Q1. What are the number of calls for each year for each battalion?

Ans. From the analysis of the number of calls for each year, there was an increasing trend. The highest number of calls were in the year 2017 with around 0.31 million. In terms of battalions, B03 had the highest number of calls for the greatest number of the years but B02 had the highest number of calls in years 2012,2015,2017,2018. I would recommend you should focus more on battalions with a high number of calls like B03.

Q2. What are the number of calls by top 5 call type, ALS unit and priority?

Ans. The top five call types with the greatest number of calls are Medical Incidents, Structure Fire, Alarms, Traffic Collisions, Other types. Medical Incidents had the greatest number of calls at around 3.1 Million calls with 2.3 Million true ALS units and 0.8 million false ALS units.

Q3. Number of Incident by fire prevention district?

Ans. The fire prevention district with the highest number of incidents is the 2nd district with 0.9 million incidents and the least number of incidents is in the 7th district with 0.3 million. The most focus should be given to districts with a high number of incidents i.e. 2nd,3rd,1st,4th fire prevention districts.

Q4. Number of incidents per month and ALS unit?

Ans. The number of incidents for each month is an almost uniform distribution. The number of false ALS units is almost half of true ALS units. This means that critical cases are more throughout the year, so the fire department must increase its inventory level of the critical equipment and even maintain safety stock in case of emergency.

Q5. Find the total number of incidents and total number of calls?

Ans. The total number of incidents through the whole data set is 2.16 million and the total number of calls is 4.79 million.

Q6. What are the number of unit types by battalion, ALS unit and final priority?

Ans. From the analysis, we can say B02 has the highest number of unit types if the final priority is 2 and if taken is 4 minutes at 94129 zip code location and then it gradually decreases to 1 minute. In the case of B03, the most average time is 7.81 minutes at 94115 zip code location.

Q7. What are the top 10 location with highest number of calls?

Ans.

|  |  |  |
| --- | --- | --- |
| Locations | Number of calls | Top 3 Battalions |
| 94102 | 601.11k | B01, B02, B03 |
| 94103 | 574.37k | B01, B02, B03 |
| 94110 | 408.19k | B02, B10, B06 |
| 94109 | 399.24k | B02, B01, B04 |
| 94124 | 248.78k | B10 |
| 94112 | 225.87k | B09, B06 |
| 94115 | 213.34k | B02, B04, B05 |
| 94107 | 189.93k | B03, B02, B10 |
| 94122 | 170.99k | B08, B05, B07 |
| 94133 | 170.88k | B01, B03 |
|  |  |  |

Q8. Total sum of date difference of “entry dttm” and “dispatch dttm” with respect to zip codes of the location?

Ans. The highest sum of the difference of entry time and dispatch time is 0.6 M minutes at 94102 and the highest average difference is 3.50 minutes. Gradually the graph decreases and becomes constant at around 1 min. So, I can say that for most of the zip codes the time difference between entry and dispatch is around 1 minute. We just must reduce the dispatch time for 94158 and 94130.

Q9. Total Sum of date difference of “received dttm” and “dispatch dttm” with respect to battalion and station area?

Ans. The highest sum of dispatch time is of battalion B03. From the average of the dispatch time, we got that B99 has the highest dispatch time and followed by B03 which has a dispatch time of 2.42 minutes. The lowest dispatch is of 3E which has a dispatch time of 2.00 minutes. Considering the target dispatch time to be around 3 minutes the department needs to be consistent with the performance.

Q10. Total sum of date difference of “received dttm” and “dispatch dttm” with respect to call type group and unit type?

Ans. The highest sum of time difference of received time and dispatch time for unit time is for Engine at 3.8 M minutes. The highest average dispatch time is of Investigation unit type at 8.64 minutes. Considering the target dispatch time is around 3 minutes I can say that unit types of Investigation, Support, and rescue captain. These unit types have an average dispatch time of more than 3 minutes.

Q11. Find the Average dispatch time and Average transport time?

Ans. The total average dispatch time is 2.30 minutes and the total Transport time is 26.69 minutes. If we have considered target dispatch time at 3 minutes the total average dispatch time is below that limit. So, we can say that the department just has to maintain time. In the case of transport time if we consider the target time at 25 minutes. The department has to improve the average time by 1.69 minutes.