# West Virginia Office of Emergency Medical Services Medical Command Report Fiscal Year 2006



West Virginia Department of Health and Human Resources Bureau for Public Health Office of Emergency Medical Services

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## Introduction

Data utilized in the compilation of this report comes from communication records initiated by transporting ambulances with their Medical Command Centers. Five Medical Command Centers are located in West Virginia: 1) Beckley Regional Command at Raleigh General Hospital, 2) Charleston Med Base, located at Charleston Area Medical Center General Division, 3) Huntington Medical Command (a cooperative venture between Cabell-Huntington Hospital and Saint Mary's Hospital), 4) WVU Medical Command located at Ruby Memorial Hospital in Morgantown and, 5) WestCom located at the 911 center in Parkersburg.

The main function of the Medical Command Centers is to provide physician medical direction and give treatment authorization to EMTs and paramedics in the prehospital environment. In addition to providing a linkage between the ambulance crew and the physician, Medical Command may also: 1) notify hospital emergency departments of in-coming patients and the extent of the injury or illness, 2) assist with field triage, 3) coordinate backup and air/medical dispatch, 4) direct routing to an appropriate medical facility, 5) collect data, and 6) keep communication records to facilitate quality improvement within the System.

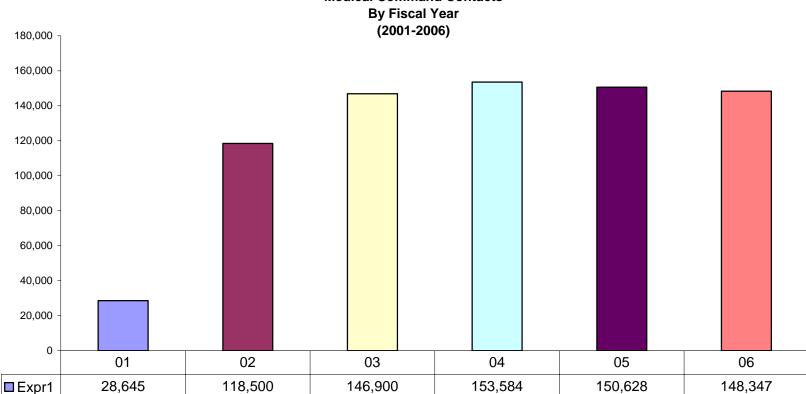
Medical Command Centers do not generally dispatch ambulances (some dispatch helicopters) and have limited involvement in transportation of patients except as it relates to incoming emergency patients to Hospital Emergency Departments. Further still, not all ambulance transporting activity to all hospitals is reported to Medical Command nor is all ambulance transporting activity collected equally by all Medical Command Centers.

For the reasons listed above, and others, this report should not be taken as indicative of the activity of Medical Commands, EMS Squads, EMS Providers or EMS activity in West Virginia. This report is prepared by the Office of Emergency Medical Services for the expressed and singular purpose of assisting in the development of the Medical Command System in West Virginia. All data contained within this report is confidential and cannot be released, referenced or referred to in any way without the expressed written permission from the State of West Virginia, the West Virginia Department of Health and Human Resources, the Bureau for Public Health, the Office of Community Health Systems and the Office of Emergency Medical Services.

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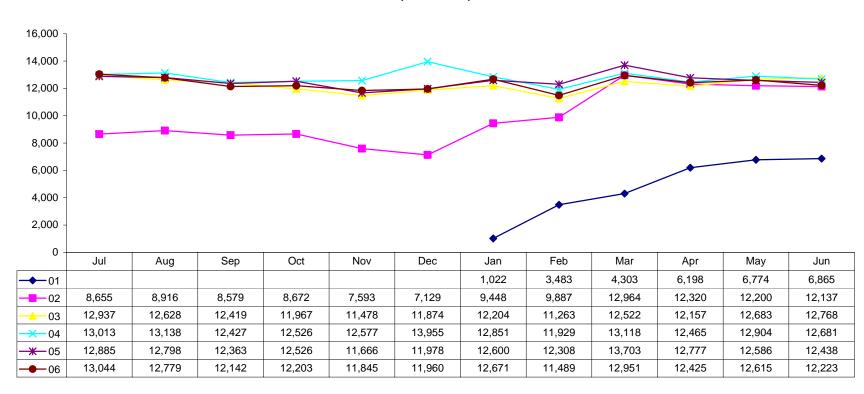
## **Medical Command Contacts by Fiscal Year**



Medical Command Contacts

The Medical Command database contains 746,604 contacts spread over six fiscal years (West Virginia State fiscal year runs from July to June and is named for the higher calendar year). The highest number of reported contacts was in 2004 (153,584) and the lowest reported was in 2001 (28,645). Medical command contacts have decreased for each of the last two fiscal years (Fiscal Year 2005 was 2,956 below 2004, and Fiscal Year 2006 was 2,281 below Fiscal Year 2005).

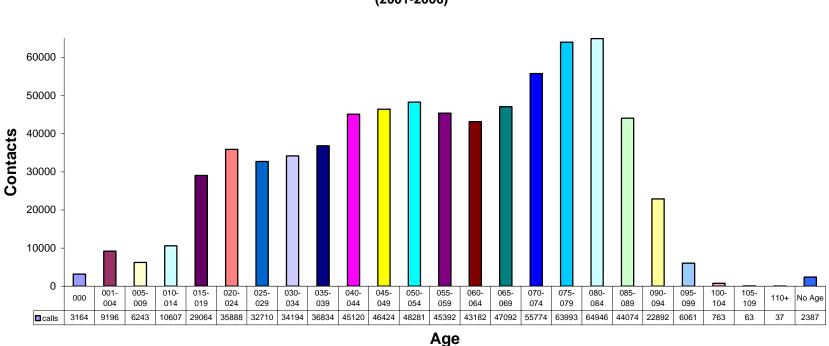




#### Medical Command Contacts By Month By Fiscal Year (2001-2006)

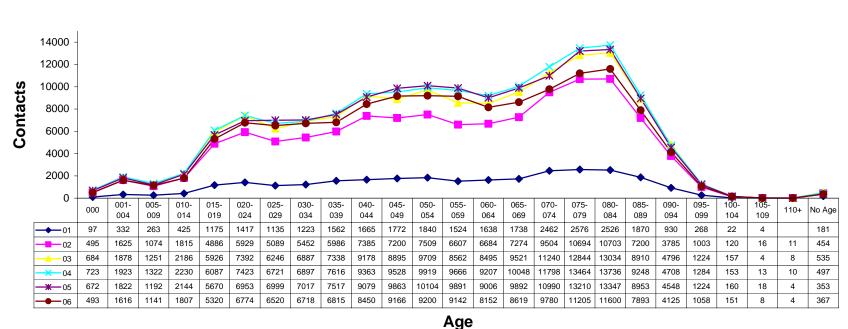
The first Medical Command data began to be collected in January 2001. The last Medical Command began to report February of 2002. A stable pattern of data began to be reported in March 2002. The range of Medical Command contacts from March 2002 until July 1, 2006 has a low of 11,263 in February 2003 and a peak of 13,955 in December of 2004.





Medical Command Contacts By Patient by Age (2001-2006)

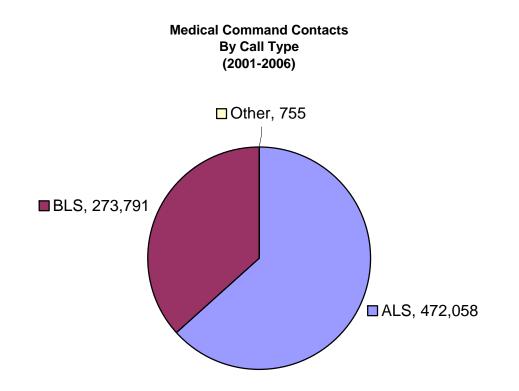
The distribution of Medical Command contacts by age (as defined in 5-year segments) is multimodal (having many peaks and valleys). The greatest number of contacts is for ages 80-89 followed by 75-79 and 70-74. There are peaks at 1-4, 20-24, 50-54 and 80-84. There are valleys at 0, 5-9, 25-29, 60-64 and 105-109. From a high at age 80-84, there is a strong drop (85-89 drops 32%, 90-94 drops 48%, 95-99 drops 73% and, 100-104 drops 87%) until it bottoms out (having few contacts) at or above 110 years of age.



Medical Command Contacts By Patient by Age By Fiscal Year (2001-2006)

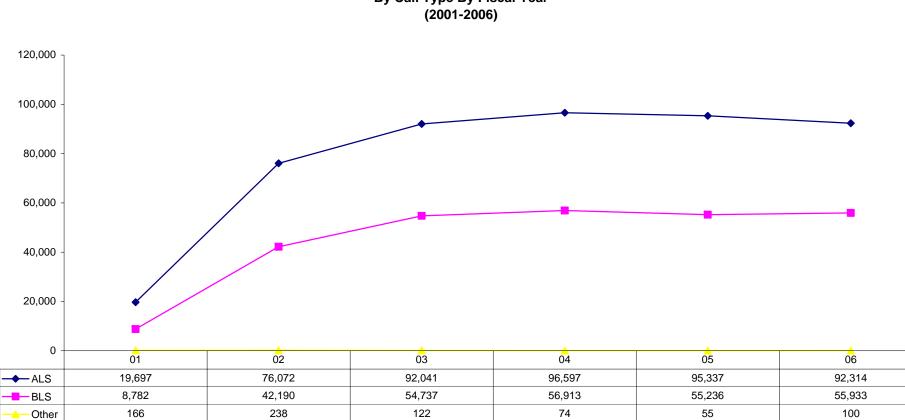
Even in Fiscal Year 2001 where the number of contacts is reduced, the multimodal nature of the age grouping distribution holds true across fiscal years.





Ambulance activation that report to Medical Command can be broadly divided into one of two groups: 1) Advanced Life Support (ALS) and 2) Basic Life Support (BLS). ALS contacts comprise 63% of all Medical Command contacts. At least two problems confound this reported result: 1) Medical Command data is limited to runs ending at a hospital, and 2) Medical Commands do not have consistent rules on the reporting of BLS contacts.

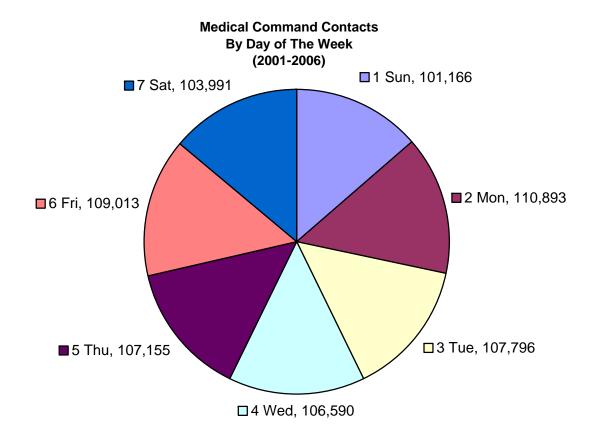




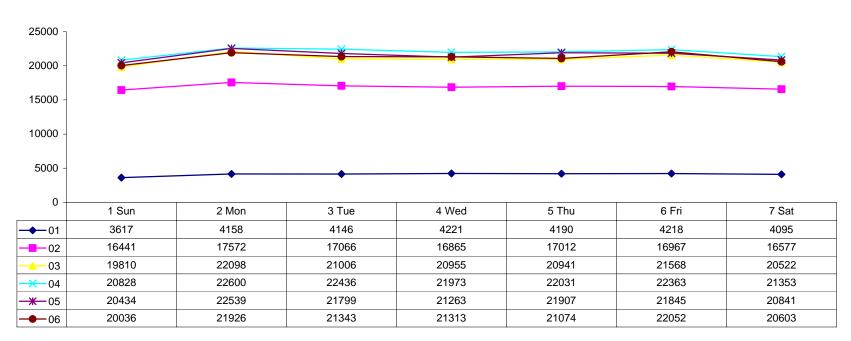
Medical Command Contacts By Call Type By Fiscal Year (2001-2006)

The distribution of ALS contacts to BLS contacts remains relatively constant across fiscal years. ALS contacts range from a high of 69% of all contacts in 2001 to a low of 62% in 2006.

## Day of the Week

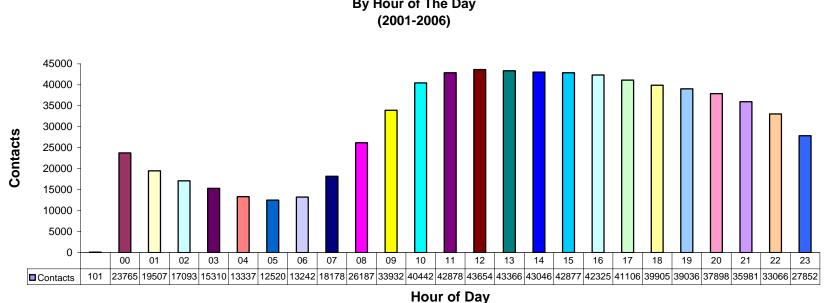


Medical Command contacts are evenly distributed when examined by day of contact. The day of the week with the least amount of contact is Sunday (with 13.55% of all contacts). The day of the week with the greatest amount of contact is Monday (with 14.85% of all contacts).





The distribution of Medical Command contacts continues to be relatively equal when examined by fiscal year.

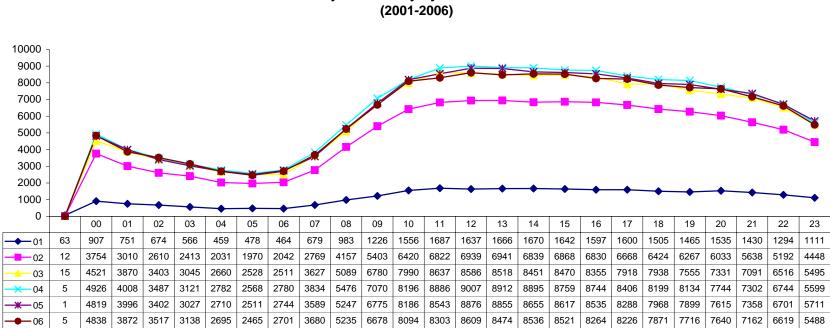


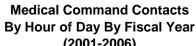
**Medical Command Contacts** By Hour of The Day

Hour of the Day

When examined by the hour of the day (listed as military time) that the contact occurred, the distribution of Medical Command contacts has one peak and one valley with "step wise" values leading away from the peak to the valley. The hour of the day with the greatest amount of contacts (43,654) is 1200 hours (in military time). The hour of the day with the least amount of contacts (12,520) is 0500 hours. The slope away from the peak (from 1200 in the direction of midnight) is more gradual than the slope from 600 hours to 1200 hours.

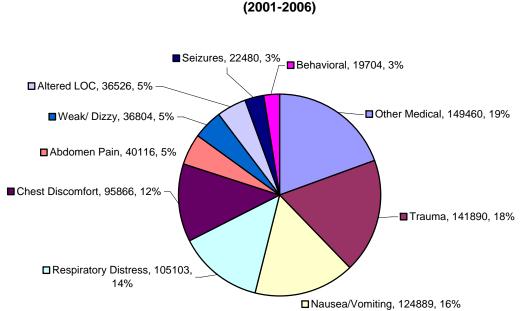






With the exception of Fiscal Year 2001, the slope and distribution of Medical Command contacts is relatively the same when examined by fiscal year. Even in Fiscal Year 2001, the pattern described previously is discernable.

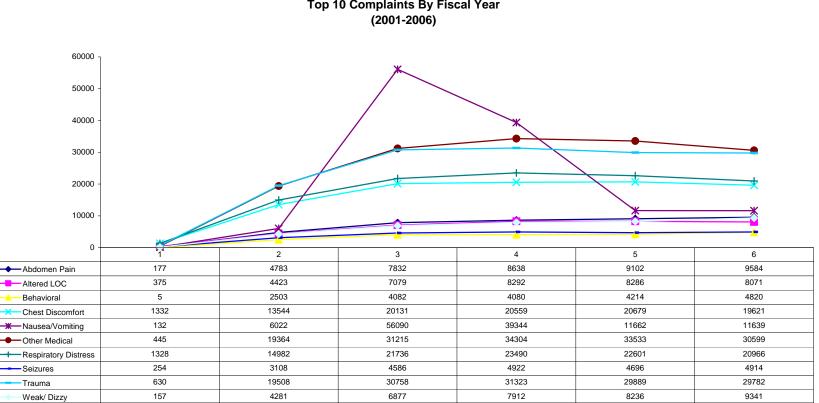
## **Top 10 Complaints**



Medical Command Contacts Top 10 Complaints (2001-2006)

The Medical Command data allowable answer set has within it the ability for the provider of service to list up to three complaints. By combining these three responses, eliminating blank/duplicate answers (only one complaint is required) and summing the result (without regard to the rank of the complaint), the complaint given most frequently can be determined. The number one complaint given most often is "Other Medical" and occurs in 19% of all contacts. This is followed by "Trauma" at 18%, Nausea/Vomiting at 16% and Respiratory Distress at 14%.

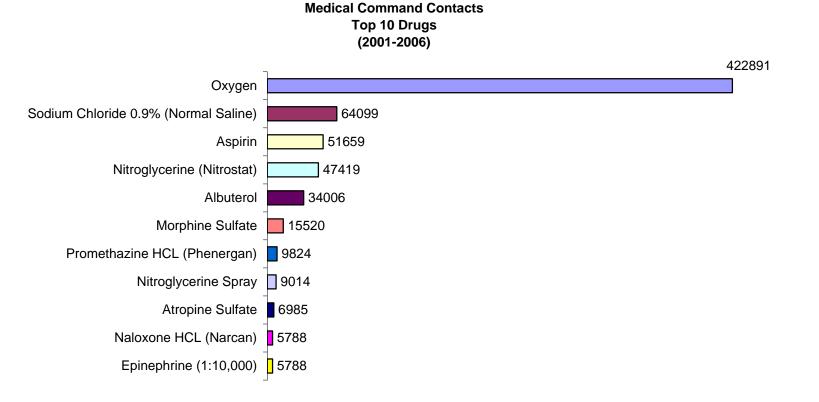




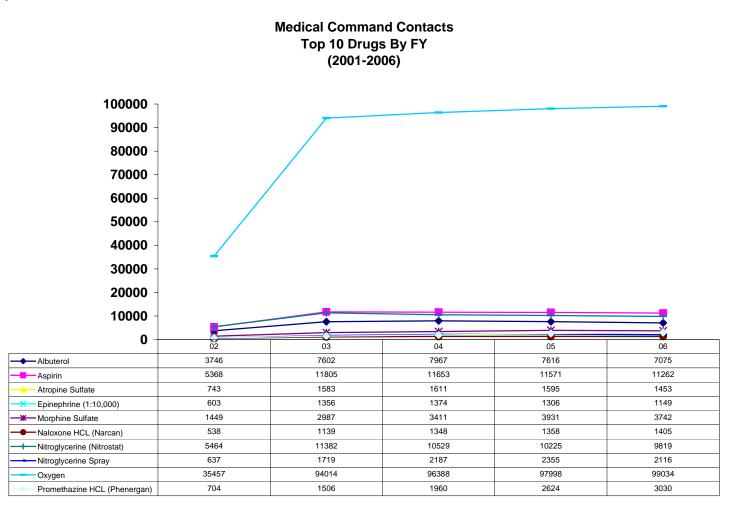
Medical Command Contacts **Top 10 Complaints By Fiscal Year** 

When examined across fiscal years, an anomaly appears. The fourth most often mentioned complaint "Nausea/Vomiting" occupies that position only because of its usage in 2003 and 2004. Three Medical Command Centers (Beckley, Charleston and Huntington) account for the elevated use of "Nausea/Vomiting". Beckley reported an elevated use in the January through April 2003 reports. Charleston reported an elevated use in the January through October 2003 reports. Huntington reported an elevated use in the January through November 2003 reports. If this anomaly is ignored, Nausea/Vomiting is consistent in the fifth most often reported complaint and Chest Discomfort takes fourth place.

## Top 10 Drugs

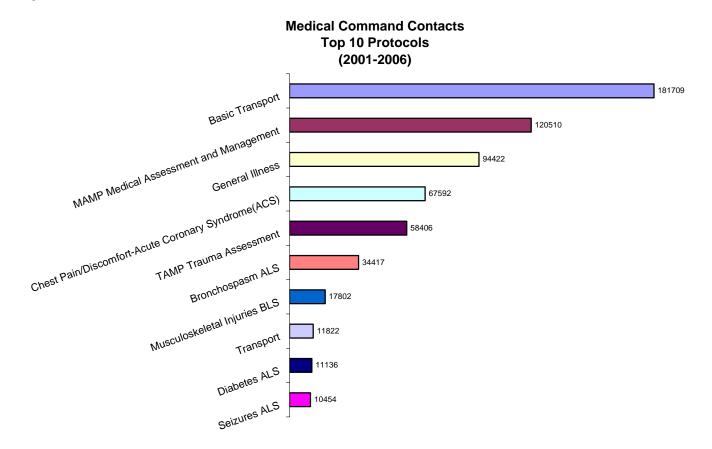


The Medical Command data allowable answer set has within it the ability for the provider of service to list an unlimited number of drugs. Typically one or two drugs are listed but as many as 16 drugs have been listed as being provided to one contact in the history of the Medical Command data reporting system. The most currently provided drug is Oxygen. Oxygen is listed six times more frequently than the second most often used drug (Normal Saline) and more than eight times more often than the third most often used drug (Aspirin).

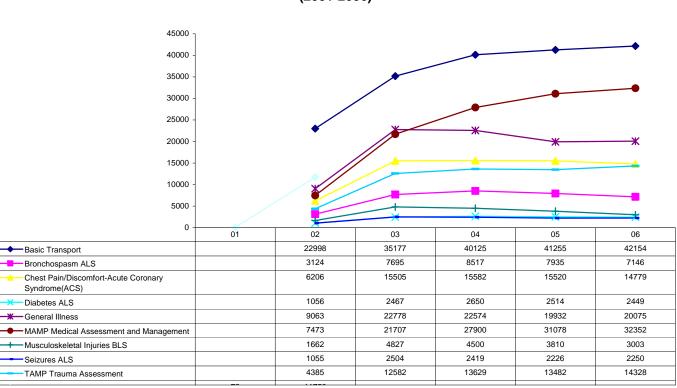


Oxygen retains its place as the number one most often used drug even when the data is examined across fiscal years.

## **Top 10 Protocols**

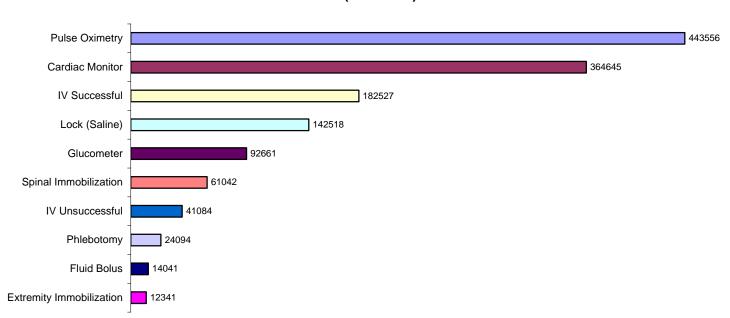


Basic Transport is the most often used Protocol with Medical Assessment and Management and General Illness rounding out the top 3.



#### Medical Command Contacts Top 10 Protocols By Fiscal Year (2001-2006)

When examined across fiscal years, Basic Transport remains the most often used protocol. General Illness was the second most often used protocol in 2002 and 2003, but overtaken by Medical Assessment and Management in 2004 and has been steadily falling through 2006. While Chest Pain/Discomfort-Acute Coronary Syndrome (ACS) has and still is the fourth most often used protocol, TAMP Trauma Assessment has been steadily increasing, and in 2006 is only 451 contacts below Chest Pain/Discomfort-Acute Coronary Syndrome (ACS).



Medical Command Contacts Top 10 Treatments (2001-2006)

**Top 10 Treatments** 

The most frequently used treatment is Pulse Oximetry followed by Cardiac Monitor. The third most common treatment (IV Successful) is used only 50% as often as the second most often used (Cardiac Monitor).



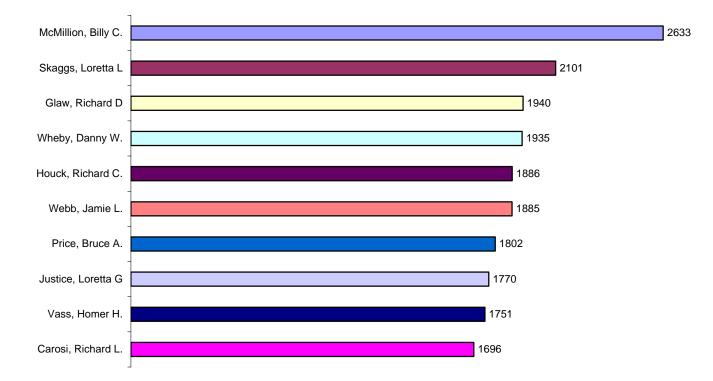


#### Medical Command Contacts Top 10 Treatments By Fiscal Year (2001-2006)

The ranking of the most frequently used treatments remains the same when viewed by fiscal year.

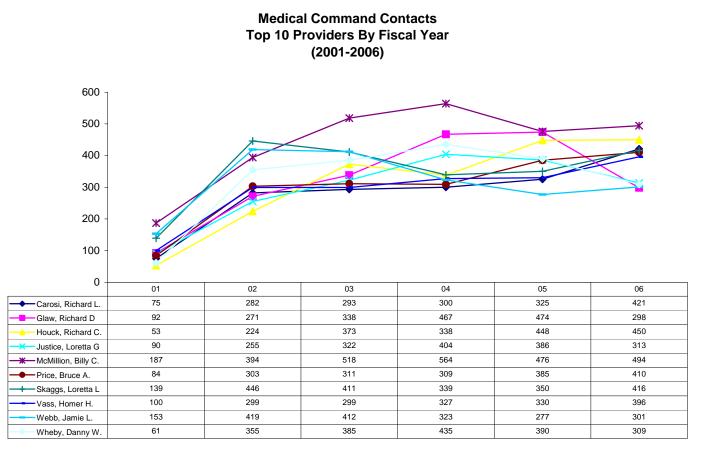
## **Top 10 Providers**

Medical Command Contacts Top 10 Providers (2001-2006)



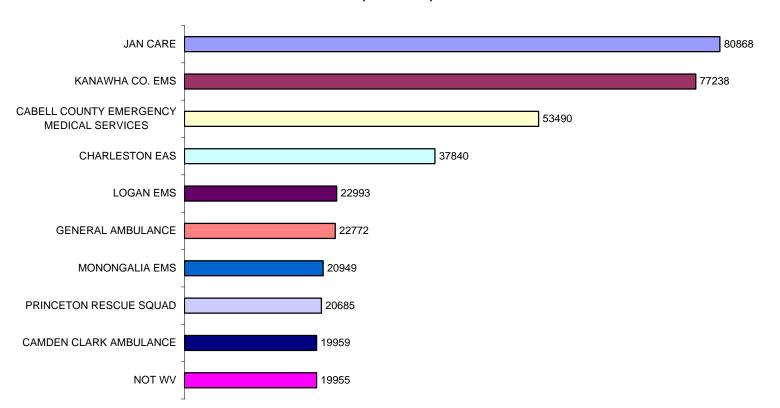
In the Medical Command data allowable answer set the "Provider" is the person within the ambulance who is responsible for the provision of medical care to the Patient. The individual most often given as the "Provider" in the Medical Command Contacts is Billy C. McMillion. Billy C. McMillion is listed 532 more times than the second most often listed Provider (Loretta L. Skaggs).





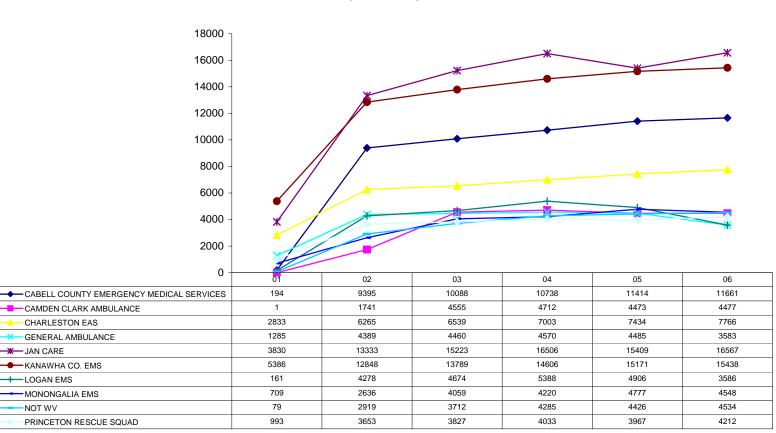
When examined by fiscal year, Billy C. McMillion has constantly been the number one most frequently listed Provider on Medical Command reports with the exception of 2002 when Loretta L. Skaggs ranked first, and 2005 when he tied with Richard D. Glaw. The number two position was held by several different individuals, most currently (2006) by Richard C. Houck.

## **Top 10 Squads**



Medical Command Contacts Top 10 Squads (2001-2006)

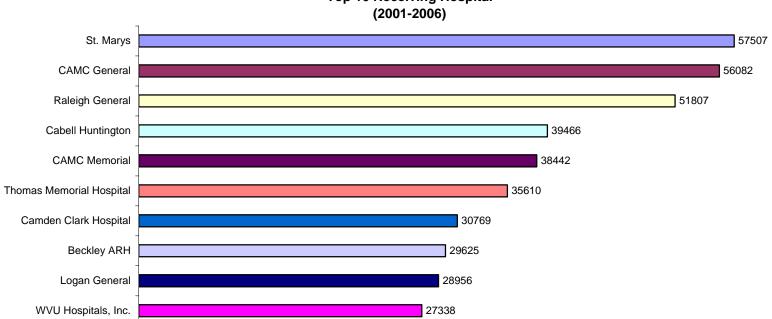
The top 10 most frequently listed Squads in the Medical Command data are identified in 50% of all Medical Command Contacts. The top two Squads (Jan Care and Kanawha County EMS) are identified in 20% of all Medical Command contacts (Jan Care – 10.83% and Kanawha County – 10.35%).



Medical Command Contacts Top 10 Squads By Fiscal Year (2001-2006)

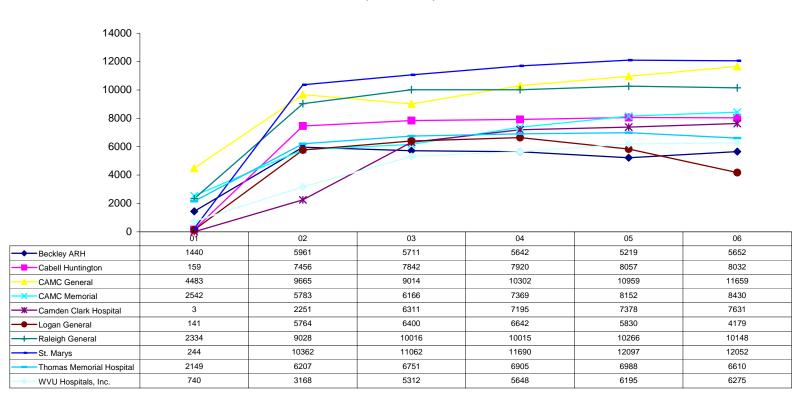
The four most frequently listed squads hold their rank when viewed across fiscal years.

## **Top 10 Hospitals**



Medical Command Contacts Top 10 Receiving Hospital (2001-2006)

The top 10 receiving hospitals were listed in 53% of all Medical Command Contacts. The top three most frequently listed receiving hospitals account for 22% (St. Marys – 7.7%, CAMC General – 7.51% and Raleigh General – 6.94%) of all Medical Command Contacts.



#### Medical Command Contacts Top 10 Receiving Hospital By Fiscal Year (2001-2006)

The "Top Receiving Hospital" (St. Mary's) remains as the "Top Receiving Hospital" when viewed across fiscal years. CAMC General has been constantly increasing in contacts from 2003 to the present. For the most recent fiscal year (2006), St Mary's had 393 contacts more than CAMC General.