCTMA is also used to analyze the need for and utilization of Trauma Network services. Statistics reflecting such variables as patient volume are collected regularly. In addition, epidemiological studies of patient characteristics help to define the population and highlight system-wide strengths and weaknesses. For example, a review of age, sex, and injury type can highlight the need for various subgroups, which are then used to help target education and injury prevention campaigns.

Data collection from acute care Center resources is limited to registry information and Medical Examiner reports. As the evaluation process has progressed, source data has been expanded. Expanded data allows additional research projects to be evaluated on an ongoing basis.

The results of all system-wide studies are presented to the Local Trauma Advisory Committee monthly. Members discuss the impact on regional care, need for corrective action or additional investigation, and distribution of findings and conclusions.

Periodic reports are presented to the local EMS Council, and annual statistical summaries are prepared and provided to State and County officials.

### **Reporting Compliance**

The evaluation process also involves routine review of the regional reporting system to assure that all licensed pre-hospital and in-hospital providers comply with DOH requirements.

The Agency ensures that each EMS provider meets the trauma scorecard requirements as provided in Chapter 64J-2, Florida Administrative Code and trauma transport requirements as also provided in Chapter 64J-1.

### **Quality Assurance and Evaluation Process**

The system evaluation parameters identified in this section provide the basis for the activities of the Trauma System Quality Improvement Committee (TSQIC). These parameters are nationally accepted guidelines for quality assurance and evaluation programs. As these parameters are not all encompassing, the committee has added a number of additional measures for use in system evaluation, such as, additional data sets, extra geographic measures causing concerns on delayed transport, and mechanisms to ensure compliance to inter-facility transports to appropriate centers.

The Broward County Trauma Management Agency Manager attends and participates in the monthly Trauma System Quality Improvement meetings at each of the three Trauma Centers in Broward County. Through these meetings, each trauma death is formally presented and discussed.

These same cases are presented at the monthly Trauma System Quality Improvement Committee (TSQIC) meetings; during which trauma cases from each facility are presented to representatives from the non-Trauma Centers, pre-hospital providers, pre-hospital Medical Directors, the Chief Medical Examiner or designee and each Trauma Center. The TSQIC, in conjunction with the Trauma Management Agency, also evaluates the performance of the trauma system on a regular basis. It is through this TSQIC, that the Trauma Agency reviews the Trauma Centers and the entire system's compliance with State statutes and guidelines for a Trauma System, as well as the system-wide goals and objectives for the preceding year.

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## XIII. Mass Casualty and Disaster Plan Coordination

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**Broward County Trauma Plan 2017 - 2022**

### XIII. MASS CASUALTY AND DISASTER PLAN COORDINATION

Broward County is susceptible to tropical storms, as well as other natural and manmade disasters. As such, it is essential that the County is prepared for any type of mass casualty or disaster situation.

Broward County's Emergency Management Division has the responsibility for developing and implementing disaster planning, mitigation, and response activities within the County under provisions of State statutes. Emergency Management operates the County Emergency Operations Center (CEOC), which functions within the scope of the National Incident Management System. The CEOC serves as a Multi-Agency Coordination system, within which there is a number of Emergency Support Functions (ESF). Representatives of the Trauma Management Agency serve as members of ESF-8 Health and Medical group operating under the Human Services Branch of the CEOC.

ESF-8 Health and Medical Services provides the mechanism for coordinated assistance to supplement County and local resources in response to a public health and medical disaster, potential or actual incidents requiring a coordinated medical response, and/or during a developing or potential health and medical emergency.

Within South Florida, hurricanes pose a real and potentially devastating threat. Florida's hurricane season runs from June 1<sup>st</sup> thru November 30<sup>th</sup>, requiring preparedness planning on the part of the Trauma Management Agency in their role as a member of ESF-8.

In the event of any major disaster involving large numbers of casualties, such as a major hurricane or terrorism event, a coordinated plan of response automatically goes into effect in coordination with the County's Emergency Response Plan and its emergency management agency.

In addition to the implementation of the strategies involved in response to a hurricane, the Broward County Emergency Response Plan includes several specific plans including Hazardous Materials Response, Mass Casualty and Fatalities, and Nuclear Disasters, each delineating the policies and procedures that would be implemented to help minimize suffering and the loss of life to the residents and visitors to Broward County. Developing and implementing updates to the appropriate disaster plans is an ongoing function of the Trauma Management Agency.

The Broward County Fire Rescue has developed two (2) new SOG/Policies related to "*Active Shooter Hostile Violent Situations*" and "*Rescue Task Force Operations*".

As these plans are protected from disclosure by Florida statutes, a copy must be requested through the Broward Emergency Management Division.



## XIV. Public Information and Education

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**Broward County Trauma Plan 2017 - 2022**



## XIV. PUBLIC INFORMATION AND EDUCATION

All of the components of a Trauma System have the same overall goal, the reduction of trauma related morbidity and mortality. The previous chapters have detailed the value of early medical intervention after an injury occurs. However, it has been shown that the most successful approach is still prevention. Therefore, an effective program of public education regarding the prevention of injuries is essential.

In addition, knowledge concerning the role of the Trauma Agency and the appropriate use of trauma facilities is instrumental to the continued success of Broward County's Trauma Network. The effort to communicate these roles, as well as, general information regarding trauma service delivery, is a major responsibility of the Trauma Agency and provider groups.

Public information programs include:

1. Information to heighten public awareness of the trauma system:  
These programs help the public understand the need for specialized trauma care and how the system operates. They stress the value of an integrated trauma network and explain how lives have been saved through its implementation. In addition, these programs are designed to teach the citizens of Broward County how to access the system, how it operates on a day-to-day basis, and which facilities serve as designated Trauma Centers.
2. Injury Prevention and Control:  
These programs are directed at reducing risk factors commonly associated with traumatic injuries. A significant effort is made to decrease the number of preventable accidents by educating the public about such topics as, the importance of using age-appropriate child car seats and seatbelts, bicycle safety, the dangers of driving while impaired, and driving distracted (texting).

There is already a widespread effort within the community to educate the public about EMS-related issues. Additionally, many local hospitals, public safety agencies, and professional organizations offer educational programs and materials to promote a healthy lifestyle and personal safety.

A number of volunteer groups such as MADD, (Mothers Against Drunk Drivers) have been actively involved in bringing specific issues to the public's attention. Educational and training programs, sponsored by the TMA and Trauma Centers are offered on a regular basis in Broward County to help emergency services personnel meet the educational standards established by their professions.

The Broward Chapters of the National Safety Council, the American Heart Association, and the American Red Cross provide public information services and consumer training in CPR and emergency care. Additionally, the Broward School Board, through its Industry Services Division, provides health training to groups either on division premises or at the company/organization's place of business.

A primary role of the Trauma Agency is to foster consolidation of these programs and encourage communication among providers. Existing public information and education activities are documented and evaluated and additional programs are added as topics of concern or interest are identified.

The Trauma Agency works with the Trauma Centers and educational specialists throughout South Florida, using a variety of materials, to evaluate the adequacy of trauma education for the public and to facilitate the implementation of various public information aspects of the education program. Educational programs are currently available to the public, EMS personnel, and in-hospital personnel.

A variety of methods are used to promote the Agency's and the Trauma Network system's public awareness and injury control programs. These include: distribution of brochures; public service announcements; health fairs; seminars; and expansion of the local media's role in educating the public. Community lectures by local medical providers, law enforcement officers and other concerned volunteers are used to publicize the role of the Trauma Network and the consequences of high-risk behaviors.

Public information programs are aimed at those populations at greatest risk of traumatic injury. For example, motor vehicle safety campaigns are directed toward the youngest and oldest drivers, those with small children, and drivers with impaired driving due to alcohol or drugs and to the current use of mobile communication devices which leads to "distracted driving." Every effort is made to involve concerned organizations such as schools, church groups, local businesses, and civic and local interest clubs and community organizations in educational activities.

The evaluation parameters of the Trauma System assists agency staff in analyzing various components of trauma incidents and deaths, and to identify significant problem areas, thus targeting appropriate groups for future prevention efforts.

Public information and education programs are important and necessary components of a successful trauma system. Effective educational programs increase community awareness regarding the issues surrounding traumatic injuries, provide support for the local trauma network, encourage proper utilization of the network, and, most importantly, assist in decreasing the number of preventable deaths and reducing permanent disabilities.

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# Appendix i. Broward County Fire Rescue Locations



Appendix i

Broward County Fire Rescue Locations

- |   |   |
|---|---|
| <b>1</b> BSO, Dept. of Fire Rescue<br>116 W Dania Beach Blvd.<br>Dania, FL 33004-3283   | <b>13</b> Fort Lauderdale Fire Department<br>2871 E Sunrise Blvd.<br>Fort Lauderdale, FL 33304-3327         |
| <b>2</b> Fort Lauderdale Fire Department<br>528 NW 2nd Street<br>Fort Lauderdale, FL 33311-9108                                 | <b>14</b> BSO, Dept. of Fire Rescue<br>791 NW 31st Avenue<br>Fort Lauderdale, FL 33311                      |
| <b>3</b> Fort Lauderdale Fire Department<br>2801 SW 4th Avenue<br>Fort Lauderdale, FL 33315-3033                                | <b>15</b> Tamarac Fire Rescue<br>6000 Hiatus Road<br>Tamarac, FL 33321-6414                                 |
| <b>4</b> BSO, Dept. of Fire Rescue<br>928 E Hillsboro Blvd.<br>Deerfield Beach, FL 33441-3554                                   | <b>16</b> Fort Lauderdale Fire Department<br>524 NE 21st Court<br>Wilton Manors, FL 33305-2112              |
| <b>5</b> Hollywood Fire Rescue<br>1821 N 21 Avenue<br>Hollywood, FL 33020   | <b>17</b> BSO, Dept. of Fire Rescue HAZMAT<br>& 2308A SW 42nd Street<br><b>93</b> Fort Lauderdale, FL 33312 |
| <b>6</b> BSO, Dept. of Fire Rescue<br>Port Everglades Fire Department<br>1901 Eller Drive<br>Fort Lauderdale, FL 33316          | <b>18</b> Margate Fire Rescue<br>5785 Park Drive<br>Margate, FL 33063-2833                                  |
| <b>7</b> Hallandale Beach Fire Rescue<br>121 SW 3rd Street<br>Hallandale Beach, FL 33009-6309                                   | <b>19</b> Miramar Fire Rescue<br>6700 Miramar Parkway<br>Miramar, FL 33023-4897                             |
| <b>8</b> Fort Lauderdale Fire Department<br>528 NW 2nd Street<br>Fort Lauderdale, FL 33311-9108                                 | <b>20</b> Oakland Park Fire Rescue<br>4721 NW 9th Avenue<br>Fort Lauderdale, FL 33309-3805                  |
| <b>9</b> Oakland Park Fire Rescue<br>301 NE 38th Street<br>Oakland Park, FL 33334-2224  | <b>21</b> BSO, Dept. of Fire Rescue<br>951 Saddle Club Road<br>Weston, FL 33327                             |
| <b>10</b> BSO, Dept. of Fire Rescue<br>Ft. Laud-Hollywood Int'l Airport<br>250 Terminal Drive<br>Fort Lauderdale, FL 33315-3504 | <b>22</b> Lighthouse Point Fire Rescue<br>3740 NE 22nd Avenue<br>Lighthouse Point, FL 33064-3928            |
| <b>11</b> Pompano Beach Fire Rescue<br>3264 NE 3rd Street<br>Pompano Beach, FL 33062-5041                                       | <b>23</b> BSO, Dept. of Fire Rescue<br>(HAZMAT)<br>2200 SW 46th Avenue<br>Fort Lauderdale, FL 33317-6814    |
| <b>12</b> Lauderdale by the Sea Fire<br>Department<br>4504 Bougainvilla Drive<br>Lauderdale-by-the-Sea, FL 33308-<br>3614       | <b>24</b> Pompano Beach Fire Rescue<br>2001 NE 10th Street<br>Pompano Beach, FL 33060                       |

- 25** Plantation Fire Department 1  
5200 W Broward Blvd  
Plantation, FL 33317-2647
- 26** South Florida Rehab  
Emergency Support Team (Canteen)  
1951 NE 48<sup>th</sup> Street  
Pompano Beach, FL 33064-6504
- 27** BSO, Dept. of Fire Rescue  
2610 SW 40th Avenue  
West Park, FL 33023-4457
- 28** BSO, Dept. of Fire Rescue  
10550 Stirling Road  
Cooper City, FL 33328
- 29** Fort Lauderdale Fire Department  
2002 NE 16th Street  
Fort Lauderdale, FL 33304-1419
- 30** Lauderhill Fire Department  
1181 NW 41st Terrace  
Lauderhill, FL 33313-6614
- 31** Hollywood Fire Rescue  
3401 Hollywood Blvd.  
Hollywood, FL 33021-6910
- 32** BSO, Dept. of Fire Rescue (TRT)  
3400 SW 4<sup>th</sup> Avenue  
Fort Lauderdale, FL 33311
- 33** Pembroke Pines Fire Rescue  
600 SW 72nd Avenue  
Pembroke Pines, FL 33023-1075
- 34** North Lauderdale Fire Rescue  
6151 Bailey Road  
Fort Lauderdale, FL 33068-4939
- 35** Fort Lauderdale Fire Rescue  
1841 E Commercial Blvd.  
Fort Lauderdale, FL 33308-3767
- 36** Tamarac Fire Rescue  
7200 North University Drive  
Tamarac, FL 33321-2428
- 37** BSO, Dept. of Fire Rescue  
3461 NW 43rd Avenue  
Lauderdale Lakes, FL 33319-5740
- 38** Davie Fire Rescue Department  
6905 Orange Drive  
Davie, FL 33314-3238
- 39** Sunrise Fire Rescue  
6800 Sunset Strip  
Sunrise, FL 33313-2848
- 40** Hollywood Fire Rescue  
1581 South Ocean Drive  
Hollywood, FL 33019-3506
- 41** Tamarac Fire Rescue  
7501 NW 88th Avenue  
Tamarac, FL 33321-2428
- 42** Coral Springs Fire Department  
6500 Parkside Drive  
Parkland, FL 33067-1638
- 43** Coral Springs Fire Department  
4550 Rock Island Road  
Coral Springs, FL 33065
- 44** North Lauderdale Fire Department  
7700 Hamptons Blvd.  
North Lauderdale, FL 33068-5585
- 45** Hollywood Fire Rescue  
1810 N 64th Avenue  
Hollywood, FL 33024-4100
- 46** Fort Lauderdale Fire Department  
1515 NW 19 Street  
Fort Lauderdale, FL 33311-6222
- 47** Fort Lauderdale Fire Department (TRT)  
1000 SW 27th Avenue  
Fort Lauderdale, FL 33312-2938
- 48** Reserved for Tamarac Fire Rescue
- 49** Fort Lauderdale Fire Department  
1015 Seabreeze Blvd.  
Fort Lauderdale, FL 33316-2423
- 50** Margate-Coconut Creek Fire Rescue  
4500 Coconut Creek Parkway  
Coconut Creek, FL 33063-1535

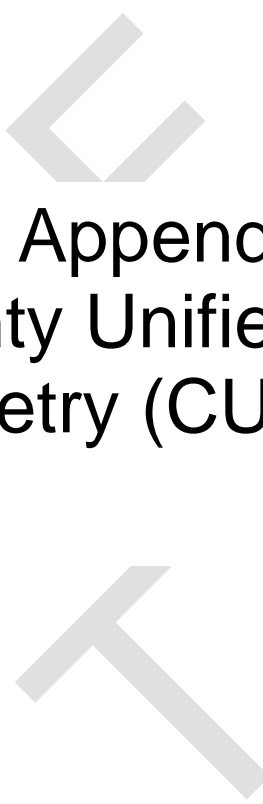

- 51** BSO, Dept. of Fire Rescue  
3192 North Powerline Road  
Pompano Beach, FL 33069-1016
- 52** Pompano Beach Fire Rescue  
10 SW 27th Avenue  
Pompano Beach, FL 33069-3019
- 53** Fort Lauderdale Fire Dept. (HAZMAT)  
2200 Executive Airport Way  
Fort Lauderdale, FL 33309-1733
- 54** Fort Lauderdale Fire Department  
3200 NE 32nd Street  
Fort Lauderdale, FL 33308-7102
- 55** BSO, Dept. of Fire Rescue  
3955 Bonaventure Blvd.  
Weston, FL 33332-2108
- 56** Plantation Fire Department 2  
550 NW 65th Avenue  
Plantation, FL 33317-1702
- 57** Lauderhill Fire Rescue  
1980 NW 56th Avenue  
Lauderhill, FL 33313-4060
- 58** Margate-Coconut Creek Fire Rescue  
600 Rock Island Road  
Margate, FL 33063-4327
- 59** Sunrise Fire Rescue  
8330 NW 27th Place  
Sunrise, FL 33322-2303
- 60** Hallandale Beach Fire Rescue  
2801 E Hallandale Beach Blvd.  
Hallandale Beach, FL 33009
- 61** Pompano Beach Fire Rescue  
2121 NW 3rd Avenue  
Pompano Beach, FL 33060-4969
- 62** Plantation Fire Department 3  
12101 W Broward Blvd.  
Plantation, FL 33325-2401
- 63** Pompano Beach Fire Rescue  
120 SW 3rd Street  
Pompano Beach, FL 33060-7900
- 64** Coral Springs Fire Department  
500 Ramblewood Drive  
Coral Springs, FL 33071-7144
- 65** Davie Fire Rescue  
1200 S Nob Hill Road  
Davie, FL 33324-4201
- 66** BSO, Dept. of Fire Rescue  
590 S Powerline Road  
Deerfield Beach, FL 33442-8109
- 67** BSO, Dept. of Fire Rescue  
951 Saddle Club Road  
Weston, FL 33326
- 68** Davie Fire Department  
3600 Flamingo Road  
Davie, FL 33330
- 69** Pembroke Pines Fire Rescue  
9500 Pines Blvd. Bldg. B  
Pembroke Pines, FL 33024-6258
- 70** Miramar Fire Rescue  
9001 Miramar Parkway  
Miramar, FL 33025-4128
- 71** Coral Springs Fire Department  
11800 NW 41st Street  
Coral Springs, FL 33065-7606
- 72** Sunrise Fire Rescue  
10490 W Oakland Park Blvd.  
Fort Lauderdale, FL 33351-6816
- 73** Lauderhill Fire Department  
7801 NW 50th Street  
Lauderhill, FL 33351-5735
- 74** Hollywood Fire Rescue Training  
2741 Stirling Road  
Hollywood, FL 33020-1124
- 75** BSO, Dept. of Fire Rescue  
71 SE 21st Avenue  
Deerfield Beach, FL 33441-4581
- 76** Plantation Fire Department 4  
8200 SW 3rd Street  
Plantation, FL 33324
- 77** Plantation Fire Department 5  
901 N Pine Island Road  
Fort Lauderdale, FL 33324-1101
- 78** Tamarac Fire Rescue  
4801 W Commercial Blvd.  
Tamarac, FL 33319-2833

- 79** Pembroke Pines Fire Rescue  
19900 Pines Blvd.  
Pembroke Pines, FL 33029-1210
- 80** Coral Springs Fire Department  
2825 Coral Springs Drive  
Coral Springs, FL 33065-3825
- 81** BSO, Dept. of Fire Rescue  
17350 Royal Palm Blvd.  
Weston, FL 33326
- 82** Southwest Ranches Fire Rescue  
17350 SW 46th Street  
Southwest Ranches, FL 33331-1124
- 83** Sunrise Fire Rescue  
60 Weston Road  
Sunrise, FL 33326-1911
- 84** Miramar Fire Rescue  
14801 SW 27th Street  
Miramar, FL 33027-4100
- 85** BSO, Dept. of Fire Rescue, Air Rescue  
5252 NW 21st Avenue  
Fort Lauderdale, FL 33309
- 86** Davie Fire Rescue  
60 Weston Road  
Sunrise, FL 33326
- 87** Oakland Park Fire Rescue  
2100 NW 39<sup>th</sup> Street  
Oakland Park, FL 33309
- 88** Fort Lauderdale Fire Dept. (HAZMAT)  
2200 Executive Airport Way  
Fort Lauderdale, FL 33309-1733
- 89** Pembroke Pines Fire Rescue  
13000 Pines Blvd.  
Pembroke Pines, FL 33027-1690
- 90** Hallandale Beach Fire Rescue  
101 Three Islands Blvd.  
Hallandale Beach, FL 33009
- 91** Davie Fire Rescue  
6101 SW 148th Avenue  
Davie, FL 33330
- 92** Sunrise Fire Rescue  
13721 NW 21 Street  
Sunrise, FL 33323
- 93** BSO, Dept. of Fire Rescue HAZMAT  
& 2308A SW 42nd Street  
**17** Fort Lauderdale, FL 33312
- 94** Margate-Coconut Creek Fire Rescue  
4555 Sol Press Blvd.  
Coconut Creek, FL 33073-1601
- 95** Coral Springs Fire Department  
300 Coral Ridge Drive  
Coral Springs, FL 33071-6180
- 96** Plantation Fire Department 6  
11050 W Sunrise Blvd.  
Plantation, FL 33322
- 97** Coral Springs Fire Department  
6650 University Drive  
Parkland, FL 33067-2500
- 98** Margate-Coconut Creek Fire Rescue  
5395 NW 24th Street  
Margate, FL 33063-7766
- 99** Pembroke Pines Fire Rescue  
16999 Pines Blvd.  
Pembroke Pines, FL 33027-1005
- 100** Miramar Fire Rescue  
2800 SW 184th Avenue  
Miramar, FL 33029
- 101** Pembroke Pines Fire Rescue  
6057 SW 198th Terrace  
Pembroke Pines, FL 33301
- 102** BSO, Dept. of Fire Rescue  
1441 SW 11<sup>th</sup> Way  
Deerfield Beach, FL 33441-6258
- 103** Pompano Beach Fire Rescue  
3500 NE 16th Terrace  
Pompano Beach, FL 33064-6281
- 104** Davie Fire Rescue  
4491 Oakes Road  
Davie, FL 33314-2205
- 105** Hollywood Fire Rescue  
1511 S. Federal Highway  
Hollywood, FL 33020-6343
- 106** BSO, Dept. of Fire Rescue  
35000 Everglades Pkwy Alligator Alley  
Fort Lauderdale, FL 33327 Mile M 35

- 107** Miramar Fire Rescue  
11811 Miramar Parkway  
Miramar, FL 33025-4218
- 108** Seminole Tribe Fire Rescue  
3101 North State Road 7  
Hollywood, FL 33021-2957
- 109** Coral Springs Fire Department  
11050 Trails End  
Parkland, FL 33076
- 110** Lauderhill Fire Rescue  
3120 NW 12th Place  
Lauderhill, FL 33311-4944
- 111** BSO, Dept. of Fire Rescue  
232 Goolsby Blvd.  
Deerfield Beach, FL 33442-3002
- 112** Davie Fire Rescue  
17220 Griffin Road  
Southwest Ranches, FL 33331-1108
- 113** Margate-Coconut Creek Fire Rescue  
3100 Wiles Blvd.  
Coconut Creek, FL 33073

[www.fcabc.com/US/index.php/fire-stations](http://www.fcabc.com/US/index.php/fire-stations)  
[www.sheriff.org/about\\_bso/dfres/stations/](http://www.sheriff.org/about_bso/dfres/stations/)





Appendix ii.  
County Unified Trauma  
Telemetry (CUTT) Report



**Broward County Trauma Plan 2017 - 2022**



## Broward County Unified Trauma Telemetry Report

Rescue Unit #: \_\_\_\_\_ Trauma Alert Type: Adult \_\_\_\_\_ OB >20weeks \_\_\_\_\_ Pediatric ≤15 YOA \_\_\_\_\_  
 Mode of Transportation: Ground \_\_\_\_\_ Air \_\_\_\_\_ ETA \_\_\_\_\_  
 Meets Color Criteria: Red \_\_\_\_\_ Blue \_\_\_\_\_ (1 red or 2 blue = Trauma Alert)  
 Meets Level 2 Criteria: \_\_\_\_\_

Adult Trauma Alert Criteria		
	Red Criteria (1 Required)	Blue Criteria (2 Required)
Airway	_____ Active airway assistance required	_____ Sustained respiratory rate ≥ 30
Circulation	_____ No radial pulse with sustained HR ≥ 120 or BP < 90 systolic	_____ Sustained HR ≥ 120
Fractures	_____ Multiple longbone FX sites	_____ Single longbone FX sites due to MVA or single longbone FX site due to fall ≥ 10 feet.
Cutaneous	_____ 2 <sup>o</sup> or 3 <sup>o</sup> burns > 15% BSA, electrical burns (high voltage/direct lightening) regardless of surface area, amputation proximal to wrist or ankle, penetrating injury to head, neck, or torso	_____ Major degloving, flap avulsion > 5 inches, or GSW to extremities
Best Motor Response (BMR)	_____ BMR ≤ 4, or exhibits presence of paralysis, suspicion of spinal cord injury, or loss of sensation	_____ BMR = 5
Mechanism of Injury		_____ Ejection from vehicle (excluding open vehicles) or deformed steering wheel
Age		_____ Anticoagulated Older Adult > 55
Misc.	_____ Paramedic Judgment (Comment Below) _____ Glasgow Coma Score ≤ 12	_____ Blunt Abdominal Injury

Pediatric Trauma Alert Criteria		
	Red Criteria (1 Required)	Blue Criteria (2 Required)
Airway	_____ Assisted or Intubated	
Consciousness	_____ Altered mental status, paralysis, suspected spinal cord injury, or loss of sensation	_____ Amnesia or reliable HX of LOC
Circulation	_____ Weak or no palpable carotid or femoral pulses, systolic BP < 50	_____ Carotid or femoral pulses palpable; no pedal pulses or systolic BP < 90
Fracture	_____ Any open longbone FX or multiple FX sites or multiple dislocations	_____ Single closed longbone FX site
Cutaneous	_____ Major soft tissue disruption, amputation proximal to wrist or ankle, 2 <sup>o</sup> or 3 <sup>o</sup> burns to 10% BSA, electrical burns (high voltage/direct lightening) regardless of surface area, penetrating injury to head, neck, or torso	
Misc.	_____ Paramedic Judgment	
Size		_____ Red, Purple <11kg (<24 lbs.)

Level 2 Trauma Alert Criteria (Adult and Pediatric)		
_____ Falls > 12ft. Adult _____ Falls > 6ft. Pediatric	_____ Death of an occupant in the same passenger compartment	_____ Fall from any height if anticoagulated older adult > 55 _____ Paramedic Judgement
_____ Extrication time > 15min.	_____ Major Intrusion into vehicle compartment	
_____ Rollover motor-vehicle crash	_____ Separation from Bicycle	

Paramedic Judgement Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



# Broward County Unified Trauma Telemetry Report

## Patient Evaluation

Age: \_\_\_\_\_ Sex: M or F Glasgow Coma Score (Adult): \_\_\_\_\_

Mechanism of Injury: \_\_\_\_\_

Initial Vital Signs: BP: \_\_\_\_\_ / \_\_\_\_\_ Pulse: \_\_\_\_\_ Resp. Rate: \_\_\_\_\_ Skin: \_\_\_\_\_ Color: \_\_\_\_\_

Assessed Injuries: \_\_\_\_\_

Treatment Interventions: (Check all that apply)

Oxygen  C-Collar  IV x \_\_\_\_\_  BVM  Backboard  ETT  CPR

Drug Therapy: \_\_\_\_\_

Other: \_\_\_\_\_

Current Vital Signs: BP \_\_\_\_\_ Pulse \_\_\_\_\_ Resp. Rate \_\_\_\_\_ Glasgow Coma Score \_\_\_\_\_

Additional Information: (If time permits)

Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Address: \_\_\_\_\_

Past Medical History: \_\_\_\_\_

Medications: \_\_\_\_\_

Allergies: \_\_\_\_\_

### Glasgow Coma Score

Best Eye Response (4)

- 1 – No eye opening
- 2 – Eye opening to pain
- 3 – Eye opening to verbal command
- 4 – Eyes open spontaneously

Best Verbal Response (5)

- 1 – No verbal response
- 2 – Incomprehensible sounds
- 3 – Inappropriate words
- 4 – Confused
- 5 – Orientated

Best Motor Response (6)

- 1 - No motor response
- 2 – Extension to pain
- 3 – Flexion to pain
- 4 – Withdrawal from pain
- 5 – Localizing Pain
- 6 – Obeys Commands

Eye = \_\_\_\_\_

Verbal = \_\_\_\_\_

Motor = \_\_\_\_\_

Total

E (\_\_\_\_\_) V (\_\_\_\_\_) M (\_\_\_\_\_) = GCS \_\_\_\_\_

Note the Glasgow Coma Scale measures cognitive ability. Therefore, if injury (chronic or acute) has caused paraplegia or quadriplegia, alternate methods of assessing motor response must be used (e.g., ability to blink eyes = obeys commands).



Appendix iii.  
Broward Regional Emergency  
Medical Services (EMS) Council



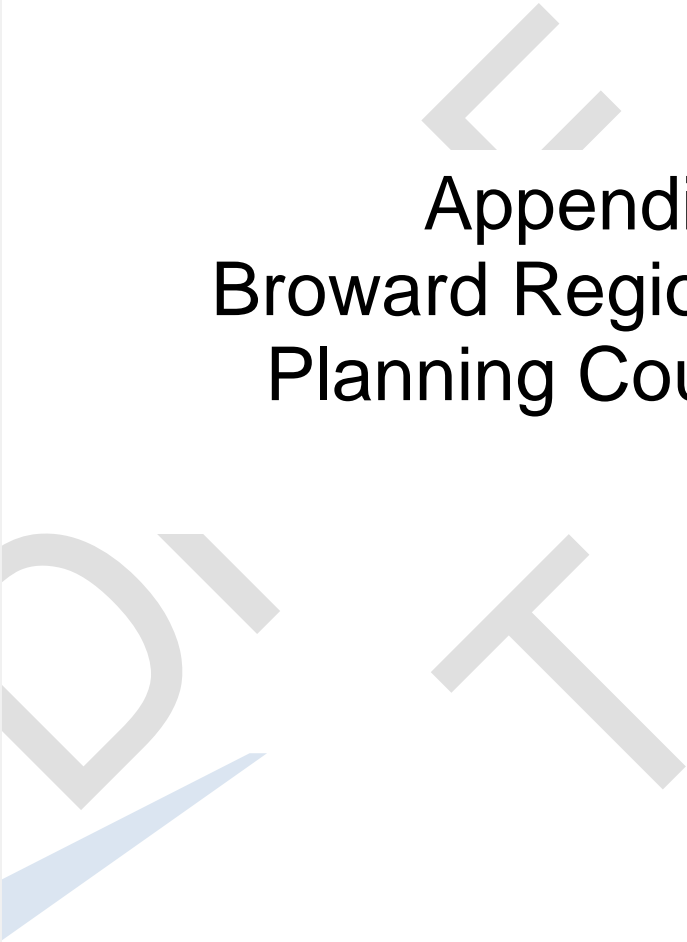

**Broward County Trauma Plan 2017 - 2022**

## Appendix iii

### Broward Regional Emergency Medical Services (EMS) Council

<b>Chair</b>	Ralph A. Marrinson	
<b>Vice-chair</b>	Frederick M. Keroff, MD	
<b>Staff Contacts</b>	<input type="checkbox"/> Alison Zerbe 954-357-5234 <input type="checkbox"/> Michele Bachmann 954-357-5229	
<b>COUNTY COMMISSION REPRESENTATIVE</b>		
Commissioner Chip LaMarca		
<b>BROWARD COUNTY COMMISSIONERS' REPRESENTATIVES</b>		
<b>Commission District</b>	<b>Commissioner</b>	<b>Representative</b>
District 1	Commissioner Nan Rich	John Halpern, DO
District 2	Commissioner Mark D. Bogen	Vacant
District 3	Commissioner Mark Udine	Leon Solomon
District 4	Commissioner Chip LaMarca	Charles Wohlitka
District 5	Commissioner Steve Geller	Daniel J. Cuoco
District 6	Commissioner Beam Furr	Adam Mitchell Geller
District 7	Commissioner Tim Ryan	David Starnes
District 8	Commissioner Barbara Sharief	Christopher Del Campo
District 9	Commissioner Dale V.C. Holness	Vacant
<b>Physicians</b>		
Emergency Medicine	Wayne Lee, MD	
Surgeon	Niqui Kiffin, M.D.	
Internist	Vacant (Pending)	
Public Health	Paula Thaqi, MD	
Pediatrician	Deborah Mulligan, MD	
Prehospital Medical Director	Peter Antevy, MD	
Broward County Medical Examiner	Craig Mallek, MD, JD	
Emergency Department Director from North Broward Hospital District	Vacant (Pending)	
Emergency Department Director from Memorial Healthcare System	Frederick M. Keroff, MD	

<b>Hospitals</b>	
Nonprofit	John Cunha, DO
Proprietary	Bruce Whitman
Broward Health, Administration	Patricia Anne Rowe-King, MD
Memorial Healthcare System, Administration	Zeff Ross
<b>Nurses</b>	
Emergency Room	Vanessa Quiles
<b>Transport</b>	
Private Ambulance	Vacant (Pending)
Municipal Fire	Thomas DiBernardo
County Fire	Harris Bouchillon
Nonemergency Medical Transportation Service	Stacy Patasnik
Rotary Air	Michael Kane
Fixed Wing Air	Tor Skoder
<b>Advanced Life Support (ALS)</b>	
Municipal Provider, Administration	Vacant (Pending)
Municipal Provider, Paramedic	Joel Gordon
County Administration	Joseph Fernandez
County Paramedic	Bruce Caruso
Private Provider, Administration	Vacant
Private Provider, Paramedic	Stephen Parr
<b>Organizations/Agencies</b>	
Broward College, Emergency Medical Services Department	Philip Bachers
Broward Regional Health Planning Council, Inc.	Ralph A. Marrinson
Broward League of Cities	Vacant
American Red Cross, Broward County Chapter	Ben Bellucci
Broward County Emergency Management Division	Miguel Ascarrunz
American Heart Association, Broward County Chapter	Antonio Gandia, MD
Broward County Trauma Advisory Panel	Joanne Richter
EMS Dispatch, County or Municipal	Jenna DePlacido
Broward County Bar Association	Edwina Kessler
Critical Incident Stress Management (CISM)	Paul J. Schweinler
Law Enforcement, Union Representative	Roger Krege
Fire and Paramedic, Union Representative	Walter Dix



Appendix iv.  
Broward Regional Health  
Planning Council, Inc.



**Broward County Trauma Plan 2017 - 2022**

## Appendix iv

### Broward Regional Health Planning Council, Inc.

Barbara S. Effman, MPH, Chair

David Roach, BA, Vice-Chair

Cyril Blavo, D.O., MPH & TM, FACOP, Treasurer

John A. Benz, MBA, Secretary

Cyril Blavo, D.O., M.P.H.&TM, FACOP, Treasurer

Lee Chaykin, MHSA, Board Member

Mark Dissette, MBA, Board Member

Albert C. Jones, MA, Board Member

Leilani Kicklighter, MBA, ARM, RN, Board Member

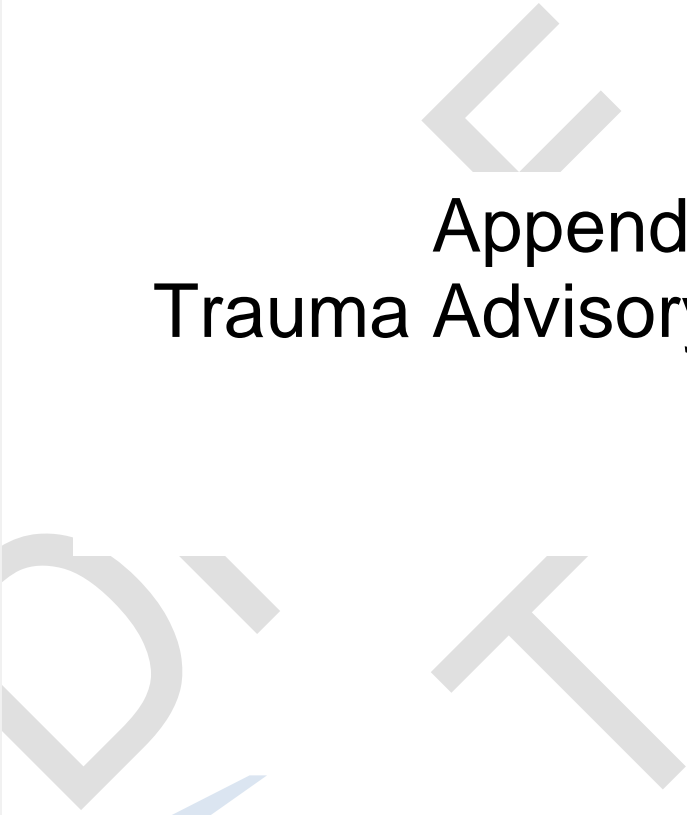

Daniel Lewis, Board Member

Jasmin D. Shirley, MSPH, Board Member

Cary Zinkin, D.P.M., Board Member

Michael De Lucca, MHM, President/CEO





Appendix v.  
Trauma Advisory Committee



**Broward County Trauma Plan 2017 - 2022**

## Trauma Advisory Committee

Fire Chiefs' Association of Broward County, President

Broward Regional Health Planning Council

Broward Health Medical Center, Level 1 Trauma Center

Broward Health North, Level 2 Trauma Center

Fire Chiefs' Association of Broward County, EMS Subcommittee Chair

Nova Southeastern University

Trauma System Quality Improvement Committee, Chair

Broward County Medical Association

Memorial Regional Hospital, Level 1 Trauma Center

Trauma Management Agency, Manager

Broward Regional EMS Council, Hospital

Office of Medical Examiner and Trauma Services

Broward Regional EMS Council, Hospital

Broward Regional EMS Council, Pre-hospital Medical Director



Appendix vi.  
Florida Statute 395.40

64J-2.011  
Trauma Center Requirements



**Broward County Trauma Plan 2017 - 2022**

## Appendix vi.

### 395.4025 Trauma centers; selection; quality assurance; records.—

(1) For purposes of developing a system of trauma centers, the department shall use the 19 trauma service areas established in s. [395.402](#). Within each service area and based on the state trauma system plan, the local or regional trauma services system plan, and recommendations of the local or regional trauma agency, the department shall establish the approximate number of trauma centers needed to ensure reasonable access to high-quality trauma services. The department shall select those hospitals that are to be recognized as trauma centers.

(2)(a) The department shall annually notify each acute care general hospital and each local and each regional trauma agency in the state that the department is accepting letters of intent from hospitals that are interested in becoming trauma centers. In order to be considered by the department, a hospital that operates within the geographic area of a local or regional trauma agency must certify that its intent to operate as a trauma center is consistent with the trauma services plan of the local or regional trauma agency, as approved by the department, if such agency exists. Letters of intent must be postmarked no later than midnight October 1.

(b) By October 15, the department shall send to all hospitals that submitted a letter of intent an application package that will provide the hospitals with instructions for submitting information to the department for selection as a trauma center. The standards for trauma centers provided for in s. [395.401](#)(2), as adopted by rule of the department, shall serve as the basis for these instructions.

(c) In order to be considered by the department, applications from those hospitals seeking selection as trauma centers, including those current verified trauma centers that seek a change or redesignation in approval status as a trauma center, must be received by the department no later than the close of business on April 1. The department shall conduct a provisional review of each application for the purpose of determining that the hospital's application is complete and that the hospital has the critical elements required for a trauma center. This critical review will be based on trauma center standards and shall include, but not be limited to, a review of whether the hospital has:

1. Equipment and physical facilities necessary to provide trauma services.
2. Personnel in sufficient numbers and with proper qualifications to provide trauma services.
3. An effective quality assurance process.
4. Submitted written confirmation by the local or regional trauma agency that the hospital applying to become a trauma center is consistent with the plan of the local or regional trauma agency, as approved by the department, if such agency exists.

(d)1. Notwithstanding other provisions in this section, the department may grant up to an additional 18 months to a hospital applicant that is unable to meet all requirements as provided in paragraph (c) at the time of application if the number of applicants in the service area in which the applicant is located is equal to or less than the service area allocation, as provided by rule of the department. An applicant that is granted additional time pursuant to this paragraph shall submit a plan for departmental approval which includes timelines and activities that the applicant proposes to complete in order to meet application requirements. Any applicant that demonstrates an ongoing effort to complete the activities within the timelines outlined in the plan shall be included in the number of trauma centers at such time that the department has conducted a provisional review of the application and has determined that the application is complete and that the hospital has the critical elements required for a trauma center.

2. Timeframes provided in subsections (1)-(8) shall be stayed until the department determines that the application is complete and that the hospital has the critical elements required for a trauma center.

(3) After April 30, any hospital that submitted an application found acceptable by the department based on provisional review shall be eligible to operate as a provisional trauma center.

(4) Between May 1 and October 1 of each year, the department shall conduct an in-depth evaluation of all applications found acceptable in the provisional review. The applications shall be evaluated against criteria enumerated in the application packages as provided to the hospitals by the department.

(5) Beginning October 1 of each year and ending no later than June 1 of the following year, a review team of out-of-state experts assembled by the department shall make onsite visits to all provisional trauma centers. The department shall develop a survey instrument to be used by the expert team of reviewers. The instrument shall include objective criteria and guidelines for reviewers based on existing trauma center standards such that all trauma centers are assessed equally. The survey instrument shall also include a uniform rating system that will be used by reviewers to indicate the degree of compliance of each trauma center with specific standards, and to indicate the quality of care provided by each trauma center as determined through an audit of patient charts. In addition, hospitals being considered as provisional trauma centers shall meet all the requirements of a trauma center and shall be located in a trauma service area that has a need for such a trauma center.

(6) Based on recommendations from the review team, the department shall select trauma centers by July 1. An applicant for designation as a trauma center may request an extension of its provisional status if it submits a corrective action plan to the department. The corrective action plan must demonstrate the ability of the applicant to correct deficiencies noted during the applicant's onsite review conducted by the department between the previous October 1 and June 1. The department may extend the provisional status of an applicant for designation as a trauma center through December 31 if the applicant provides a corrective action plan acceptable to the department. The department or a team of out-of-state experts assembled by the department shall conduct an onsite visit on or before November 1 to confirm that the deficiencies have been corrected. The provisional trauma center is responsible for all costs associated with the onsite visit in a manner prescribed by rule of the department. By January 1, the department must approve or deny the application of any provisional applicant granted an extension. Each trauma center shall be granted a 7-year approval period during which time it must continue to maintain trauma center standards and acceptable patient outcomes as determined by department rule. An approval, unless sooner suspended or revoked, automatically expires 7 years after the date of issuance and is renewable upon application for renewal as prescribed by rule of the department.

(7) Any hospital that wishes to protest a decision made by the department based on the department's preliminary or in-depth review of applications or on the recommendations of the site visit review team pursuant to this section shall proceed as provided in chapter 120. Hearings held under this subsection shall be conducted in the same manner as provided in ss. [120.569](#) and [120.57](#). Cases filed under chapter 120 may combine all disputes between parties.

(8) Notwithstanding any provision of chapter 381, a hospital licensed under ss. [395.001-395.3025](#) that operates a trauma center may not terminate or substantially reduce the availability of trauma service without providing at least 180 days' notice of its intent to terminate such service. Such notice shall be given to the department, to all affected local or regional trauma agencies, and to all trauma centers, hospitals, and emergency medical service providers in the trauma service area. The department shall adopt by rule the procedures and process for notification, duration, and explanation of the termination of trauma services.

(9) Except as otherwise provided in this subsection, the department or its agent may collect trauma care and registry data, as prescribed by rule of the department, from trauma centers, hospitals, emergency medical service providers, local or regional trauma agencies, or medical examiners for the purposes of evaluating trauma system effectiveness, ensuring compliance with the standards, and monitoring patient outcomes. A trauma center, hospital, emergency medical service provider, medical examiner, or local trauma agency or regional trauma agency, or a panel or committee assembled by such an agency under s. [395.50\(1\)](#) may, but is not required to, disclose to the department patient care quality assurance proceedings, records, or reports. However, the department may require a local trauma agency or a regional trauma agency, or a panel or committee assembled by such an agency to disclose to the department patient care quality assurance proceedings, records, or reports that the department needs solely to conduct quality assurance activities under s. [395.4015](#), or to ensure compliance with the quality assurance component of the trauma agency's plan approved under s. [395.401](#). The patient care quality assurance proceedings, records, or reports that the department may require for these purposes include, but are not limited to, the structure, processes, and procedures of the agency's quality assurance

activities, and any recommendation for improving or modifying the overall trauma system, if the identity of a trauma center, hospital, emergency medical service provider, medical examiner, or an individual who provides trauma services is not disclosed.

(10) Out-of-state experts assembled by the department to conduct onsite visits are agents of the department for the purposes of s. [395.3025](#). An out-of-state expert who acts as an agent of the department under this subsection is not liable for any civil damages as a result of actions taken by him or her, unless he or she is found to be operating outside the scope of the authority and responsibility assigned by the department.

(11) Onsite visits by the department or its agent may be conducted at any reasonable time and may include but not be limited to a review of records in the possession of trauma centers, hospitals, emergency medical service providers, local or regional trauma agencies, or medical examiners regarding the care, transport, treatment, or examination of trauma patients.

(12) Patient care, transport, or treatment records or reports, or patient care quality assurance proceedings, records, or reports obtained or made pursuant to this section, s. [395.3025\(4\)\(f\)](#), s. [395.401](#), s. [395.4015](#), s. [395.402](#), s. [395.403](#), s. [395.404](#), s. [395.4045](#), s. [395.405](#), s. [395.50](#), or s. [395.51](#) must be held confidential by the department or its agent and are exempt from the provisions of s. [119.07\(1\)](#). Patient care quality assurance proceedings, records, or reports obtained or made pursuant to these sections are not subject to discovery or introduction into evidence in any civil or administrative action.

(13) The department may adopt, by rule, the procedures and process by which it will select trauma centers. Such procedures and process must be used in annually selecting trauma centers and must be consistent with subsections (1)-(8) except in those situations in which it is in the best interest of, and mutually agreed to by, all applicants within a service area and the department to reduce the timeframes.

(14) Notwithstanding the procedures established pursuant to subsections (1) through (13), hospitals located in areas with limited access to trauma center services shall be designated by the department as Level II trauma centers based on documentation of a valid certificate of trauma center verification from the American College of Surgeons. Areas with limited access to trauma center services are defined by the following criteria:

- (a) The hospital is located in a trauma service area with a population greater than 600,000 persons but a population density of less than 225 persons per square mile;
- (b) The hospital is located in a county with no verified trauma center; and
- (c) The hospital is located at least 15 miles or 20 minutes travel time by ground transport from the nearest verified trauma center.

History.—ss. 6, 15, ch. 90-284; s. 78, ch. 91-282; ss. 38, 98, ch. 92-289; s. 1, ch. 94-129; s. 3, ch. 94-260; s. 1052, ch. 95-148; s. 27, ch. 95-398; s. 218, ch. 96-406; s. 125, ch. 96-410; s. 106, ch. 99-8; s. 4, ch. 2000-189; s. 7, ch. 2004-259; s. 3, ch. 2013-153.

Note.—Former s. 395.0335.

#### **64J-2.011 Trauma Center Requirements.**

(1) The standards for Level I, Level II and Pediatric trauma centers are published in DH Pamphlet (DHP) 150-9, January 2010, Trauma Center Standards, which is incorporated by reference and available from the department, as defined by subsection 64J-2.001(4), F.A.C. Any hospital that has been granted Provisional trauma center status or has been granted a 7 year Certificate of Approval to operate as a verified trauma center at the time this rule is amended must be in full compliance with the revised standards one year from the date the rule is amended. On or after the effective date of the amended rule, completed applications for Provisional trauma center status that do not demonstrate full compliance with these standards shall be denied.

(2) To be a Level I trauma center, a hospital shall be a state licensed general hospital and shall:

- (a) Meet and maintain after receiving provisional status and during the 7 year approval period the standards for a Level

I trauma center as provided in DHP 150-9;

(b) Meet the site visit requirements described in Rule 64J-2.016, F.A.C.;

(c) Meet and maintain after receiving provisional status and during the 7 year approval period the requirements provided in Rule 64J-2.006, F.A.C., regarding the collecting and reporting of trauma registry data; and

(d) Maintain and update at least annually an in-hospital copy of the application that was approved by the department as described in Rule 64J-2.012, F.A.C., so that the application reflects current and accurate information. Documentation used by the trauma center to update the application, but maintained elsewhere between annual application updates shall be immediately available for department review at any time. The application shall be maintained and updated after receiving provisional status and during the 7 year approval period, and organized in the same manner as was required at the time of application.

(3) To be a Level II trauma center, a hospital shall:

(a) Meet and maintain after receiving provisional status and during the 7 year approval period the standards for a Level II trauma center, as provided in DHP 150-9;

(b) Meet the site visit requirements described in Rule 64J-2.016, F.A.C.;

(c) Meet and maintain after receiving provisional status and during the 7 year approval period the requirements provided in Rule 64J-2.006, F.A.C., regarding the collecting and reporting of trauma registry data; and

(d) Maintain and update at least annually an in-hospital copy of the application that was approved by the department as described in Rule 64J-2.012, F.A.C., so that the application reflects current and accurate information. The application shall be maintained and updated after receiving provisional status and during the 7 year approval period, and organized in the same manner as was required at the time of application.

(4) To be a pediatric trauma center, a hospital shall:

(a) Meet and maintain after receiving provisional status and during the 7 year approval period the standards for a pediatric trauma center, as provided in DHP 150-9;

(b) Meet the site visit requirements described in Rule 64J-2.016, F.A.C.;

(c) Meet and maintain after receiving provisional status and during the 7 year approval period the requirements provided in Rule 64J-2.006, F.A.C., regarding the collecting and reporting of trauma registry data; and

(d) Maintain and update at least annually an in-hospital copy of the application that was approved by the department as described in Rule 64J-2.012, F.A.C., so that the application reflects current and accurate information. Documentation used by the trauma center to update the application, but maintained elsewhere between annual application updates shall be immediately available for department review at any time. The application shall be maintained and updated after receiving provisional status and during the 7 year approval period, and organized in the same manner as was required at the time of application.

*Rulemaking Authority 395.405 FS. Law Implemented 395.401, 395.4015, 395.402, 395.4025, 395.404, 395.4045, 395.405 FS. History—New 8-3-88, Amended 12-10-92, 12-10-95, Formerly 10D-66.108, Amended 8-4-98, 2-20-00, 6-3-02, 6-9-05, 3-5-08, Formerly 64E-2.023, Amended 11-5-09, 4-20-10.*