

CAHOOTS Medical Emergency Analysis and MCSLC Impact

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Background

CAHOOTS (Crisis Assistance Helping Out On The Streets) has helped the Eugene-Springfield area for over 20 years in being a alternative police response in 911 calls. They were one of the first programs in the country to help resolve mental health crisis, having mental health professionals to help resolve these calls that police may not have the training for. They had EMT certified personal in their vehicles allowing them to provide wound and trauma care on top of their mental health response. Recently, another service similar to CAHOOTS began operating in August 2024 in same county. Mobile Crisis Services Lane County (MCSLC) in a county funded emergency mental health intervention that has its own vehicles to respond to those in a mental health crisis. Unlike CAHOOTS they serve a majority of Lane County and do not provide wound and trauma care. When first launched they were only able to provided services from 2pm to 11pm.

- How did the opening of MSCLC in August 2024 affect CAHOOT calls?
- How many calls does CAHOOT respond to regarding medical emergencies?

Data

The primary data used for this analysis is the Computer Aided Dispatch of the City of Eugene from January 2014 to April 2025. This contained over 1 million call events. Some of the variables the data provided was the date & time of a call, a brief one or couple words of the type of the call, how was it closed, amount of time it took to respond to amount of time it took to close and call sign of the unit responding.

Methods

Packages used:

- ggplot2
- dplyr
- reshape2
- MASS

- reshape
- lubridate
- rddtools

Cleaning of Data:

- Added a time column (24 Hour Time)
- Added month column (YYYY-MM)
- Any call that was closed as a disregard, no dispatch, false alarm or a accidental event creation by the dispatch was removed
- Split data set into two by calls that CAHOOTS respond to and did not respond to using calls signs provided by CAHOOTS.
- For MSCLC analysis, filtered for calls between 1400 and 2300 as this is when MSCLC is operational
- For CAHOOTS medical emergency response, filtered for calls that had to death with injuries, health issues, drug complications

In my exploratory analysis:

- Plotted total month calls per month in a scatter plot
- Performed linear regression to see how many calls should be expected for medical emergency calls
- Created new data frames for MSCLC and Medical Emergencies responses, that had total calls per month
- Created sub data frames that had total calls per month based on type of calls such mental transport, injury, time of call
- Additional data frames were made to compare police calls to medical emergency
- Performed Regression Discontinuity Design (RDD) analysis to compare the call volume prior to significant dates and after
- Recorded p-values of RDD test to see if there is significant evidence of change
- Removed April 2025 calls as this only had a week of data

Results

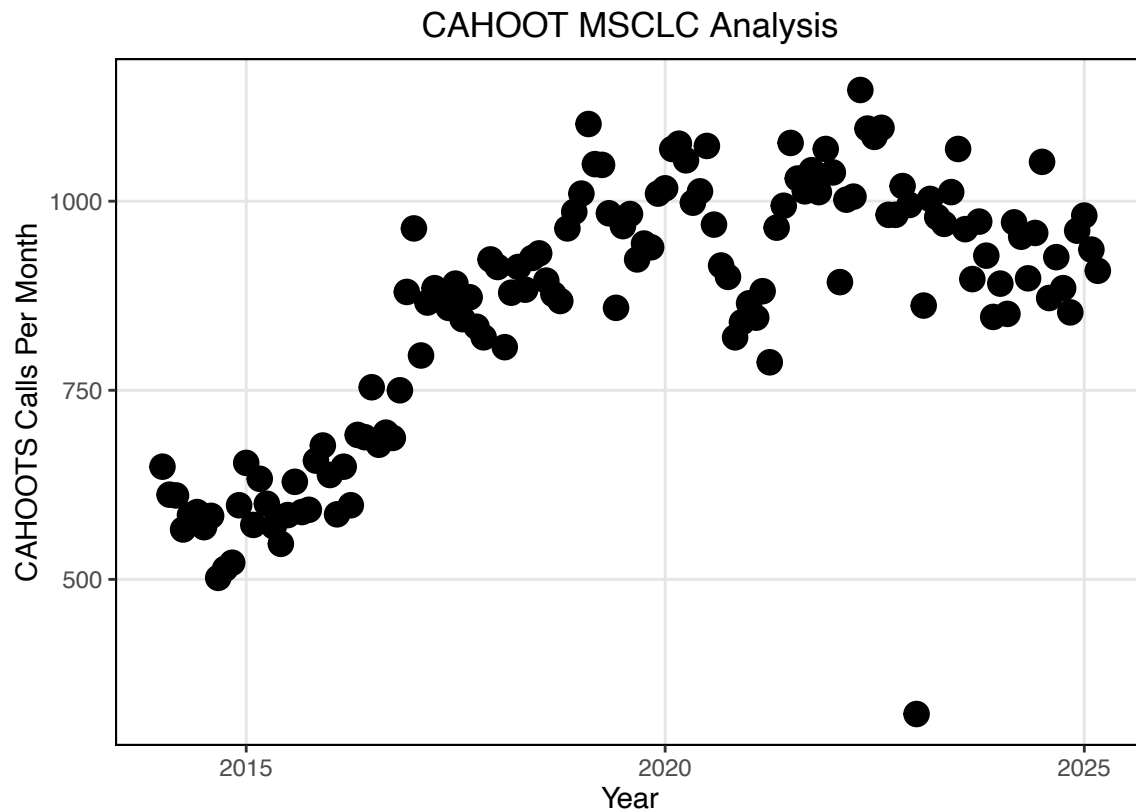


Figure 1 (above) displays overall CAHOOT calls from January 2014 to March 2025, as time progresses the total amount of calls reaches a peak in summer 2021-2022 before plateauing.

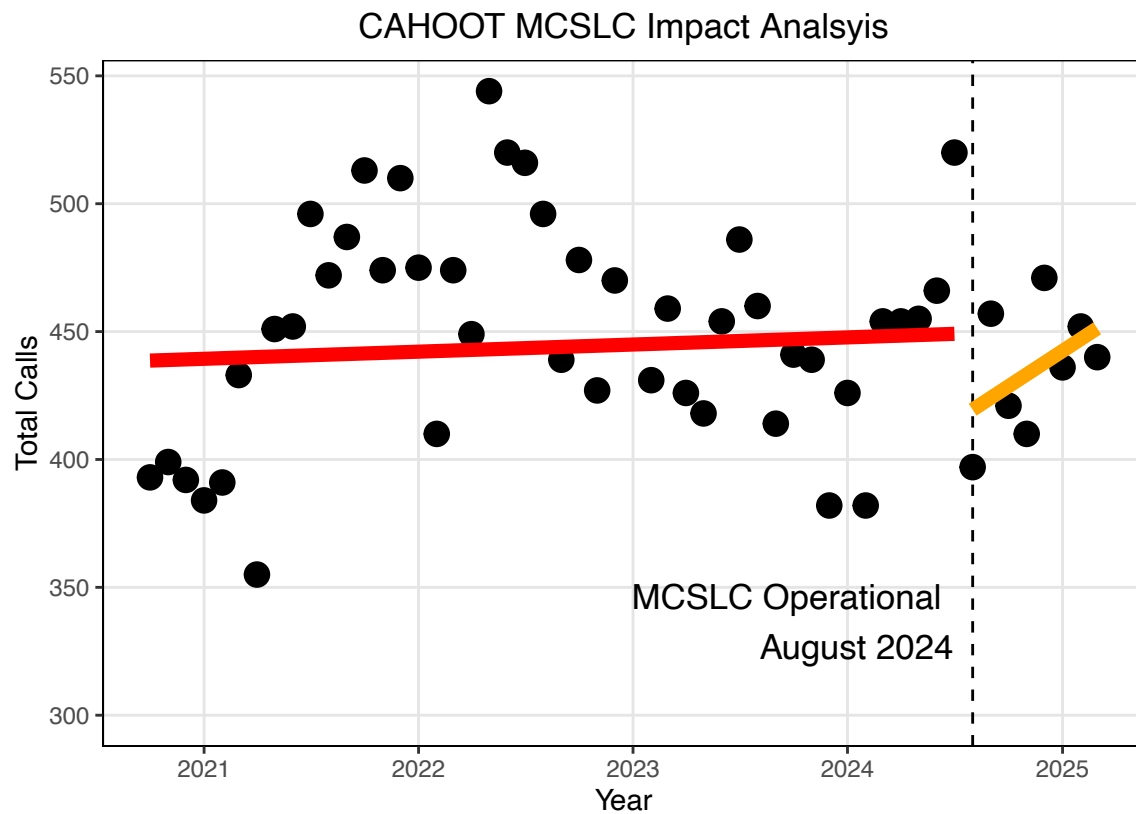


Figure 2 (above) displays the amount of calls for CAHOOTs prior and after August 2024. A RDD analysis was conducted to see if there was a significant change in total calls after August 2024, when MSCLC was operational. RDD returned a p-value greater than .05, indicating there was not a significant change in total CAHOOT calls over the past 8 months.

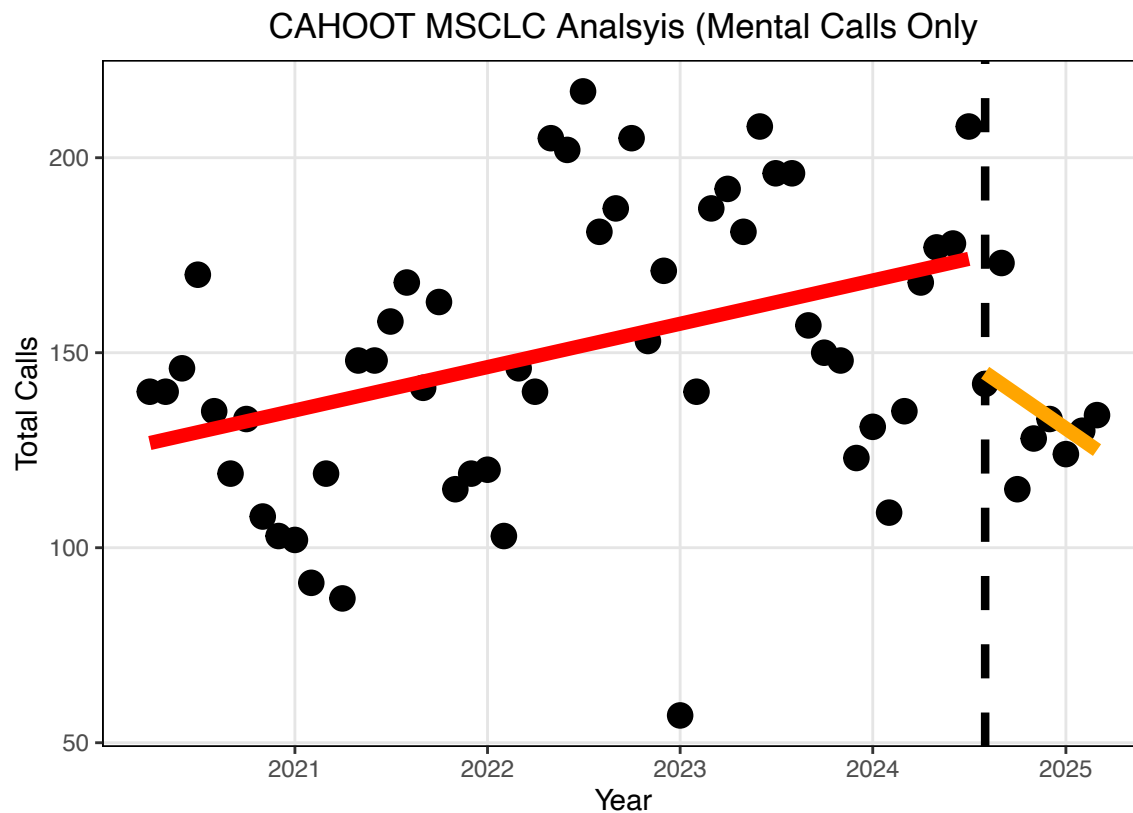
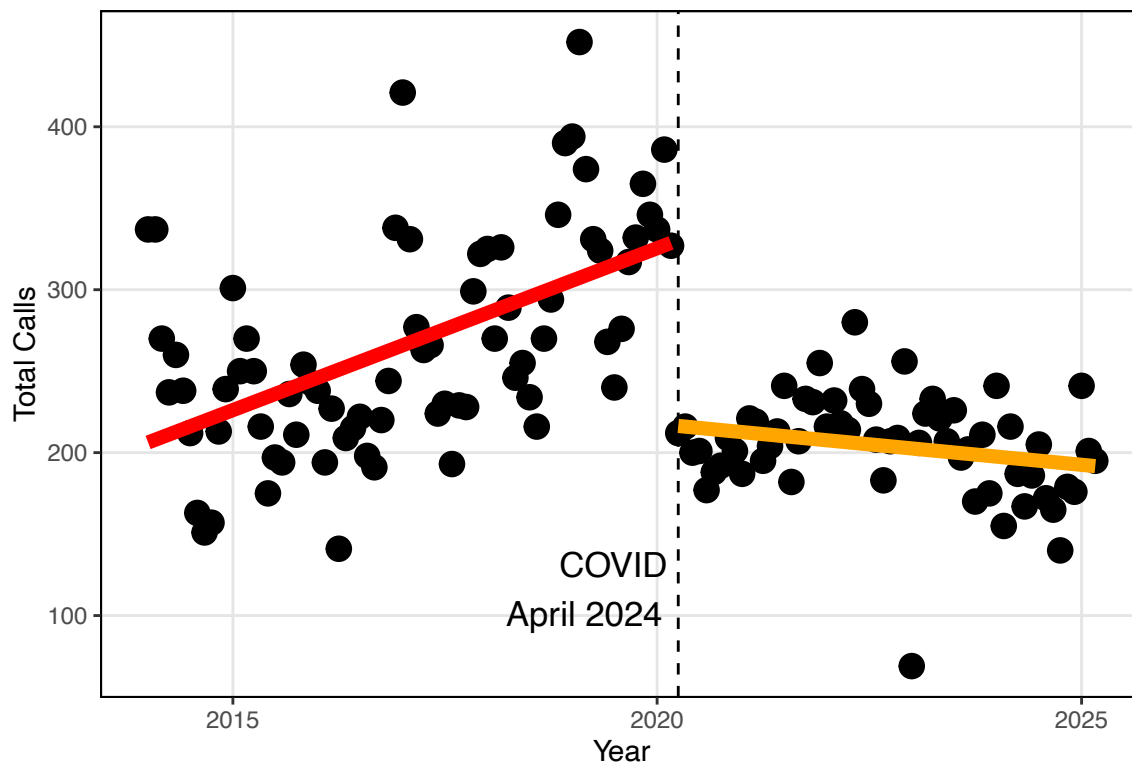


Figure 3 (above) displays the amount of mental health type calls for CAHOOTs prior and after August 2024. RDD analysis of total mental health calls per month returned a p-value greater than .05 indicating there was not a significant change in total mental CAHOOT calls over the past 8 months. While not immediately impacting there may have been some instances of confusion as to who responds to calls when MSCLC came into operation that may have diverted some calls but not enough to significantly impact CAHOOTs.

Figure 4 (below) displays the amount of Medical Emergency calls that CAHOOT had received from January 2014 to March 2025. RDD analysis of Medical Emergency calls after COVID indicate that there was a significant change in Medical Emergency calls, decreasing their total amount trending downward as time progresses. Overall CAHOOT calls during this period did not have any other significant changes.

CAHOOT Medical Emergency Analysis



Police Medical Emergency Analysis

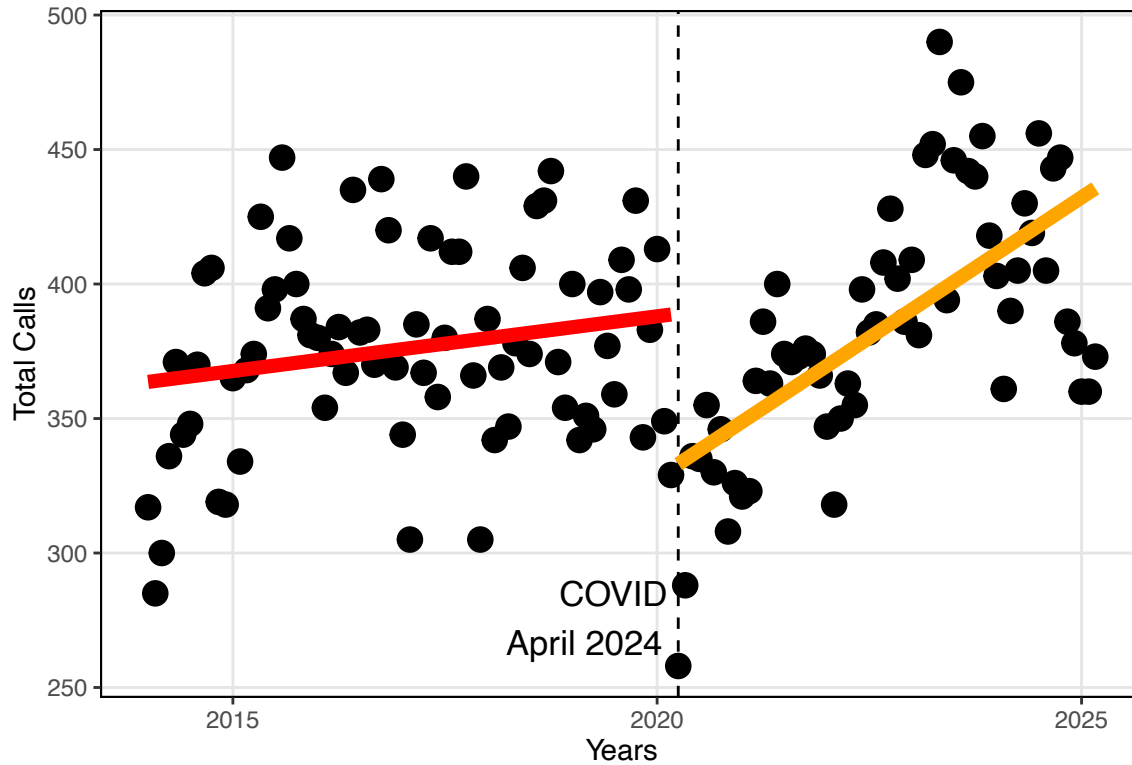


Figure 5 (above) displays the amount of Medical Emergency calls that Eugene Police Department received from January 2014 to March 2025. RDD analysis of Medical Emergency shows that after COVID they had significant change in their response to medical emergency calls increasing in a positive trend. Overall police calls increased however prior to COVID their response to Medical Emergency calls had no strong correlation and was sporadic.

Recent Development

During the time performing analysis on CAHOOTS, on April 7th 2025 CAHOOTS was rendered inoperable due to lack of funding, this is one reason why the data that focused on was March 2025 as this is the last full month of data. On May 30th the city of Eugene agreed to allocate over \$2 million dollars of funding to fund a service that is essentially a spiritual successor to CAHOOTS named Willamette Valley Crisis Care (WVCC), that would function identically to CAHOOTS. As of the time of this report there is no timeline for the WVCC to be launched however we expect it to take place in the summer 2025. Any and all conclusions for CAHOOTS should be applied to WVCC as they will be staffed by the same workers.

Conclusions

MSCLC does not appear to immediately impact CAHOOT services, however there are a couple of caveats to note. MSCLC when launched in August 2024 only have 10 hour window to provide mobile services compared to CAHOOTS who was operating at a 24/7 timeframe. MSCLC however will be going to a 24/7 system in summer 2025, directly competing with WVCC. To March 2025 there is not a significant change but as time continues trends in call diversion may become apparent. Another thing to note is that this long disruption in service that left MSCLC with the responsibility to respond to these mental health calls could cause an impact as well when WVCC becomes operational. One thing I will note is that both services seek to help out some of the most vulnerable members of our community, and they should seek collaboration in best use of their resources to maximize their effectiveness to those in need.

Medical emergency response calls were significantly changed after COVID, before March 2020 and the beginning of the first full month of the pandemic CAHOOTS was trending towards 270 calls per month. After COVID, CAHOOTS dropped the almost 200 calls per month a 35% decrease. In that same time period calls for police for these type of calls increased significantly. One thing to note is that both directly changed during COVID, but for what reason we have not yet been able to figure out. We speculate that during the pandemic there may have been a change of policy or standard operating procedures that may have caused CAD to systematically choose Eugene police to respond to medical emergency calls instead of CAHOOTS. This change may have never been reverted, however with no solid confirmation from the city of Eugene dispatch team we can not confirm this. It's also important to note that these type of calls MSCLC does not have the ability to respond to.