

FIRE SERVICES DATA ANALYSIS REPORT

Indiantown, Florida



CPSM[®]

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CONTENTS

| | |
|--|-----------|
| Tables..... | iv |
| Figures | v |
| Introduction..... | 6 |
| Methodology | 7 |
| Aggregate Call Totals and Runs..... | 8 |
| Call Summary | 8 |
| Calls by Type | 9 |
| Calls by Type and Duration | 12 |
| Calls per Day and per Hour | 14 |
| Units Dispatched to Calls | 16 |
| Workload: Runs and Total Time Spent..... | 19 |
| Runs and Deployed Time | 19 |
| Workload by Station | 23 |
| Analysis of Busiest Hours | 26 |
| Response Time | 28 |
| Response Time by Type of Call..... | 28 |
| Response Time by Hour | 32 |
| Response Time Distribution..... | 34 |
| Transport Call Analysis | 38 |
| Transport Calls by Type..... | 38 |
| Average Transport Calls per Hour | 39 |
| Calls by Type and Duration | 41 |
| Transport Time Components..... | 42 |
| Total Work by Location..... | 43 |
| Total Workload | 43 |
| Transport Workload..... | 44 |
| Attachment I: Fire Loss | 45 |
| Attachment II: Transport Time by Hospital | 47 |
| Attachment III: Cover Assignment Calls | 48 |

TABLES

| | |
|--|----|
| TABLE 1: Calls by Grand Call Type, Station Zone, and Location..... | 8 |
| TABLE 2: Calls in Indiantown, by Grand Call Type and Responding Agency..... | 8 |
| TABLE 3: Call Types..... | 9 |
| TABLE 4: Calls by Type and Duration..... | 12 |
| TABLE 5: Calls by Call Type and Number of Units Dispatched | 16 |
| TABLE 6: Annual Runs and Deployed Time by Run Type | 19 |
| TABLE 7: Average Deployed Minutes by Hour of Day..... | 22 |
| TABLE 8: Call Workload by station and Unit | 23 |
| TABLE 9: Total Annual Runs by Run Type, Station, and Unit | 24 |
| TABLE 10: Daily Average Deployed Minutes by Run Type, Station, and Unit | 24 |
| TABLE 11: Frequency Distribution of the Number of Calls | 26 |
| TABLE 12: Frequency of Overlapping Calls | 26 |
| TABLE 13: Availability to Respond to Calls | 26 |
| TABLE 14: Top 10 Hours with the Most Calls Received..... | 27 |
| TABLE 15: Average Response Time of First Arriving Unit, by Call Type (Minutes)..... | 29 |
| TABLE 16: 90th Percentile Response Time of First Arriving Unit, by Call Type (Minutes) | 30 |
| TABLE 17: Average and 90th Percentile Response Time of First Arriving Unit, by Hour of Day | 32 |
| TABLE 18: Cumulative Distribution of Response Time – First Arriving Unit – EMS..... | 36 |
| TABLE 19: Cumulative Distribution of Response Time – First Arriving Unit – Structure and Outside Fires..... | 37 |
| TABLE 20: Transport Calls by Call Type | 38 |
| TABLE 21: Transport Calls per Day, by Hour | 39 |
| TABLE 22: Transport Call Duration by Call Type..... | 41 |
| TABLE 23: Time Component Analysis for Transport Runs by Call Type (in Minutes) | 42 |
| TABLE 24: Total Runs by Station, Zone, and Location | 43 |
| TABLE 25: Total Work Hours by Station, Zone, and Location | 43 |
| TABLE 26: Total Transport Runs by Station, Zone, and Location | 44 |
| TABLE 27: Total Transport Hours by Station, Zone, and Location..... | 44 |
| TABLE 28: Total Fire Loss Above and Below \$20,000 | 45 |
| TABLE 29: Content and Property Loss – Structure and Outside Fires in Indiantown..... | 45 |
| TABLE 30: Property Loss – Structure and Outside Fires Outside Indiantown | 45 |
| TABLE 31: Average Transport Time By Hospital..... | 47 |

FIGURES

| | |
|--|----|
| FIGURE 1: EMS Calls by Type | 10 |
| FIGURE 2: Fire Calls by Type | 10 |
| FIGURE 3: Average Calls per Day, by Month | 14 |
| FIGURE 4: Calls by Hour of Day | 15 |
| FIGURE 5: Calls by Number of Units Dispatched – EMS | 17 |
| FIGURE 6: Calls by Number of Units Dispatched – Fire | 17 |
| FIGURE 7: Average Deployed Minutes by Hour of Day | 21 |
| FIGURE 8: Average Response Time of First Arriving Unit, by Call Type – EMS | 29 |
| FIGURE 9: Average Response Time of First Arriving Unit, by Call Type – Fire..... | 30 |
| FIGURE 10: Average Response Time of First Arriving Unit, by Hour of Day..... | 33 |
| FIGURE 11: Cumulative Distribution of Response Time – First Arriving Unit – EMS | 34 |
| FIGURE 12: Frequency Distribution of Response Time – First Arriving Unit – Structure and Outside Fires..... | 35 |
| FIGURE 13: Transport Calls per Day, by Hour..... | 40 |
| FIGURE 14: Cover Assignment Calls per Day, by Month | 48 |
| FIGURE 15: Cover Assignment Calls by Hour of Day..... | 49 |

INTRODUCTION

This data analysis examines fire suppression services provided by Martin County Fire Rescue (MCFR) for Indiantown. All MCFR units that are located in Indiantown are housed in Station 24. We label Station 24 as Indiantown's "contracted station." This analysis examines all calls for service between January 1, 2019, and December 31, 2019, as recorded in the Martin County Regional Dispatch Center's computer-aided dispatch (CAD) system and the MCFR's National Fire Incident Reporting System (NFIRS). The CAD data serves as the primary data source for the study.

This analysis consists of six parts. The first five parts focus on all calls within Indiantown, in which the first part analyzes call types and dispatches. The second part explores the time spent and the workload of individual units. The third part presents an analysis of the busiest hours in the year studied. The fourth part provides a response time analysis of the first arriving unit to calls in Indiantown. The fifth part looks at the calls with patient transports. The sixth and final part is an analysis of Station 24's unit activity outside of Indiantown.

During the year covered by this study, Station 24 utilized one frontline engine, two frontline rescue units, two brush trucks, a tanker, a utility unit, and a support vehicle.

During the study period, there were 1,722 calls in Indiantown to which at least one MCFR unit responded and 473 calls outside of Indiantown to which at least one unit from Station 24 responded. EMS calls accounted for 50 percent of incidents occurring within Indiantown and 75 percent of the calls responded to by Station 24 outside of Indiantown. The total combined workload (deployed time) for unit responses in the city was 2,292.0 hours. The average dispatch time for the first arriving unit was 0.4 minutes and the average total response time was 6.1 minutes. The 90th percentile dispatch time was 0.8 minutes and the 90th percentile response time was 8.2 minutes.

METHODOLOGY

In this report, CPSM analyzes calls and runs. A call is an emergency service request or incident. A run is a dispatch of a unit (i.e., a unit responding to a call). Thus, a call may include multiple runs.

We received CAD data and NFIRS data for calls in Indiantown and calls outside of Indiantown to which units from the contracted station 24 responded. We first matched the NFIRS and CAD data based on incident numbers provided. Then, we classified the calls in a series of steps. We first used the NFIRS incident type to identify canceled calls and to assign EMS, motor vehicle accident (MVA), and fire category call types. EMS calls were then assigned detailed categories based on their EMS Clawson codes.

Finally, units with no en route and arrival time were removed.

In this report, canceled calls are included in all analyses other than the response time analyses.

AGGREGATE CALL TOTALS AND RUNS

During the year studied, there were 2,195 calls either occurring in Indiantown or involving units from Station 24. Of these, 1,722 calls (78 percent) occurred in Indiantown and 473 calls occurred outside of Indiantown. Of the 473 calls outside of Indiantown, 232 calls (49 percent) occurred within Station 24's assigned response zone.

CALL SUMMARY

Table 1 shows the number of calls by grand call type, station zone, and location. For calls within Indiantown, the number of calls broken out by grand call type and responding station is presented in Table 2.

TABLE 1: Calls by Grand Call Type, Station Zone, and Location

| Call Type | Outside Indiantown | | Inside Indiantown | Total |
|--------------|--------------------|------------|-------------------|--------------|
| | Zone 24 | Other | | |
| EMS | 164 | 195 | 860 | 1,219 |
| Fire | 43 | 21 | 200 | 264 |
| Other | 25 | 25 | 662 | 712 |
| Total | 232 | 241 | 1,722 | 2,195 |

Note: Calls outside Indiantown are limited to calls where at least one unit from Station 24 responded. The "other" call type includes canceled and cover assignment calls.

TABLE 2: Calls in Indiantown, by Grand Call Type and Responding Agency

| Call Type | Responding Station | | | Total |
|--------------|--------------------|-------------------|---------------------|--------------|
| | Station 24 Only | Combined Response | Other Stations Only | |
| EMS | 685 | 151 | 24 | 860 |
| Fire | 132 | 59 | 9 | 200 |
| Other | 19 | 16 | 627 | 662 |
| Total | 836 | 226 | 660 | 1,722 |

Observations:

- Station 24 responded to 97 percent of the EMS calls that occurred in Indiantown.
- Station 24 responded to 96 percent of the fire calls that occurred in Indiantown.
- Most "other" calls were cover assignments. For this reason, Station 24 only responded to 5 percent of the other calls that occurred in Indiantown.

CALLS BY TYPE

There were 1,722 calls in Indiantown to which at least one MCFR fire agency unit responded. Of these, 5 were structure fire calls and 13 were outside fire calls. This part of the analysis focuses on calls in Indiantown; however, the workload from the 473 calls outside of Indiantown to which units from Station 24 responded is included in Tables 24 and 25.

Table 3, Figure 1 and Figure 2, all show the number of calls by call type, average calls per day, and the percentage of calls that fall into each call type category for the 12-month period studied.

TABLE 3: Call Types

| Call Type | Number of Calls | Calls per Day | Call Percentage |
|-----------------------------|-----------------|---------------|-----------------|
| Breathing difficulty | 109 | 0.3 | 6.3 |
| Cardiac and stroke | 105 | 0.3 | 6.1 |
| Fall and injury | 163 | 0.4 | 9.5 |
| Illness and other | 368 | 1.0 | 21.4 |
| MVA | 33 | 0.1 | 1.9 |
| Overdose and psychiatric | 22 | 0.1 | 1.3 |
| Seizure and unconsciousness | 60 | 0.2 | 3.5 |
| EMS Total | 860 | 2.4 | 49.9 |
| False alarm | 50 | 0.1 | 2.9 |
| Good intent | 5 | 0.0 | 0.3 |
| Hazard | 27 | 0.1 | 1.6 |
| Outside fire | 13 | 0.0 | 0.8 |
| Public service | 100 | 0.3 | 5.8 |
| Structure fire | 5 | 0.0 | 0.3 |
| Fire Total | 200 | 0.5 | 11.6 |
| Canceled | 147 | 0.4 | 8.5 |
| Cover assignment | 515 | 1.4 | 29.9 |
| Total | 1,722 | 4.7 | 100.0 |

FIGURE 1: EMS Calls by Type

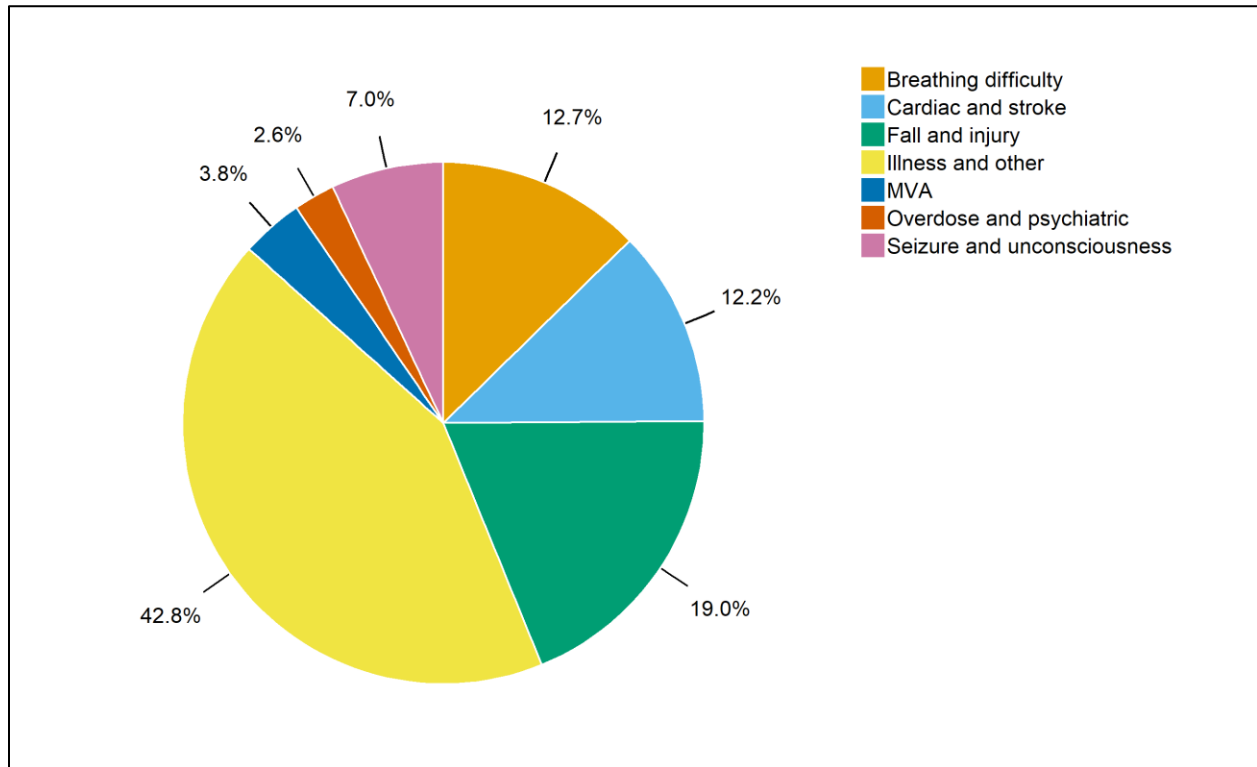
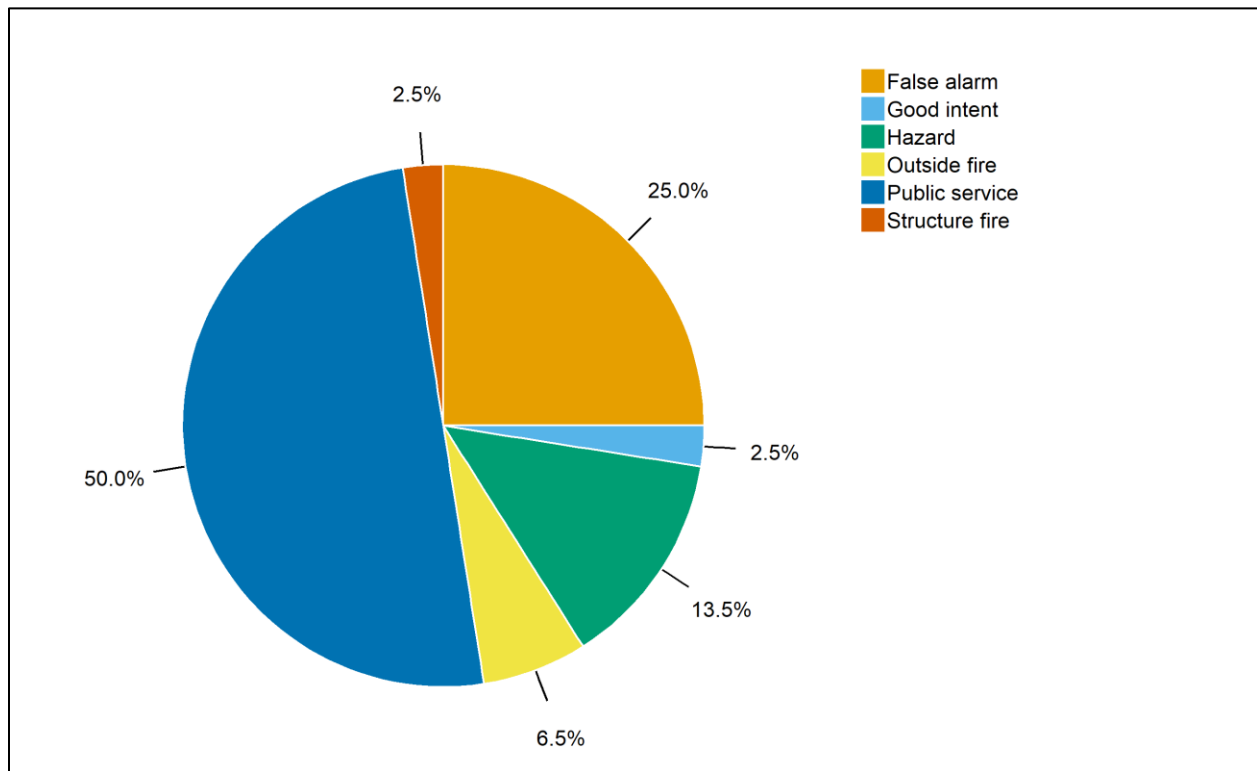


FIGURE 2: Fire Calls by Type



Observations:

Overall

- The department received an average of 4.7 calls, including 1.4 cover assignment and 0.4 canceled calls per day.
- EMS calls for the year totaled 860 (50 percent of all calls), an average of 2.4 per day.
- Fire calls for the year totaled 200 (12 percent of all calls), an average of 0.5 per day.

EMS

- Illness and other calls was the largest category of EMS calls at 43 percent of EMS calls, an average of 1.0 calls per day.
- Cardiac and stroke calls made up 12 percent of EMS calls, an average of 0.3 calls per day.
- Motor vehicle accidents made up 4 percent of EMS calls, an average of 0.1 calls per day.

Fire

- Public service calls were the largest category of fire calls at 50 percent of fire calls, an average of 0.3 calls per day.
- False alarm calls made up 25 percent of fire calls, an average of 0.1 calls per day.
- Structure and outside fire calls combined made up 9 percent of fire calls, an average of one call every 20 days.

CALLS BY TYPE AND DURATION

Table 4 shows the duration of calls by type using four duration categories: less than 30 minutes, 30 minutes to one hour, one to two hours, and more than an hour.

TABLE 4: Calls by Type and Duration

| Call Type | Less than 30 Minutes | 30 Minutes to One Hour | One to Two Hours | More Than Two Hours | Total |
|-----------------------------|----------------------|------------------------|------------------|---------------------|--------------|
| Breathing difficulty | 5 | 15 | 88 | 1 | 109 |
| Cardiac and stroke | 4 | 11 | 88 | 2 | 105 |
| Fall and injury | 38 | 21 | 101 | 3 | 163 |
| Illness and other | 47 | 71 | 250 | 0 | 368 |
| MVA | 10 | 4 | 18 | 1 | 33 |
| Overdose and psychiatric | 5 | 4 | 13 | 0 | 22 |
| Seizure and unconsciousness | 9 | 10 | 41 | 0 | 60 |
| EMS Total | 118 | 136 | 599 | 7 | 860 |
| False alarm | 38 | 12 | 0 | 0 | 50 |
| Good intent | 2 | 3 | 0 | 0 | 5 |
| Hazard | 11 | 7 | 5 | 4 | 27 |
| Outside fire | 6 | 1 | 5 | 1 | 13 |
| Public service | 93 | 4 | 0 | 3 | 100 |
| Structure fire | 1 | 1 | 2 | 1 | 5 |
| Fire Total | 151 | 28 | 12 | 9 | 200 |
| Canceled | 137 | 8 | 2 | 0 | 147 |
| Cover assignment | 160 | 188 | 112 | 55 | 515 |
| Total | 566 | 360 | 725 | 71 | 1,722 |

Observations:

EMS

- A total of 254 EMS calls (30 percent) lasted less than one hour, 599 EMS calls (70 percent) lasted one to two hours, and 7 EMS calls (1 percent) lasted two or more hours.
- On average, there were 1.7 EMS calls per day that lasted more than one hour.
- A total of 15 cardiac and stroke calls (14 percent) lasted less than one hour, 88 cardiac and stroke calls (84 percent) lasted one to two hours, and 2 cardiac and stroke calls (2 percent) lasted two or more hours.
- A total of 14 motor vehicle accidents (42 percent) lasted less than one hour, 18 motor vehicle accidents (55 percent) lasted one to two hours, and 1 motor vehicle accident (3 percent) lasted two or more hours.

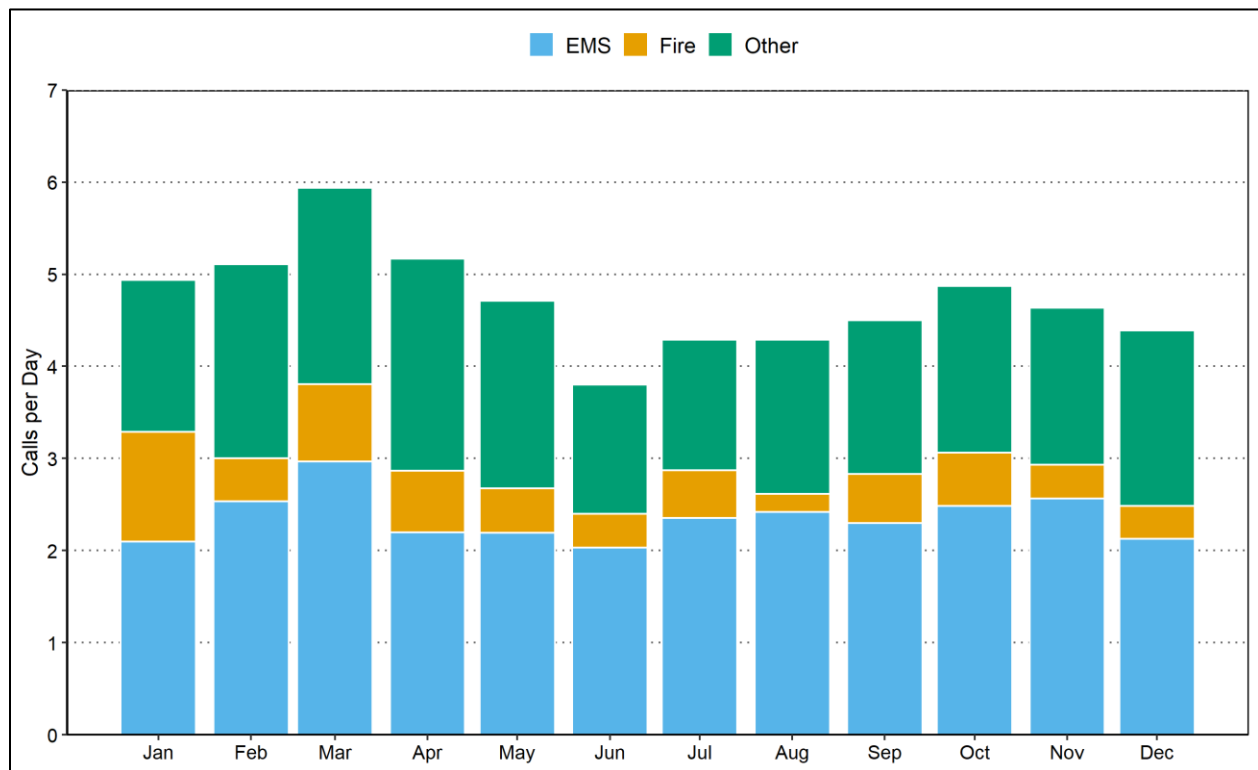
Fire

- A total of 179 fire calls (90 percent) lasted less than one hour, 12 fire calls (6 percent) lasted one to two hours, and 9 fire calls (4 percent) lasted two or more hours.
- On average, there were 0.1 fire calls per day that lasted more than one hour.
- A total of 7 outside fire calls (54 percent) lasted less than one hour, 5 outside fire calls (38 percent) lasted one to two hours, and 1 outside fire call (8 percent) lasted two or more hours.
- A total of 2 structure fire calls (40 percent) lasted less than one hour, 2 structure fire calls (40 percent) lasted one to two hours, and 1 structure fire call (20 percent) lasted two or more hours.

CALLS PER DAY AND PER HOUR

Figure 3 shows the monthly variation in the average daily number of calls in Indiantown during the year studied. Similarly, Figure 4 illustrates the average number of calls received each hour of the day over the year.

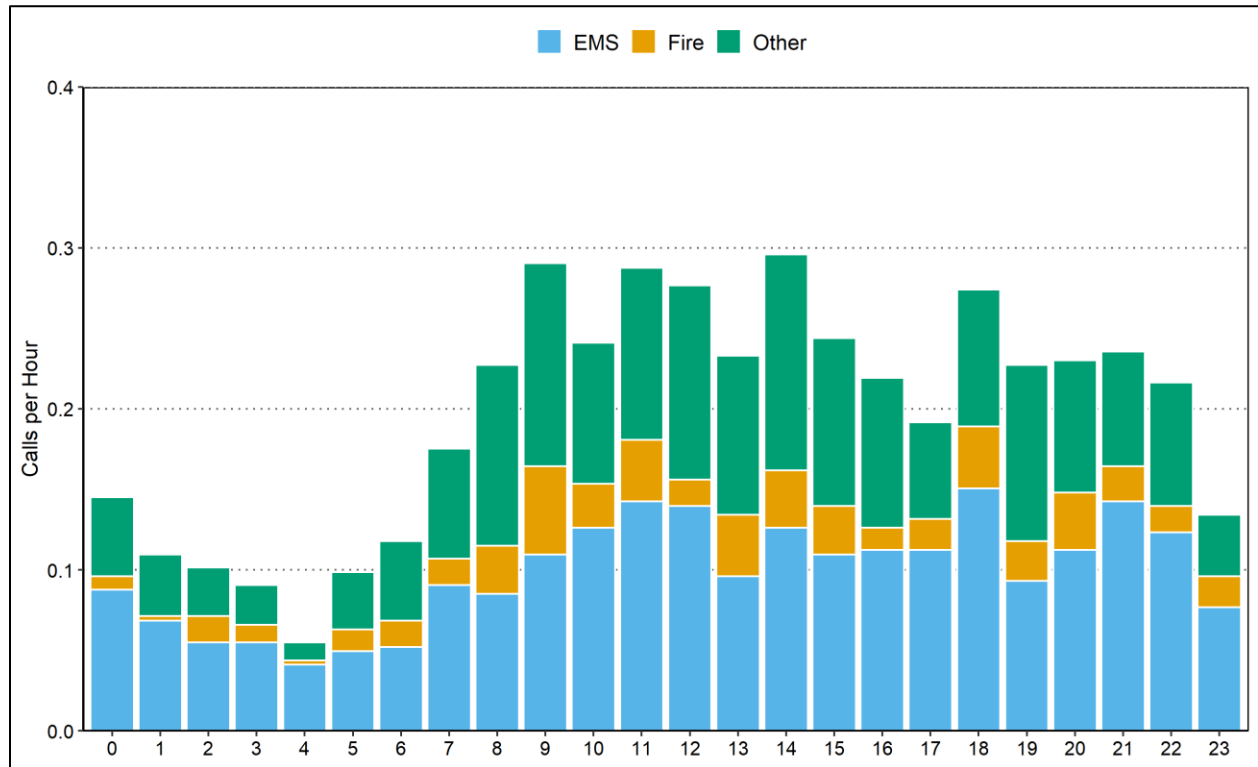
FIGURE 3: Average Calls per Day, by Month



Observations:

- Average calls per day overall ranged from 3.8 in June 2019 to 5.9 in March 2019.
- Average EMS calls per day ranged from 2.0 in June 2019 to 3.0 in March 2019.
- Average fire calls per day ranged from 0.2 in August 2019 to 1.2 in January 2019.
- Average other calls per day ranged from 1.4 in June 2019 to 2.3 in April 2019.

FIGURE 4: Calls by Hour of Day



Observations:

- Average calls per hour overall ranged from 0.05 between 4:00 a.m. and 5:00 a.m. to 0.30 between 2:00 p.m. and 3:00 p.m.
- Average EMS calls per hour ranged from 0.04 between 4:00 a.m. and 5:00 a.m. to 0.15 between 6:00 p.m. and 7:00 p.m.
- Average fire calls per hour ranged from less than 0.01 between midnight and 2:00 a.m., and between 4:00 a.m. and 5:00 a.m. to 0.05 between 9:00 a.m. and 10:00 a.m.
- Average other calls per hour ranged from 0.01 between 4:00 a.m. and 5:00 a.m. to 0.13 between 2:00 p.m. and 3:00 p.m.

UNITS DISPATCHED TO CALLS

Figure 5, Figure 6, and Table 5 detail the number of calls with one, two, three, four or more units dispatched overall and broken down by call type.

TABLE 5: Calls by Call Type and Number of Units Dispatched

| Call Type | Number of Units | | | | Total Calls |
|-----------------------------|-----------------|-------------|-------------|--------------|--------------|
| | One | Two | Three | Four or More | |
| Breathing difficulty | 5 | 68 | 32 | 4 | 109 |
| Cardiac and stroke | 5 | 70 | 16 | 14 | 105 |
| Fall and injury | 65 | 68 | 12 | 18 | 163 |
| Illness and other | 202 | 118 | 38 | 10 | 368 |
| MVA | 0 | 19 | 0 | 14 | 33 |
| Overdose and psychiatric | 7 | 11 | 4 | 0 | 22 |
| Seizure and unconsciousness | 12 | 33 | 7 | 8 | 60 |
| EMS Total | 296 | 387 | 109 | 68 | 860 |
| False alarm | 3 | 13 | 30 | 4 | 50 |
| Good intent | 0 | 2 | 0 | 3 | 5 |
| Hazard | 12 | 2 | 5 | 8 | 27 |
| Outside fire | 3 | 3 | 2 | 5 | 13 |
| Public service | 86 | 12 | 2 | 0 | 100 |
| Structure fire | 0 | 1 | 0 | 4 | 5 |
| Fire Total | 104 | 33 | 39 | 24 | 200 |
| Canceled | 104 | 36 | 5 | 2 | 147 |
| Cover assignment | 355 | 102 | 42 | 16 | 515 |
| Total | 859 | 558 | 195 | 110 | 1,722 |
| Percentage | 49.9 | 32.4 | 11.3 | 6.4 | 100.0 |

FIGURE 5: Calls by Number of Units Dispatched – EMS

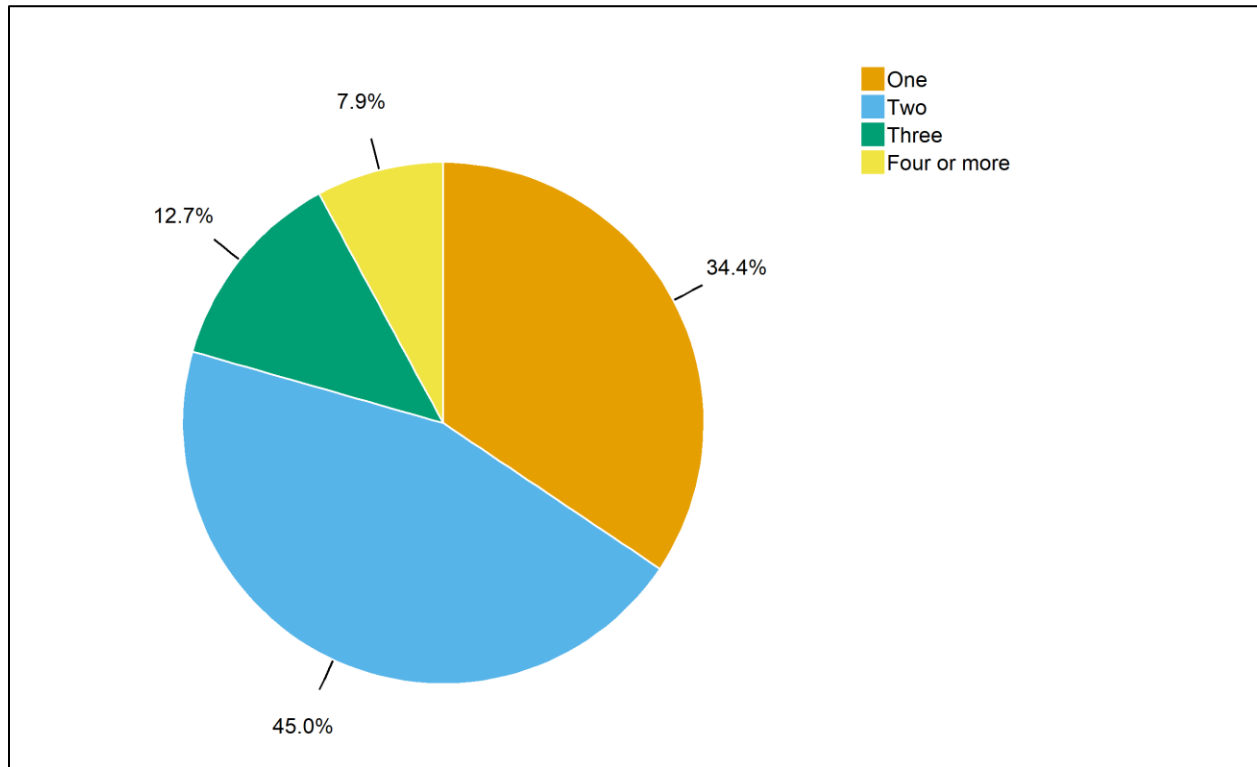
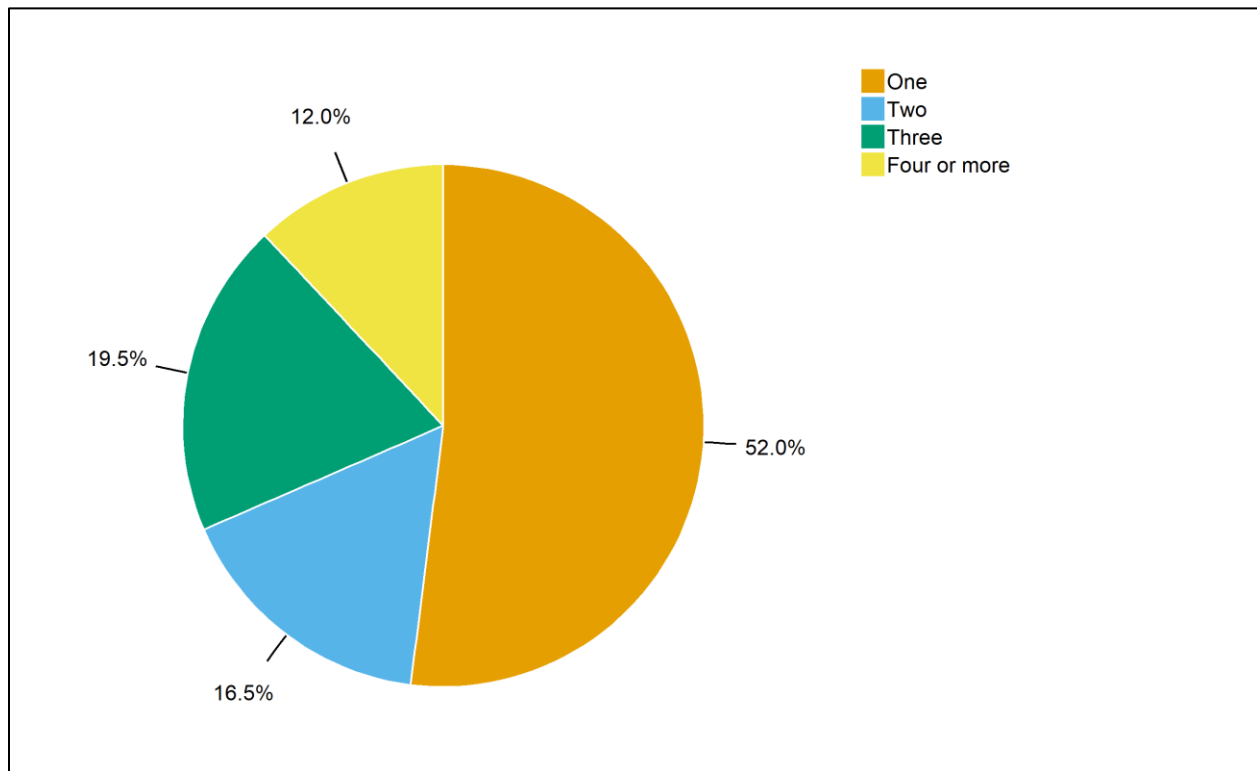


FIGURE 6: Calls by Number of Units Dispatched – Fire



Observations:

Overall

- On average, 1.9 units were dispatched to all calls; for 50 percent of calls, only one unit was dispatched.
- Overall, four or more units were dispatched to 6 percent of calls.

EMS

- On average, 2.1 units were dispatched per EMS call.
- For EMS calls, one unit was dispatched 34 percent of the time, two units were dispatched 45 percent of the time, three units were dispatched 13 percent of the time, and four or more units were dispatched 8 percent of the time.

Fire

- On average, 2.3 units were dispatched per fire call.
- For fire calls, one unit was dispatched 52 percent of the time, two units were dispatched 16 percent of the time, three units were dispatched 20 percent of the time, and four or more units were dispatched 12 percent of the time.
- For outside fire calls, three or more units were dispatched 54 percent of the time.
- For structure fire calls, three or more units were dispatched 80 percent of the time.

WORKLOAD: RUNS AND TOTAL TIME SPENT

The workload of each unit is measured in two ways: runs and deployed time. The deployed time of a run is measured from the time a unit is dispatched through the time the unit is cleared. Because multiple units respond to some calls, there are more runs than calls and the average deployed time per run varies from the total duration of calls.

RUNS AND DEPLOYED TIME

Deployed time, also referred to as deployed hours, is the total deployment time of all units deployed on all runs. Table 6 shows the total deployed time, both overall and broken down by type of run, for MCFR units responding to incidents within Indiantown during the year studied.

TABLE 6: Annual Runs and Deployed Time by Run Type

| Call Type | Avg. Deployed Min. per Run | Total Annual Hours | Percent of Total Hours | Avg. Deployed Min. per Day | Total Annual Runs | Avg. Runs per Day |
|-----------------------------|-------------------------------------|--------------------------|------------------------------|-------------------------------------|-------------------------|----------------------------|
| Breathing difficulty | 40.0 | 168.5 | 7.4 | 27.7 | 253 | 0.7 |
| Cardiac and stroke | 38.8 | 170.5 | 7.4 | 28.0 | 264 | 0.7 |
| Fall and injury | 38.6 | 224.4 | 9.8 | 36.9 | 349 | 1.0 |
| Illness and other | 44.2 | 438.7 | 19.1 | 72.1 | 596 | 1.6 |
| MVA | 39.9 | 95.1 | 4.1 | 15.6 | 143 | 0.4 |
| Overdose and psychiatric | 37.0 | 25.3 | 1.1 | 4.2 | 41 | 0.1 |
| Seizure and unconsciousness | 33.5 | 77.6 | 3.4 | 12.8 | 139 | 0.4 |
| EMS Total | 40.3 | 1,200.2 | 52.4 | 197.3 | 1,785 | 4.9 |
| False alarm | 14.2 | 32.1 | 1.4 | 5.3 | 136 | 0.4 |
| Good intent | 23.5 | 8.2 | 0.4 | 1.4 | 21 | 0.1 |
| Hazard | 54.9 | 78.7 | 3.4 | 12.9 | 86 | 0.2 |
| Outside fire | 100.3 | 108.7 | 4.7 | 17.9 | 65 | 0.2 |
| Public service | 25.9 | 50.1 | 2.2 | 8.2 | 116 | 0.3 |
| Structure fire | 48.7 | 27.6 | 1.2 | 4.5 | 34 | 0.1 |
| Fire Total | 40.0 | 305.5 | 13.3 | 50.2 | 458 | 1.3 |
| Canceled | 11.7 | 38.9 | 1.7 | 6.4 | 199 | 0.5 |
| Cover assignment | 59.5 | 747.4 | 32.6 | 122.9 | 754 | 2.1 |
| Total | 43.0 | 2,292.0 | 100.0 | 376.8 | 3,196 | 8.8 |

Observations:

Overall

- The total deployed time for the year was 2,292.0 hours.
- The daily average was 6.3 hours for all units combined.
- There were 3,196 runs, including 199 runs dispatched for canceled calls and 754 runs dispatched for cover assignment calls.
- The daily average was 8.8 runs.

EMS

- EMS runs accounted for 52 percent of the total workload.
- The average deployed time for EMS runs was 40.3 minutes.
- The deployed time for all EMS runs averaged 3.3 hours per day.

Fire

- Fire runs accounted for 13 percent of the total workload.
- The average deployed time for fire runs was 40.0 minutes.
- The deployed time for all fire runs averaged 0.8 hours per day.
- There were 99 runs for structure and outside fire calls combined, with a total workload of 136.3 hours. This accounted for 6 percent of the total workload.
- The average deployed time for outside fire runs was 100.3 minutes per run, and the average deployed time for structure fire runs was 48.7 minutes per run.

FIGURE 7: Average Deployed Minutes by Hour of Day

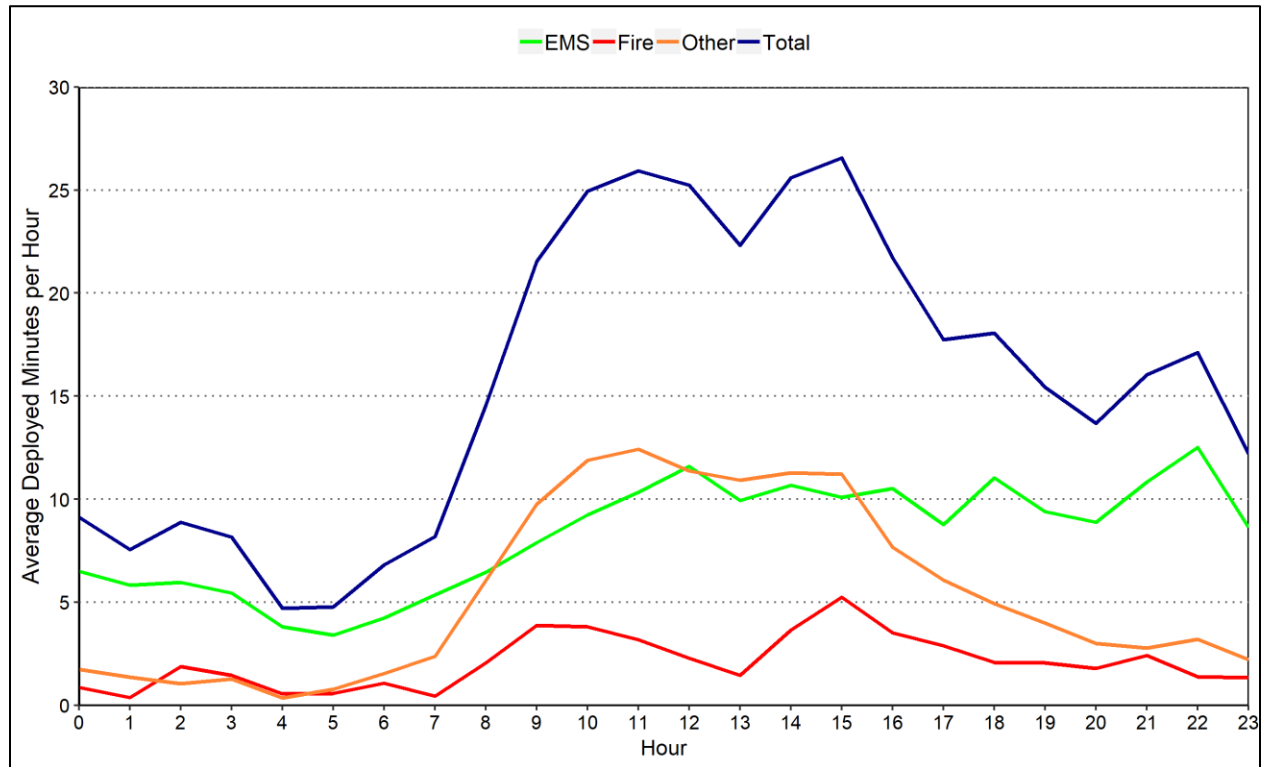


TABLE 7: Average Deployed Minutes by Hour of Day

| Hour | EMS | Fire | Other | Total |
|-------------------|--------------|-------------|--------------|--------------|
| 0 | 6.5 | 0.9 | 1.7 | 9.1 |
| 1 | 5.8 | 0.4 | 1.4 | 7.6 |
| 2 | 6.0 | 1.9 | 1.0 | 8.9 |
| 3 | 5.4 | 1.4 | 1.3 | 8.2 |
| 4 | 3.8 | 0.5 | 0.3 | 4.7 |
| 5 | 3.4 | 0.6 | 0.8 | 4.8 |
| 6 | 4.2 | 1.1 | 1.5 | 6.8 |
| 7 | 5.4 | 0.4 | 2.4 | 8.2 |
| 8 | 6.5 | 2.1 | 6.0 | 14.6 |
| 9 | 7.9 | 3.9 | 9.7 | 21.5 |
| 10 | 9.2 | 3.8 | 11.9 | 24.9 |
| 11 | 10.3 | 3.2 | 12.4 | 25.9 |
| 12 | 11.6 | 2.3 | 11.4 | 25.2 |
| 13 | 9.9 | 1.5 | 10.9 | 22.3 |
| 14 | 10.7 | 3.6 | 11.3 | 25.6 |
| 15 | 10.1 | 5.2 | 11.2 | 26.6 |
| 16 | 10.5 | 3.5 | 7.7 | 21.7 |
| 17 | 8.8 | 2.9 | 6.1 | 17.7 |
| 18 | 11.0 | 2.1 | 4.9 | 18.1 |
| 19 | 9.4 | 2.1 | 4.0 | 15.4 |
| 20 | 8.9 | 1.8 | 3.0 | 13.7 |
| 21 | 10.8 | 2.4 | 2.8 | 16.0 |
| 22 | 12.5 | 1.4 | 3.2 | 17.1 |
| 23 | 8.6 | 1.3 | 2.2 | 12.2 |
| Daily Avg. | 197.3 | 50.2 | 129.2 | 376.7 |

Observations:

- Hourly deployed time was highest during the day from 9:00 a.m. to 5:00 p.m., averaging between 22 minutes and 27 minutes.
- Average deployed time peaked between 3:00 p.m. and 4:00 p.m., averaging 27 minutes.
- Average deployed time was lowest between 4:00 a.m. and 5:00 a.m., averaging 5 minutes.

WORKLOAD BY STATION

Table 8 provides a summary of the contracted station 24's workload overall, along with the workload of non-contracted MCFR stations. Tables 9 and 10 provide a more detailed view of workload, showing runs broken out by run type (Table 8) and the resulting daily average deployed time by run type (Table 10) for contracted and non-contracted MCFR stations.

TABLE 8: Call Workload by station and Unit

| Station | Unit | Unit Type | Deployed Minutes per Run | Total Annual Hours | Percent of Total Hours | Deployed Minutes per Day | Total Annual Runs | Runs per Day |
|-------------------|-------------|-----------|--------------------------------|--------------------------|------------------------------|--------------------------------|-------------------------|-----------------|
| 24 | E24 | Engine | 21.6 | 218.4 | 9.5 | 35.9 | 606 | 1.7 |
| | R241 | Rescue | 51.1 | 493.5 | 21.5 | 81.1 | 579 | 1.6 |
| | R242 | Rescue | 49.4 | 449.0 | 19.6 | 73.8 | 545 | 1.5 |
| | Other Units | | 128.2 | 104.7 | 4.6 | 17.2 | 49 | 0.1 |
| | Total | | 42.7 | 1,265.6 | 55.2 | 208.0 | 1,779 | 4.9 |
| Other Stations | E22 | Engine | 43.8 | 358.6 | 15.6 | 59.0 | 491 | 1.3 |
| | R22 | Rescue | 46.9 | 190.0 | 8.3 | 31.2 | 243 | 0.7 |
| | E32 | Engine | 25.0 | 50.4 | 2.2 | 8.3 | 121 | 0.3 |
| | Other Units | | 45.6 | 427.3 | 18.6 | 70.2 | 562 | 1.5 |
| | Total | | 43.5 | 1,026.4 | 44.8 | 168.7 | 1,417 | 3.9 |
| Total | | | 43.0 | 2,292.0 | 100.0 | 376.8 | 3,196 | 8.8 |

Note: Only units with more than 100 runs are specified. The remaining units are combined as "other units".

TABLE 9: Total Annual Runs by Run Type, Station, and Unit

| Station | Unit | Unit Type | EMS | False Alarm | Good Intent | Hazard | Outside Fire | Public Service | Structure Fire | Canceled | Cover Assignment | Total |
|-------------------------|-------------|-----------|-------|-------------|-------------|--------|--------------|----------------|----------------|----------|------------------|-------|
| Contracted Station 24 | E24 | Engine | 492 | 47 | 4 | 21 | 13 | 15 | 5 | 9 | 0 | 606 |
| | R241 | Rescue | 463 | 28 | 3 | 9 | 3 | 54 | 5 | 14 | 0 | 579 |
| | R242 | Rescue | 459 | 20 | 1 | 6 | 6 | 38 | 4 | 7 | 4 | 545 |
| | Other Units | | 7 | 0 | 5 | 4 | 16 | 1 | 2 | 1 | 13 | 49 |
| | Total | | 1,421 | 95 | 13 | 40 | 38 | 108 | 16 | 31 | 17 | 1,779 |
| Non-Contracted Stations | E22 | Engine | 64 | 4 | 2 | 4 | 2 | 2 | 4 | 66 | 343 | 491 |
| | R22 | Rescue | 34 | 4 | 2 | 1 | 1 | 1 | 0 | 27 | 173 | 243 |
| | E32 | Engine | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 37 | 73 | 121 |
| | Other Units | | 256 | 32 | 4 | 41 | 24 | 5 | 14 | 38 | 148 | 562 |
| | Total | | 364 | 41 | 8 | 46 | 27 | 8 | 18 | 168 | 737 | 1,417 |
| Total | | | 1,785 | 136 | 21 | 86 | 65 | 116 | 34 | 199 | 754 | 3,196 |

TABLE 10: Daily Average Deployed Minutes by Run Type, Station, and Unit

| Station | Unit | Unit Type | EMS | False Alarm | Good Intent | Hazard | Outside Fire | Public Service | Structure Fire | Canceled | Cover Assignment | Total |
|-------------------------|-------------|-----------|-------|-------------|-------------|--------|--------------|----------------|----------------|----------|------------------|-------|
| Contracted Station 24 | E24 | Engine | 25.9 | 2.5 | 0.3 | 2.6 | 2.5 | 0.9 | 1.0 | 0.3 | 0.0 | 35.9 |
| | R241 | Rescue | 74.3 | 0.9 | 0.3 | 1.2 | 1.5 | 2.1 | 0.6 | 0.2 | 0.0 | 81.1 |
| | R242 | Rescue | 68.2 | 0.7 | 0.1 | 0.7 | 1.9 | 1.6 | 0.5 | 0.1 | 0.0 | 17.2 |
| | Other Units | | 0.1 | 0.0 | 0.4 | 2.3 | 5.7 | 0.0 | 0.4 | 0.0 | 8.4 | 91.0 |
| | Total | | 168.5 | 4.1 | 1.1 | 6.8 | 11.5 | 4.6 | 2.4 | 0.6 | 8.5 | 208.0 |
| Non-Contracted Stations | E22 | Engine | 3.2 | 0.2 | 0.1 | 0.2 | 0.4 | 0.1 | 0.3 | 2.2 | 52.1 | 59.0 |
| | R22 | Rescue | 5.3 | 0.1 | 0.1 | 0.0 | 0.6 | 0.0 | 0.0 | 0.9 | 24.3 | 31.2 |
| | E32 | Engine | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 6.7 | 8.3 |
| | Other Units | | 19.8 | 0.9 | 0.1 | 6.0 | 5.4 | 3.5 | 1.8 | 1.5 | 31.3 | 70.2 |
| | Total | | 28.8 | 1.2 | 0.2 | 6.2 | 6.4 | 3.7 | 2.1 | 5.8 | 114.4 | 168.7 |
| Total | | | 197.3 | 5.3 | 1.4 | 12.9 | 17.9 | 8.2 | 4.5 | 6.4 | 122.9 | 376.8 |

Observations:

- Station 24 made a total of 1,779 runs or an average of 4.9 runs per day. This involved 1,265.6 hours or an average of 3.5 hours of deployed time per day.
 - EMS calls accounted for 80 percent of runs and 81 percent of total deployed time.
 - Structure and outside fire calls accounted for 3 percent of runs and 7 percent of total deployed time.
- Non-contracted stations made a total of 1,417 runs or an average of 3.9 runs per day. This involved 1,026.4 hours or an average of 2.8 hours deployed time per day.
 - EMS calls accounted for 26 percent of runs and 17 percent of total deployed time.
 - Structure and outside fire calls accounted for 3 percent of runs and 5 percent of total deployed time.
- Engine E24 made the most runs (606 or an average of 1.7 runs per day) and had the third total annual deployed time (218.4 hours or an average of 35.9 minutes per day).
 - EMS calls accounted for 81 percent of runs and 72 percent of total deployed time.
 - Structure and outside fire calls accounted for 3 percent of runs and 10 percent of total deployed time.
- Rescue R241 made the second-most runs (579 or an average of 1.6 runs per day) and had the highest total annual deployed time (493.5 hours or an average of 81.1 minutes per day).
 - EMS calls accounted for 80 percent of runs and 92 percent of total deployed time.
 - Structure and outside fire calls accounted for 1 percent of runs and 3 percent of total deployed time.
- Among the units from other stations, Engine E22 made the most runs (491 or an average of 1.3 runs per day) and had the highest total annual deployed time (358.6 hours or an average of 59.0 minutes per day).
 - EMS calls accounted for 13 percent of runs and 5 percent of total deployed time.
 - Structure and outside fire calls accounted for 1 percent of runs and 1 percent of total deployed time.
 - Cover assignment accounted for 70 percent of runs and 88 percent of total deployed time.

ANALYSIS OF BUSIEST HOURS

There is significant variability in the number of calls from hour to hour. One special concern relates to the resources available for hours with the heaviest workload. We tabulated the data for each of 8,760 hours in the year. Table 11 shows the number of hours in the year in which there were zero to three calls during the hour. Table 12 shows the number of calls occurring simultaneously. Table 13 presents the percentage of calls occurring in a station's area and examines how often units from the nearest station respond, arrive, or arrive first to a call in their station area. Table 14 shows the 10 one-hour intervals which had the most calls during the year.

In this section, we focus on EMS and fire calls while excluding canceled and cover assignment calls. Cover assignments are a different type of call and it wouldn't be relevant to examine how they overlap with EMS and fire calls. Also, nearly all canceled calls were originally cover assignments. Tables 11 and 12 analyze a total of 1,060 calls. Table 13 excludes calls where no unit arrives, leaving 1,044 calls.

TABLE 11: Frequency Distribution of the Number of Calls

| Calls in an Hour | Frequency | Percentage |
|------------------|--------------|--------------|
| 0 | 7,765 | 88.6 |
| 1 | 932 | 10.6 |
| 2 | 61 | 0.7 |
| 3 | 2 | 0.0 |
| Total | 8,760 | 100.0 |

TABLE 12: Frequency of Overlapping Calls

| Scenario | Number of Calls | Percent of All Calls | Total Hours |
|---------------------------|-----------------|----------------------|-------------|
| No overlapped call | 918 | 86.6 | 907.7 |
| Overlapped with one call | 130 | 12.3 | 57.8 |
| Overlapped with two calls | 12 | 1.1 | 4.4 |

TABLE 13: Availability to Respond to Calls

| Calls in Area | Station 24 Responded | Station 24 Arrived | Station 24 First | Percent Responded | Percent Arrived | Percent First |
|---------------|----------------------|--------------------|------------------|-------------------|-----------------|---------------|
| 1,044 | 1,012 | 1,009 | 990 | 96.9 | 96.6 | 94.8 |

Note: We count the number of calls occurring within Indiantown and limited our analysis to calls where at least one unit arrived. Next, we focus on units from the first due station to see if any units responded, arrived, or arrived first.

TABLE 14: Top 10 Hours with the Most Calls Received

| Hour | Number of Calls | Number of Runs | Total Deployed Hours |
|------------------------------------|-----------------|----------------|----------------------|
| 3/7/2019 2:00 p.m. to 3:00 p.m. | 3 | 26 | 69.1 |
| 8/20/2019 noon to 1:00 p.m. | 3 | 4 | 4.6 |
| 12/14/2019 2:00 a.m. to 3:00 a.m. | 2 | 14 | 20.2 |
| 11/28/2019 2:00 p.m. to 3:00 p.m. | 2 | 11 | 7.3 |
| 11/3/2019 5:00 p.m. to 6:00 p.m. | 2 | 10 | 7.4 |
| 12/26/2019 7:00 p.m. to 8:00 p.m. | 2 | 9 | 4.9 |
| 1/19/2019 3:00 a.m. to 4:00 a.m. | 2 | 8 | 5.8 |
| 9/25/2019 2:00 p.m. to 3:00 p.m. | 2 | 8 | 5.7 |
| 5/2/2019 5:00 p.m. to 6:00 p.m. | 2 | 7 | 4.6 |
| 2/28/2019 10:00 p.m. to 11:00 p.m. | 2 | 7 | 3.5 |

Note: Total deployed hours is a measure of the total time spent responding to calls received in the hour, and which may extend into the next hour or hours. The number of runs and deployed hours only includes unit activity in Indiantown.

Observations:

- During 2 hours (0.0 percent of all hours), three calls occurred; in other words, the department responded to three calls in an hour roughly once every 182 days.
- The hour with the most calls and associated runs was 2:00 p.m. to 3:00 p.m. on March 7, 2019.
 - The hour's 3 calls involved 26 individual dispatches resulting in 69.1 hours of deployed time.
 - These 3 calls included one breathing difficulty call (4 runs), one outside fire call (20 runs), and one public service call (2 runs).
 - The outside fire was a 36.5-acre wildfire.
- Another hour with the most calls was noon to 1:00 p.m. on August 20, 2019.
 - The hour's 3 calls involved 4 individual dispatches resulting in 4.6 hours of deployed time.
 - These 3 calls included three illness and other calls.

RESPONSE TIME

In this part of the analysis, we present response time statistics for different call types. We separate response time into its identifiable components. *Dispatch time* is the difference between the time a call is received and the time a unit is dispatched. Dispatch time includes call processing time, which is the time required to determine the nature of the emergency and types of resources to dispatch. *Turnout time* is the difference between dispatch time and the time a unit is en route to a call's location. *Travel time* is the difference between the time en route and arrival on scene. *Response time* is the total time elapsed between receiving a call to arriving on scene.

In this analysis, we included all calls to which at least one non-administrative fire agency unit responded while excluding canceled calls. In addition, calls with a total response time of more than 30 minutes were excluded. Finally, we focused on units that had complete time stamps, that is, units with all components recorded, so that we could calculate each segment of response time.

Based on the methodology above, we excluded 147 canceled calls, 515 cover assignment calls, 16 calls where no units recorded a valid on-scene time, 575 non-emergent calls, and 16 calls where one or more segments of the first arriving unit's response time could not be calculated due to missing or faulty data. As a result, in this section, a total of 453 calls are included in the analysis.

RESPONSE TIME BY TYPE OF CALL

Table 15 provides average dispatch, turnout, travel, and total response time for the first arriving unit to each call in the city, broken out by call type. Figures 8 and 9 illustrate the same information. Table 16 gives the 90th percentile time broken out in the same manner. A 90th percentile time means that 90 percent of calls had response times at or below that number. For example, Table 16 shows a 90th percentile response time of 8.2 minutes which means that 90 percent of the time a call had a response time of no more than 8.2 minutes.

TABLE 15: Average Response Time of First Arriving Unit, by Call Type (Minutes)

| Call Type | Dispatch | Turnout | Travel | Total | Number of Calls |
|-----------------------------|------------|------------|------------|------------|-----------------|
| Breathing difficulty | 0.4 | 1.6 | 4.3 | 6.3 | 101 |
| Cardiac and stroke | 0.4 | 1.5 | 3.5 | 5.4 | 93 |
| Fall and injury | 0.4 | 1.6 | 4.0 | 6.0 | 21 |
| Illness and other | 0.4 | 1.6 | 3.7 | 5.7 | 127 |
| MVA | 0.6 | 2.7 | 3.8 | 7.1 | 12 |
| Overdose and psychiatric | 0.3 | 1.4 | 4.4 | 6.1 | 8 |
| Seizure and unconsciousness | 0.3 | 1.8 | 3.4 | 5.5 | 38 |
| EMS Total | 0.4 | 1.6 | 3.8 | 5.8 | 400 |
| False alarm | 0.7 | 1.7 | 5.8 | 8.2 | 30 |
| Good intent | 0.4 | 3.0 | 4.4 | 7.8 | 2 |
| Hazard | 0.4 | 2.0 | 4.1 | 6.5 | 8 |
| Outside fire | 1.4 | 1.0 | 6.3 | 8.8 | 7 |
| Public service | 0.3 | 1.8 | 3.9 | 5.9 | 2 |
| Structure fire | 0.5 | 2.4 | 4.3 | 7.1 | 4 |
| Fire Total | 0.7 | 1.8 | 5.4 | 7.9 | 53 |
| Total | 0.4 | 1.6 | 4.0 | 6.1 | 453 |

FIGURE 8: Average Response Time of First Arriving Unit, by Call Type – EMS

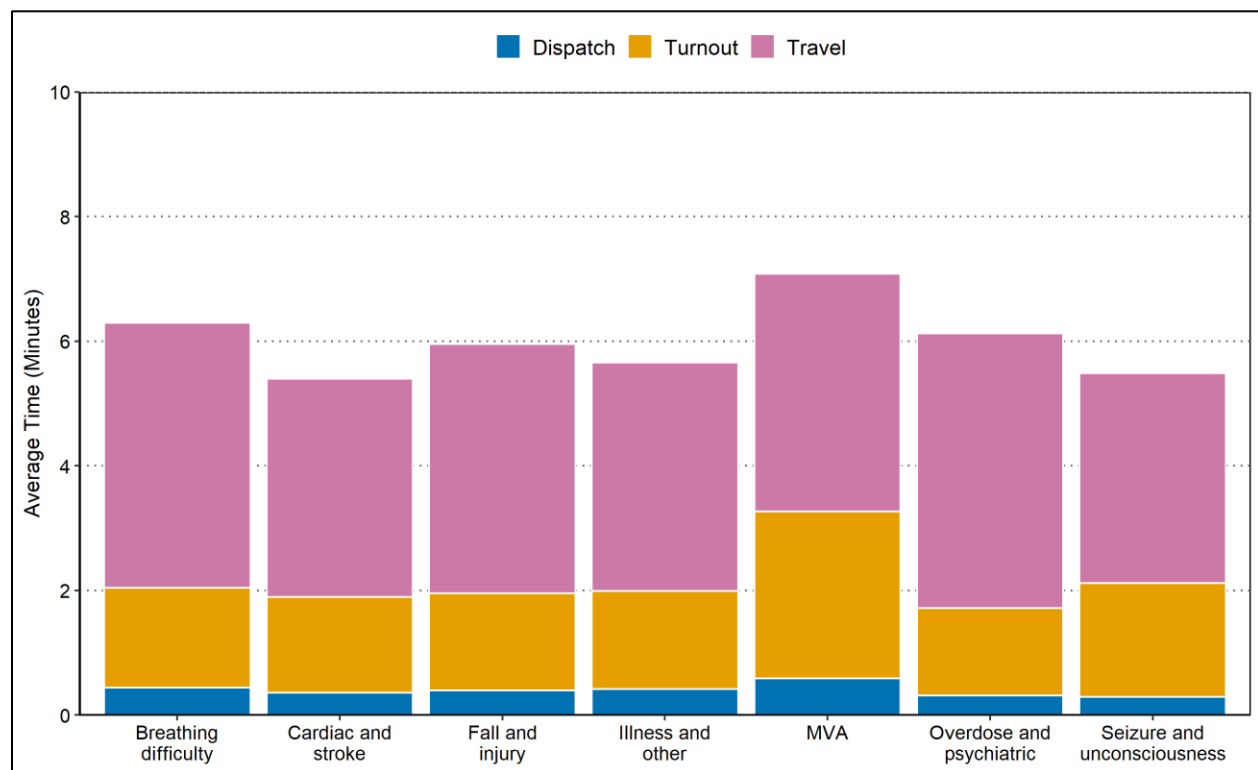


FIGURE 9: Average Response Time of First Arriving Unit, by Call Type – Fire

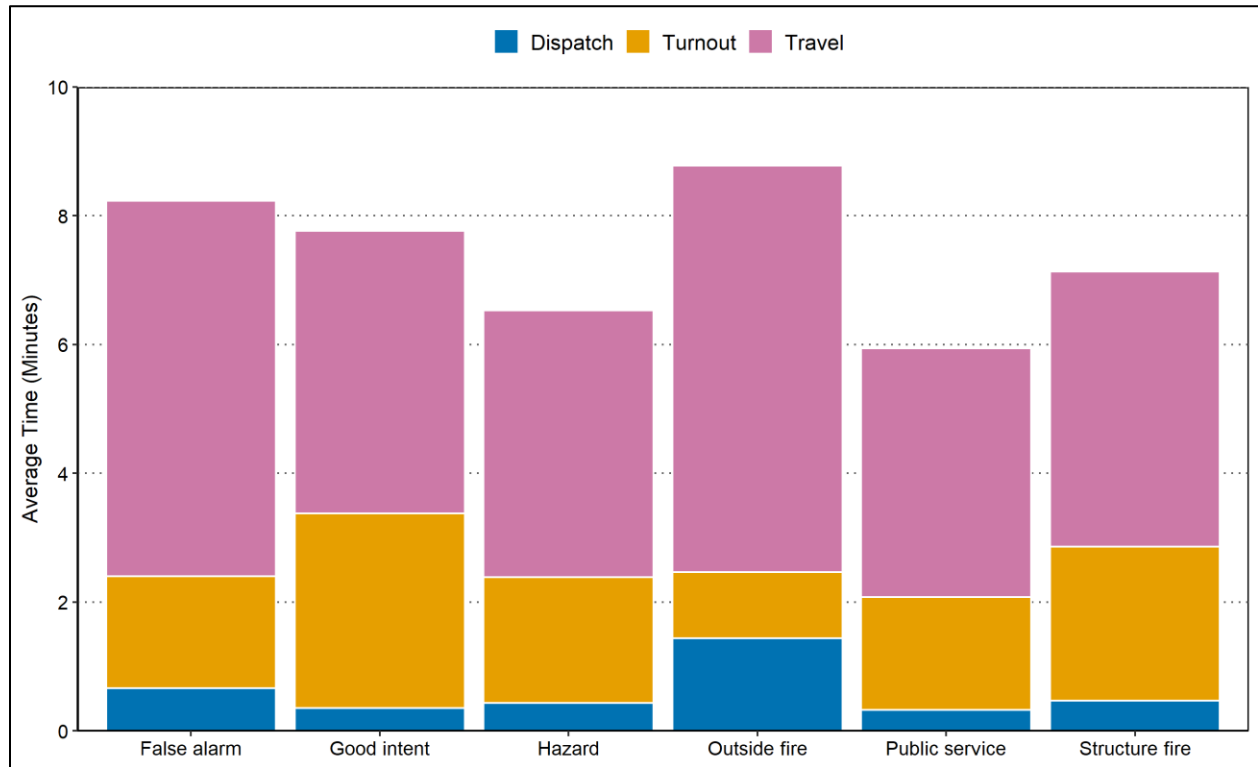


TABLE 16: 90th Percentile Response Time of First Arriving Unit, by Call Type (Minutes)

| Call Type | Dispatch | Turnout | Travel | Total | Number of Calls |
|-----------------------------|------------|------------|------------|-------------|-----------------|
| Breathing difficulty | 0.9 | 2.4 | 5.9 | 8.2 | 101 |
| Cardiac and stroke | 0.6 | 2.5 | 4.7 | 7.0 | 93 |
| Fall and injury | 0.4 | 2.3 | 4.3 | 6.8 | 21 |
| Illness and other | 0.9 | 2.6 | 5.0 | 7.4 | 127 |
| MVA | 1.2 | 3.6 | 5.2 | 8.4 | 12 |
| Overdose and psychiatric | 0.9 | 2.3 | 7.2 | 9.6 | 8 |
| Seizure and unconsciousness | 0.6 | 2.9 | 5.6 | 7.4 | 38 |
| EMS Total | 0.8 | 2.6 | 5.2 | 7.6 | 400 |
| False alarm | 1.1 | 2.8 | 9.2 | 11.2 | 30 |
| Good intent | 0.5 | 4.1 | 4.5 | 9.1 | 2 |
| Hazard | 0.8 | 3.4 | 5.7 | 9.2 | 8 |
| Outside fire | 3.6 | 3.3 | 12.1 | 15.6 | 7 |
| Public service | 0.5 | 2.5 | 3.9 | 6.9 | 2 |
| Structure fire | 0.6 | 4.2 | 5.6 | 8.2 | 4 |
| Fire Total | 1.5 | 3.2 | 8.7 | 10.5 | 53 |
| Total | 0.8 | 2.7 | 5.6 | 8.2 | 453 |

Observations:

- The average dispatch time was 0.4 minutes.
- The average turnout time was 1.6 minutes.
- The average travel time was 4.0 minutes.
- The average total response time was 6.1 minutes.
- The average response time was 5.8 minutes for EMS calls and 7.9 minutes for fire calls.
- The average response time was 8.8 minutes for outside fires and 7.1 minutes for structure fires.
- The 90th percentile dispatch time was 0.8 minutes.
- The 90th percentile turnout time was 2.7 minutes.
- The 90th percentile travel time was 5.6 minutes.
- The 90th percentile total response time was 8.2 minutes.
- The 90th percentile response time was 7.6 minutes for EMS calls and 10.5 minutes for fire calls.
- The 90th percentile response time was 15.6 minutes for outside fires and 8.2 minutes for structure fires.

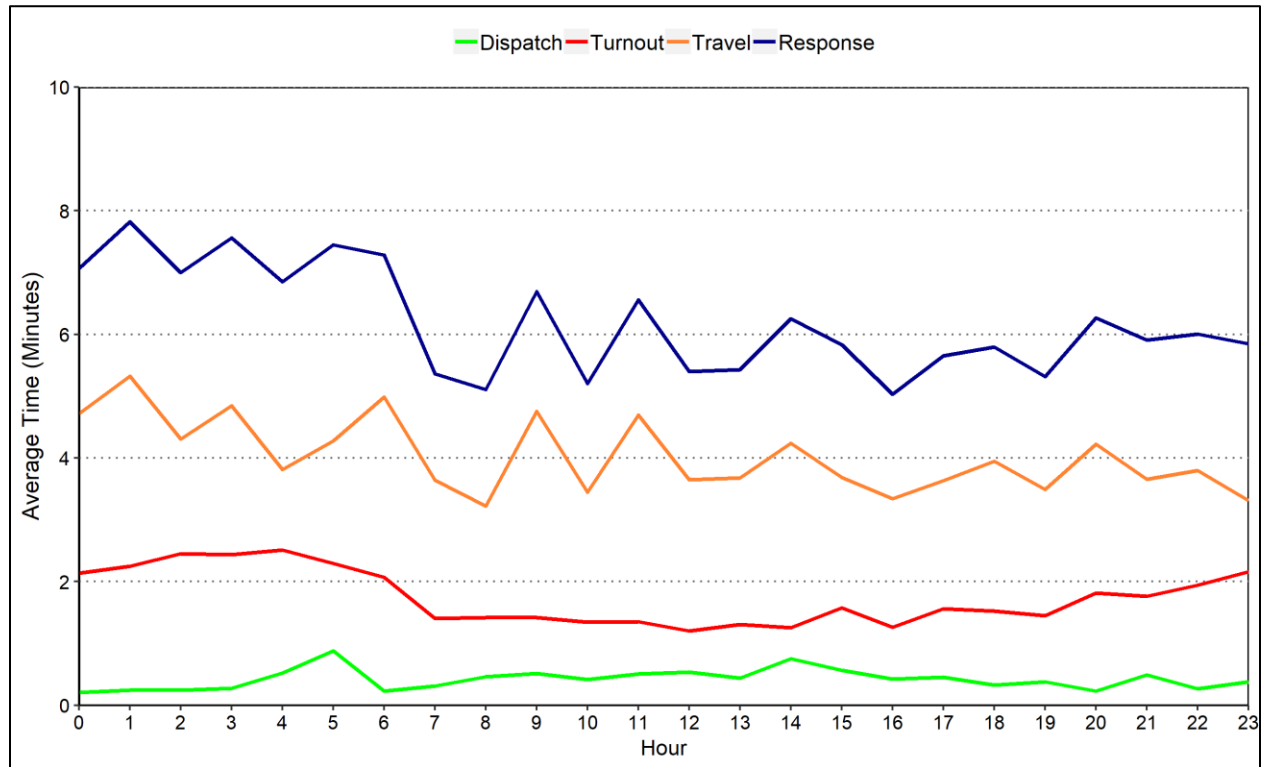
RESPONSE TIME BY HOUR

Average dispatch, turnout, travel, and total response time by the hour is shown in Table 17 and Figure 10. The table also shows 90th percentile response times.

TABLE 17: Average and 90th Percentile Response Time of First Arriving Unit, by Hour of Day

| Hour | Dispatch | Turnout | Travel | Response Time | 90th Percentile Response Time | Number of Calls |
|--------------|------------|------------|------------|---------------|-------------------------------|-----------------|
| 0 | 0.2 | 2.1 | 4.7 | 7.1 | 9.7 | 16 |
| 1 | 0.2 | 2.3 | 5.3 | 7.8 | 9.6 | 14 |
| 2 | 0.2 | 2.5 | 4.3 | 7.0 | 8.8 | 14 |
| 3 | 0.3 | 2.4 | 4.8 | 7.6 | 10.8 | 9 |
| 4 | 0.5 | 2.5 | 3.8 | 6.8 | 7.8 | 10 |
| 5 | 0.9 | 2.3 | 4.3 | 7.4 | 8.9 | 10 |
| 6 | 0.2 | 2.1 | 5.0 | 7.3 | 8.6 | 12 |
| 7 | 0.3 | 1.4 | 3.6 | 5.4 | 6.9 | 16 |
| 8 | 0.5 | 1.4 | 3.2 | 5.1 | 7.6 | 19 |
| 9 | 0.5 | 1.4 | 4.8 | 6.7 | 9.1 | 25 |
| 10 | 0.4 | 1.3 | 3.4 | 5.2 | 7.3 | 24 |
| 11 | 0.5 | 1.4 | 4.7 | 6.6 | 7.8 | 23 |
| 12 | 0.5 | 1.2 | 3.7 | 5.4 | 7.4 | 28 |
| 13 | 0.4 | 1.3 | 3.7 | 5.4 | 6.8 | 20 |
| 14 | 0.8 | 1.3 | 4.2 | 6.2 | 8.2 | 29 |
| 15 | 0.6 | 1.6 | 3.7 | 5.8 | 7.6 | 17 |
| 16 | 0.4 | 1.3 | 3.3 | 5.0 | 6.1 | 22 |
| 17 | 0.5 | 1.6 | 3.6 | 5.7 | 9.2 | 24 |
| 18 | 0.3 | 1.5 | 3.9 | 5.8 | 8.2 | 25 |
| 19 | 0.4 | 1.4 | 3.5 | 5.3 | 7.5 | 17 |
| 20 | 0.2 | 1.8 | 4.2 | 6.3 | 11.2 | 19 |
| 21 | 0.5 | 1.8 | 3.7 | 5.9 | 8.0 | 24 |
| 22 | 0.3 | 1.9 | 3.8 | 6.0 | 8.2 | 23 |
| 23 | 0.4 | 2.2 | 3.3 | 5.8 | 6.9 | 13 |
| Total | 0.4 | 1.6 | 4.0 | 6.1 | 8.2 | 453 |

FIGURE 10: Average Response Time of First Arriving Unit, by Hour of Day



Observations:

- Average dispatch time was between 0.2 minutes (midnight to 1:00 a.m.) and 0.9 minutes (5:00 a.m. to 6:00 a.m.).
- Average turnout time was between 1.2 minutes (noon to 1:00 p.m.) and 2.5 minutes (4:00 a.m. to 5:00 a.m.).
- Average travel time was between 3.2 minutes (8:00 a.m. to 9:00 a.m.) and 5.3 minutes (1:00 a.m. to 2:00 a.m.).
- Average response time was between 5.0 minutes (4:00 p.m. to 5:00 p.m.) and 7.8 minutes (1:00 a.m. to 2:00 a.m.).
- The 90th percentile response time was between 6.1 minutes (4:00 a.m. to 5:00 a.m.) and 11.2 minutes (8:00 p.m. to 9:00 p.m.).

RESPONSE TIME DISTRIBUTION

Here, we present a more detailed look at how response times to calls are distributed. The cumulative distribution of total response time for the first arriving unit to EMS calls is shown in Figure 11. Table 18 shows response times for the first arriving unit to EMS calls as a frequency distribution in whole-minute increments. Figure 12 and Table 19 show similar information for structure and outside fire calls

The cumulative percentages here are read in the same way as a percentile. In Figure 11, the 90th percentile of 7.6 minutes means that 90 percent of EMS calls had a response time of 7.6 minutes or less. In Table 18, the cumulative percentage of 91.8, for example, means that 91.8 percent of EMS calls had a response time under 8 minutes.

FIGURE 11: Cumulative Distribution of Response Time – First Arriving Unit – EMS

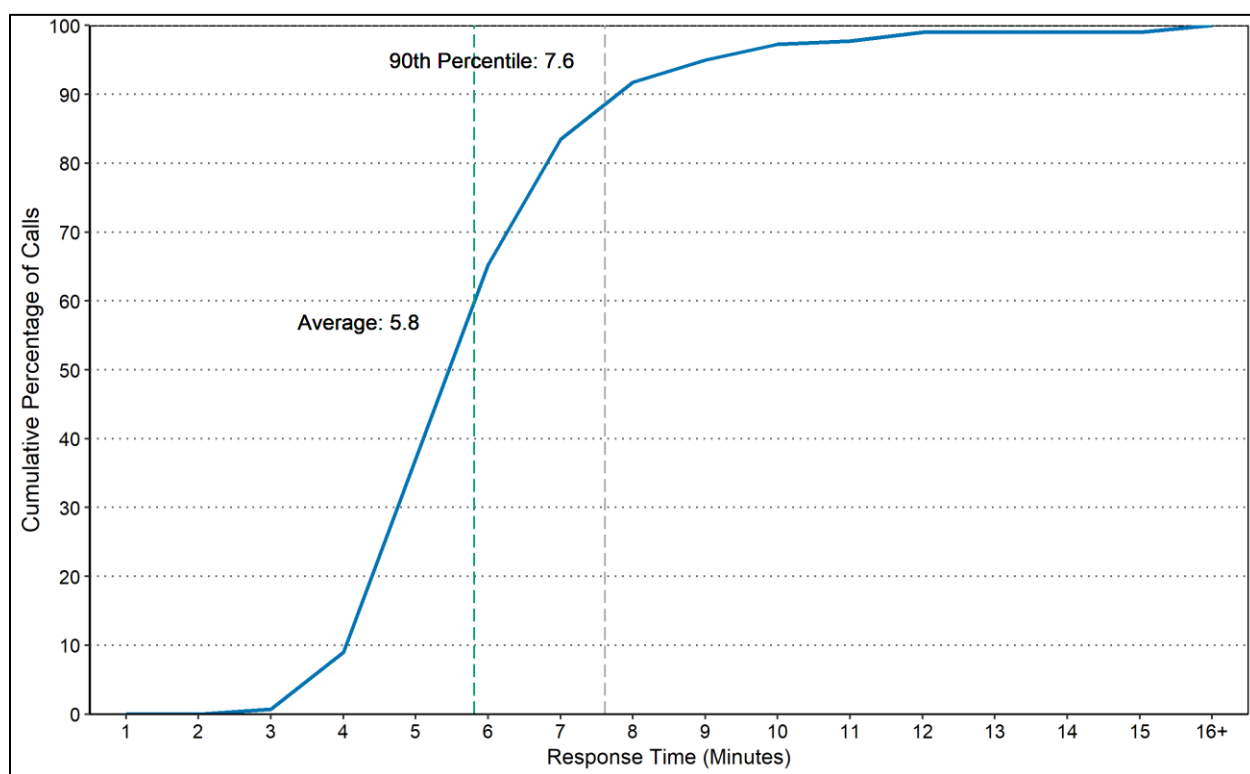


FIGURE 12: Frequency Distribution of Response Time – First Arriving Unit – Structure and Outside Fires

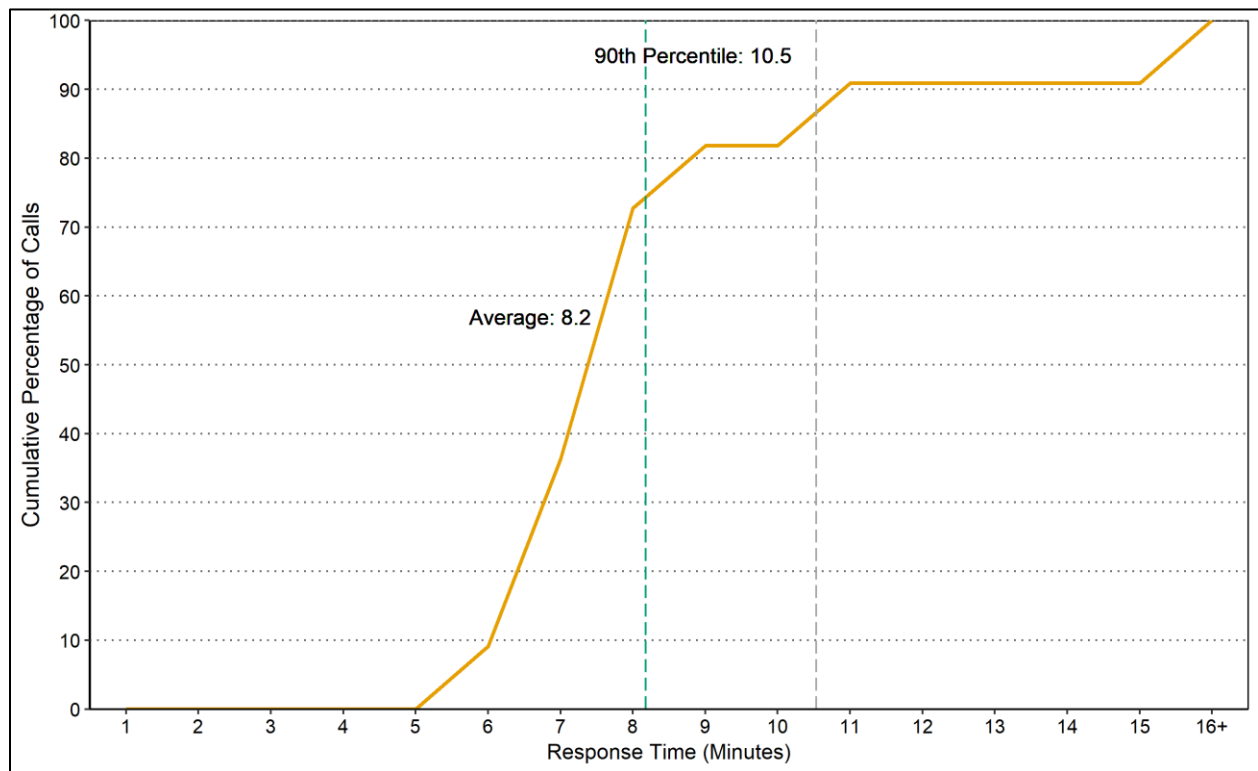


TABLE 18: Cumulative Distribution of Response Time – First Arriving Unit – EMS

| Response Time (minute) | Frequency | Cumulative Percentage |
|-----------------------------------|------------------|----------------------------------|
| 1 | 0 | 0.0 |
| 2 | 0 | 0.0 |
| 3 | 3 | 0.8 |
| 4 | 33 | 9.0 |
| 5 | 112 | 37.0 |
| 6 | 113 | 65.2 |
| 7 | 73 | 83.5 |
| 8 | 33 | 91.8 |
| 9 | 13 | 95.0 |
| 10 | 9 | 97.2 |
| 11 | 2 | 97.8 |
| 12 | 5 | 99.0 |
| 13 | 0 | 99.0 |
| 14 | 0 | 99.0 |
| 15 | 0 | 99.0 |
| 16+ | 4 | 100.0 |

TABLE 19: Cumulative Distribution of Response Time – First Arriving Unit – Structure and Outside Fires

| Response Time (minute) | Frequency | Cumulative Percentage |
|-----------------------------------|------------------|----------------------------------|
| 1 | 0 | 0.0 |
| 2 | 0 | 0.0 |
| 3 | 0 | 0.0 |
| 4 | 0 | 0.0 |
| 5 | 0 | 0.0 |
| 6 | 1 | 9.1 |
| 7 | 3 | 36.4 |
| 8 | 4 | 72.7 |
| 9 | 1 | 81.8 |
| 10 | 0 | 81.8 |
| 11 | 1 | 90.9 |
| 12 | 0 | 90.9 |
| 13 | 0 | 90.9 |
| 14 | 0 | 90.9 |
| 15 | 0 | 90.9 |
| 16+ | 1 | 100.0 |

Observations:

- For 92 percent of EMS calls, the response time of the first arriving unit was less than 8 minutes.
- For 73 percent of structure and outside fire calls, the response time of the first arriving unit was less than 8 minutes.

TRANSPORT CALL ANALYSIS

In this section, we present an analysis of MCFR unit activity within Indiantown that involved transporting patients. We examine the variations by the hour of the day, and the average time for each stage of the transport service. We identified transport calls by requiring that at least one responding medic or aid unit had recorded both a “beginning to transport” time and an “arriving at the hospital” time. Based on these criteria, we note that 2 non-EMS calls resulted in transports and are included in this analysis.

TRANSPORT CALLS BY TYPE

Table 20 shows the number of calls by call type broken out by transport and non-transport calls.

TABLE 20: Transport Calls by Call Type

| Call Type | Number of Calls | | | Conversion Rate |
|-------------------------------|-----------------|------------|--------------|-----------------|
| | Non-transport | Transport | Total | |
| Breathing difficulty | 7 | 102 | 109 | 93.6 |
| Cardiac and stroke | 9 | 96 | 105 | 91.4 |
| Fall and injury | 47 | 116 | 163 | 71.2 |
| Illness and other | 60 | 308 | 368 | 83.7 |
| MVA | 12 | 21 | 33 | 63.6 |
| Overdose and psychiatric | 5 | 17 | 22 | 77.3 |
| Seizure and unconsciousness | 14 | 46 | 60 | 76.7 |
| EMS Total | 154 | 706 | 860 | 82.1 |
| Fire & Other Total | 860 | 2 | 862 | 0.2 |
| Total | 1,014 | 708 | 1,722 | 41.1 |

Observations:

- Overall, 82 percent of EMS calls involved transporting one or more patients.
- On average, there were approximately 2 EMS calls per day that involved transporting one or more patients.

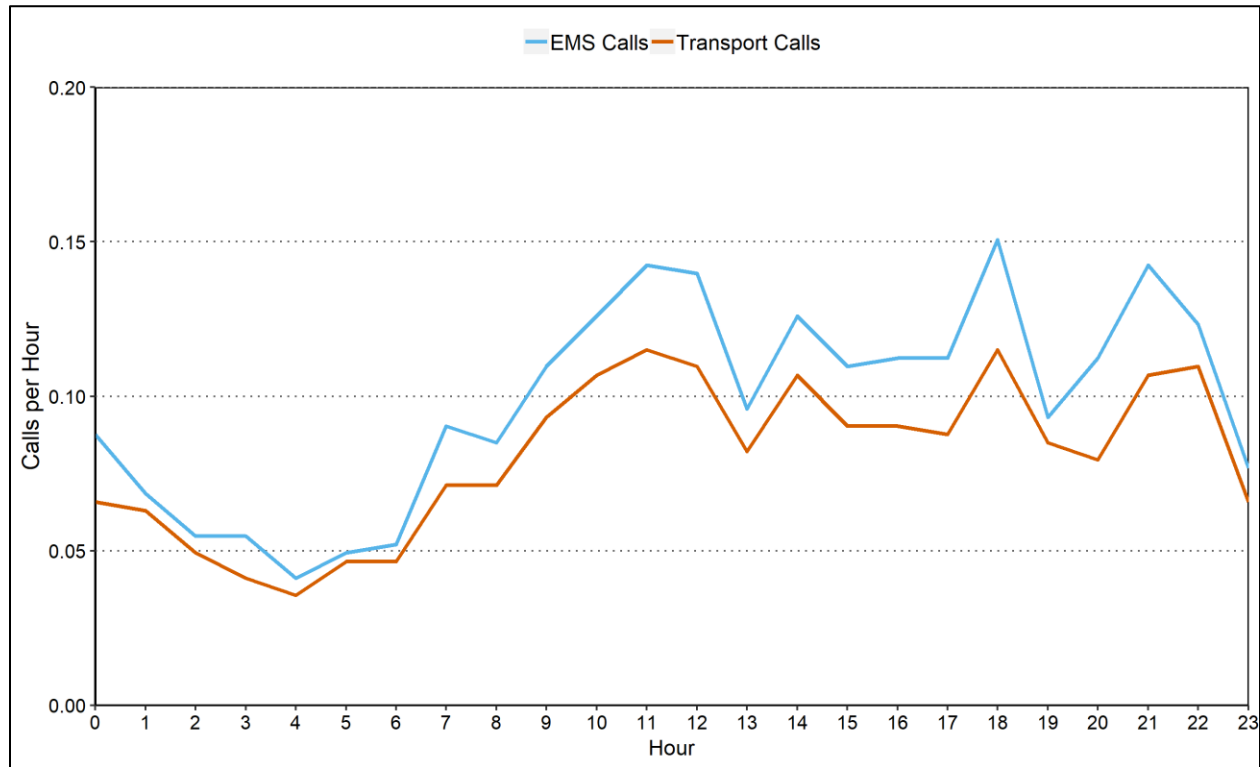
AVERAGE TRANSPORT CALLS PER HOUR

Table 21 and Figure 13 show the average number of EMS calls received each hour of the day over the course of the year and the average number of transport calls. Only transport calls categorized as EMS calls have been included in the table.

TABLE 21: Transport Calls per Day, by Hour

| Hour | Number of EMS Calls | Number of Transport Calls | EMS Calls per Day | Transport Calls per Day | Conversion Rate |
|------|---------------------|---------------------------|-------------------|-------------------------|-----------------|
| 0 | 32 | 24 | 0.09 | 0.07 | 75.0 |
| 1 | 25 | 23 | 0.07 | 0.06 | 92.0 |
| 2 | 20 | 18 | 0.05 | 0.05 | 90.0 |
| 3 | 20 | 15 | 0.05 | 0.04 | 75.0 |
| 4 | 15 | 13 | 0.04 | 0.04 | 86.7 |
| 5 | 18 | 17 | 0.05 | 0.05 | 94.4 |
| 6 | 19 | 17 | 0.05 | 0.05 | 89.5 |
| 7 | 33 | 26 | 0.09 | 0.07 | 78.8 |
| 8 | 31 | 26 | 0.08 | 0.07 | 83.9 |
| 9 | 40 | 34 | 0.11 | 0.09 | 85.0 |
| 10 | 46 | 39 | 0.13 | 0.11 | 84.8 |
| 11 | 52 | 42 | 0.14 | 0.12 | 80.8 |
| 12 | 51 | 40 | 0.14 | 0.11 | 78.4 |
| 13 | 35 | 30 | 0.10 | 0.08 | 85.7 |
| 14 | 46 | 39 | 0.13 | 0.11 | 84.8 |
| 15 | 40 | 33 | 0.11 | 0.09 | 82.5 |
| 16 | 41 | 33 | 0.11 | 0.09 | 80.5 |
| 17 | 41 | 32 | 0.11 | 0.09 | 78.0 |
| 18 | 55 | 42 | 0.15 | 0.12 | 76.4 |
| 19 | 34 | 31 | 0.09 | 0.08 | 91.2 |
| 20 | 41 | 29 | 0.11 | 0.08 | 70.7 |
| 21 | 52 | 39 | 0.14 | 0.11 | 75.0 |
| 22 | 45 | 40 | 0.12 | 0.11 | 88.9 |
| 23 | 28 | 24 | 0.08 | 0.07 | 85.7 |

FIGURE 13: Transport Calls per Day, by Hour



Observations:

- Hourly EMS calls per day were highest during the day from 9:00 a.m. to 11:00 p.m., averaging between 0.10 calls and 0.15 calls per day.
- Average hourly EMS calls per day peaked between 6:00 p.m. and 7:00 p.m., averaging 0.15 calls per day.
- Average hourly EMS calls per day were lowest between 4:00 a.m. and 5:00 a.m., averaging 0.04 calls per day.
- Hourly transport calls per day were highest during the day from 10:00 a.m. to 10:00 p.m., averaging between 0.08 and 0.12 calls per day.
- Average hourly transport calls per day peaked between 11:00 a.m. and noon and between 6:00 p.m. and 7:00 p.m., averaging 0.12 calls per day.
- Average hourly transport calls per day were lowest between 3:00 a.m. and 5:00 a.m., averaging 0.04 calls per day.
- The hourly transport conversion rates peaked between 5:00 a.m. and 6:00 a.m. at 94 percent.
- The hourly transport conversion rate was lowest between 8:00 p.m. and 9:00 p.m. at 71 percent.

CALLS BY TYPE AND DURATION

Table 22 shows the average duration of transport and non-transport EMS calls by call type.

TABLE 22: Transport Call Duration by Call Type

| Call Type | Non-transport | | Transport | |
|-------------------------------|------------------|-----------------|------------------|-----------------|
| | Average Duration | Number of Calls | Average Duration | Number of Calls |
| Breathing difficulty | 29.2 | 7 | 72.9 | 102 |
| Cardiac and stroke | 40.2 | 9 | 75.2 | 96 |
| Fall and injury | 25.5 | 47 | 73.8 | 116 |
| Illness and other | 25.0 | 60 | 70.1 | 308 |
| MVA | 22.6 | 12 | 84.4 | 21 |
| Overdose and psychiatric | 20.0 | 5 | 66.4 | 17 |
| Seizure and unconsciousness | 27.0 | 14 | 72.3 | 46 |
| EMS Total | 26.0 | 154 | 72.3 | 706 |
| Fire & Other Total | 48.4 | 860 | 133.1 | 2 |
| Total | 45.0 | 1,014 | 72.5 | 708 |

Note: The duration of a call is defined as the longest deployed time of any of the units responding to the same call.

Observations:

- The average duration was 26.0 minutes for non-transport EMS calls.
- The average duration was 72.3 minutes for EMS calls where one or more patients were transported to a hospital.

TRANSPORT TIME COMPONENTS

Table 23 gives the average deployed time for a rescue unit on a transport call, along with three major components of the deployed time: on-scene time, travel to hospital time, and at-hospital time.

The on-scene time is the interval from the unit arriving on-scene time through the time the unit departs the scene for the hospital. Travel to hospital time is the interval from the time the unit departs the scene to travel to the hospital through the time the unit arrives at the hospital. At-hospital time is the time it takes for patient turnover at the hospital. While there were 708 transport calls, there were 721 transport runs. We only analyze 705 runs, as 16 records with incomplete timestamps were removed.

TABLE 23: Time Component Analysis for Transport Runs by Call Type (in Minutes)

| Call Type | Average Time Spent per Run | | | | Number of Runs |
|-------------------------------|----------------------------|-----------------------|-------------|--------------|----------------|
| | On Scene | Traveling to Hospital | At Hospital | Deployed | |
| Breathing difficulty | 12.3 | 29.1 | 24.7 | 72.8 | 98 |
| Cardiac and stroke | 12.0 | 30.8 | 25.6 | 74.2 | 94 |
| Fall and injury | 13.6 | 29.1 | 23.5 | 72.4 | 119 |
| Illness and other | 11.7 | 30.8 | 21.8 | 69.8 | 305 |
| MVA | 20.1 | 27.0 | 24.6 | 80.3 | 23 |
| Overdose and psychiatric | 13.6 | 26.8 | 20.4 | 66.4 | 17 |
| Seizure and unconsciousness | 12.7 | 30.4 | 23.2 | 72.1 | 46 |
| EMS Total | 12.6 | 30.0 | 23.1 | 71.7 | 702 |
| Fire & Other Total | 20.0 | 25.8 | 68.3 | 124.5 | 3 |
| Total | 12.6 | 30.0 | 23.3 | 71.9 | 705 |

Note: The average unit deployed time per run is lower than average call duration for some call types because call duration is based on the longest deployed time of any of the units responding to the same call, which may include an engine or ladder. Total deployed time is greater than the combination of on-scene, transport, and hospital wait times as it includes turnout, initial travel, and hospital return times.

Observations:

- The average time spent on-scene for a transport EMS call was 12.6 minutes.
- The average travel time from the scene of the EMS call to the hospital was 30.0 minutes.
- The average deployed time spent on transport EMS calls was 71.7 minutes.
- The average deployed time at the hospital was 23.1 minutes, which accounts for approximately 32 percent of the average total deployed time for a transport EMS call.

TOTAL WORK BY LOCATION

In this analysis, we expand our run and workload statistics to include runs from Station 24 outside Indiantown. We included two additional tables that focus on transport runs. Outside Indiantown, we divided runs into those that occurred within Station 24's response zone and those outside of the station's response zone.

TOTAL WORKLOAD

Tables 24 and 25 show the total number of runs and total deployed time by station and call location.

TABLE 24: Total Runs by Station, Zone, and Location

| Station | Outside Indiantown | | Inside Indiantown | Total |
|--------------|--------------------|------------|-------------------|--------------|
| | Zone 24 | Other | | |
| 24 | 516 | 414 | 1,779 | 2,709 |
| Other | 0 | 0 | 1,417 | 1,417 |
| Total | 516 | 414 | 3,196.0 | 4,126 |

Note: The runs of non-contracted station units were only counted for calls in Indiantown.

TABLE 25: Total Work Hours by Station, Zone, and Location

| Station | Outside Indiantown | | Inside Indiantown | Total |
|--------------|--------------------|--------------|-------------------|----------------|
| | Zone 24 | Other | | |
| 24 | 427.4 | 349.1 | 1,265.6 | 2,042.1 |
| Other | 0 | 0 | 1,026.4 | 1,026.4 |
| Total | 427.4 | 349.1 | 2,292.0 | 3,068.5 |

Observations:

- Station 24 units made 66 percent of their runs in Indiantown.
- Station 24 units made 85 percent of their runs in Indiantown and their extended response zone.
- Station 24 units spent 62 percent of their deployed hours in Indiantown.
- Station 24 units spent 89 percent of their deployed in Indiantown and their extended response zone.

TRANSPORT WORKLOAD

Tables 26 and 27 show the number of transport runs and deployed time by station and call location. The transport calls were identified by requiring that at least one rescue unit had recorded both “beginning to transport” time and “arriving at the hospital” time.

TABLE 26: Total Transport Runs by Station, Zone, and Location

| Station | Outside Indiantown | | Inside Indiantown | Total |
|--------------|--------------------|------------|-------------------|------------|
| | Zone 24 | Other | | |
| 24 | 119 | 120 | 655 | 894 |
| Other | 0 | 0 | 50 | 50 |
| Total | 119 | 120 | 705 | 944 |

Note: The runs of non-contracted units were only counted for calls in Indiantown.

TABLE 27: Total Transport Hours by Station, Zone, and Location

| Station | Outside Indiantown | | Inside Indiantown | Total |
|---------|--------------------|-------|-------------------|----------------|
| | Zone 24 | Other | | |
| 24 | 160.7 | 153.5 | 775.6 | 1,089.9 |
| Other | 0 | 0 | 68.9 | 68.9 |

Observations:

- Station 24 units made 73 percent of their transport runs inside Indiantown.
- Station 24 units made 87 percent of their transport runs in Indiantown and their extended response zone.
- Station 24 units spent 71 percent of their deployed transport hours inside Indiantown.
- Station 24 units spent 86 percent of their deployed transport hours in Indiantown and their extended response zone.

ATTACHMENT I: FIRE LOSS

TABLE 28: Total Fire Loss Above and Below \$20,000

| Call Type | Inside Indiantown | | | Outside Indiantown | | |
|----------------|-------------------|----------------|---------------|--------------------|----------------|---------------|
| | No Loss | Under \$20,000 | \$20,000 plus | No Loss | Under \$20,000 | \$20,000 plus |
| Outside fire | 12 | 0 | 1 | 20 | 4 | 0 |
| Structure fire | 2 | 3 | 0 | 1 | 1 | 0 |
| Total | 14 | 3 | 1 | 21 | 5 | 0 |

Observations:

In Indiantown

- 12 outside fires and 2 structure fires had no recorded losses.
- 1 outside fire had \$20,000 or more in losses.

Out of Indiantown

- 20 outside fires and 1 structure fire had no recorded losses.
- 4 outside fires and 1 structure fire had losses under \$20,000.

TABLE 29: Content and Property Loss – Structure and Outside Fires in Indiantown

| Call Type | Property Loss | | Content Loss | |
|----------------|-----------------|-----------------|-----------------|-----------------|
| | Loss Value | Number of Calls | Loss Value | Number of Calls |
| Outside fire | \$15,000 | 1 | \$15,000 | 1 |
| Structure fire | \$5,500 | 3 | \$4,500 | 3 |
| Total | \$27,000 | 4 | \$19,500 | 4 |

Note: This includes only calls with recorded losses greater than \$0.

TABLE 30: Property Loss – Structure and Outside Fires Outside Indiantown

| Call Type | Property Loss | |
|----------------|-----------------|-----------------|
| | Loss Value | Number of Calls |
| Outside fire | \$8,700 | 4 |
| Structure fire | \$4,000 | 1 |
| Total | \$12,700 | 5 |

Note: This includes only calls with recorded loss greater than \$0. No content loss was recorded for any fire call outside Indiantown.

Observations:

In Indiantown

- Out of 13 outside fires in Indiantown, 1 had a recorded loss with a property loss of \$15,000 and a content loss of \$15,000 for a total loss of \$30,000.
- Out of 5 structure fires in Indiantown, 3 had recorded losses, with a combined \$5,500 in property losses, a combined \$4,500 in content losses, and a total combined loss of \$10,000.

Outside Indiantown

- Out of 24 outside fires outside Indiantown, 4 recorded property losses with a combined loss of \$8,700.
- Out of 2 structure fires outside Indiantown, 1 had a recorded \$4,000 property loss.
- No fires recorded a content loss outside Indiantown.

ATTACHMENT II: TRANSPORT TIME BY HOSPITAL

Table 31 shows the variation in average transport time for a rescue unit to transport patients from Indiantown to hospitals in the area. The code is included in the table in case the hospital was inaccurately identified.

TABLE 31: Average Transport Time By Hospital

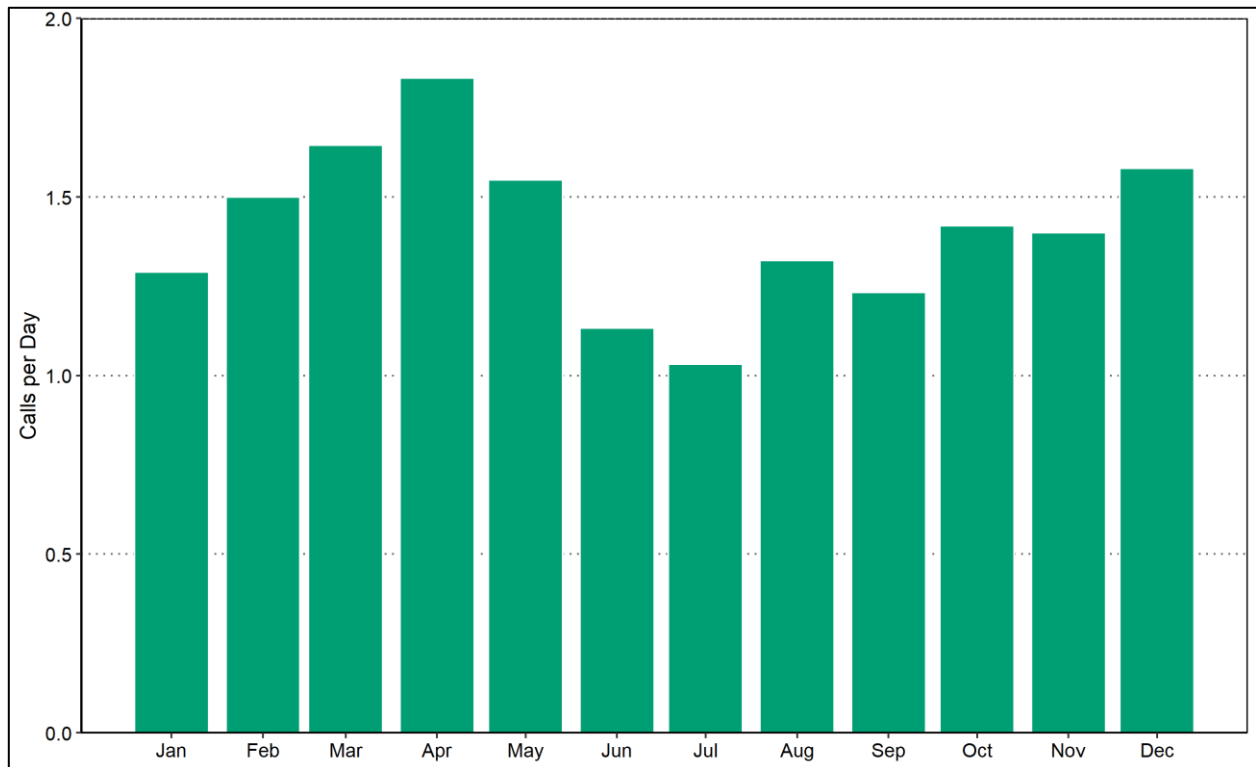
| Hospital | Hospital Code | Average Transport Minutes | Number of Transport Calls |
|-------------------------------------|---------------|---------------------------|---------------------------|
| Martin County Hospital South | SOUTH | 28.7 | 504 |
| Cleveland Clinic Tradition Hospital | @TRADI | 32.3 | 115 |
| Cleveland Clinic Martin Health | 220 SE | 36.6 | 67 |
| Lawnwood Regional Medical Center | LAWNWO | 24.2 | 9 |
| Jupiter Medical Center | @JUPIT | 35.9 | 6 |
| St. Mary Medical Center | @ST MA | 37.7 | 9 |

Note: Hospitals with less than 5 transport calls are not included.

ATTACHMENT III: COVER ASSIGNMENT CALLS

Cover assignment calls primarily involved units from noncontracted stations. Whenever Station 24 units were more than 20 minutes from the station, additional units were sent proactively to provide service coverage. Figure 14 shows the monthly variation in the average daily number of cover assignment calls in Indiantown during the year studied. Similarly, Figure 15 illustrates the average number of cover assignment calls received each hour of the day over the course of the year.

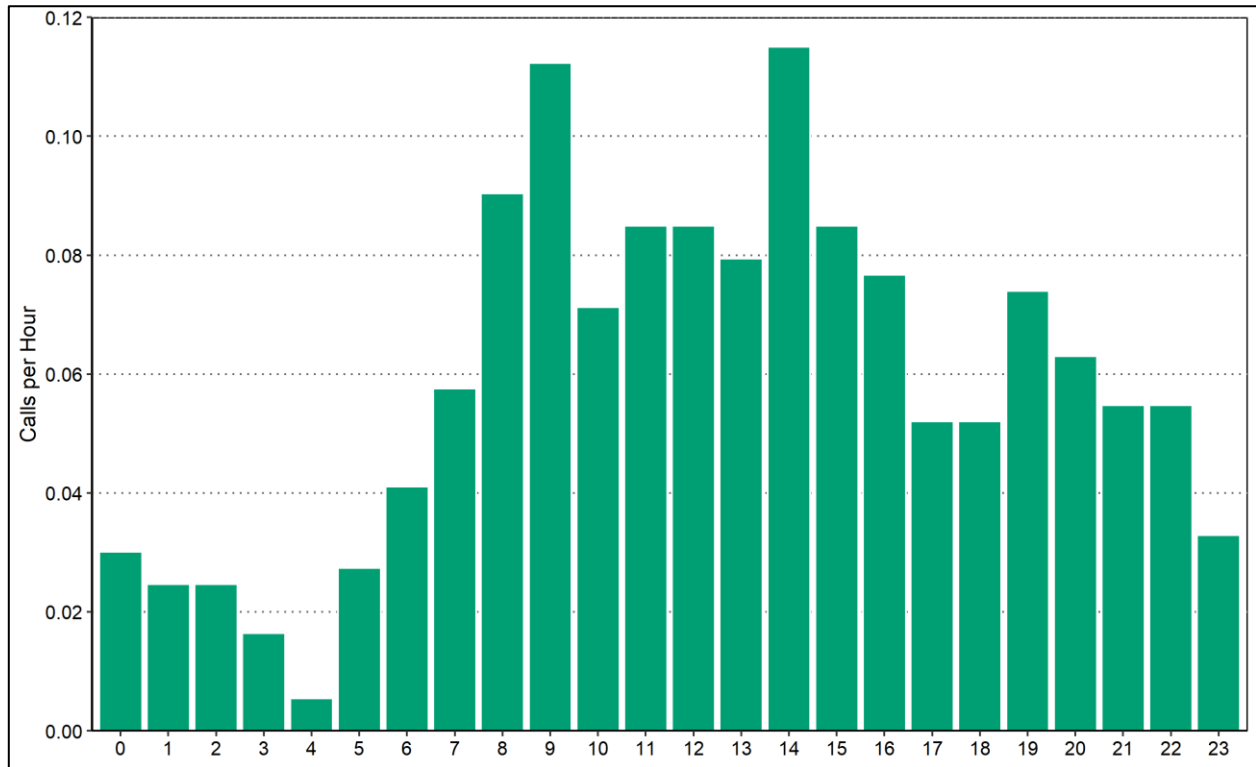
FIGURE 14: Cover Assignment Calls per Day, by Month



Observations:

- Average cover assignment calls per day ranged from 1.0 in July 2019 to 1.8 in April 2019.

FIGURE 15: Cover Assignment Calls by Hour of Day



Observations:

Outside Fires

- Average cover assignment calls per hour overall ranged from less than 0.01 between 4:00 a.m. and 5:00 a.m. to 0.12 between 2:00 p.m. and 3:00 p.m.