The Hungry Hornets:
Checkpoint 2 Findings

1. **Are officers with drug/alcohol abuse allegations more or less likely to be disciplined as a result of the fallout of the allegation, compared with officers with all other kinds of misconduct allegations?**

   Officers with drug/alcohol abuse and medical allegations are less likely to be disciplined than those with other allegations of misconduct. Our pie graphs visualization demonstrates that while 69.42% of those with other allegations are disciplined, 45.58% of those with drug/alcohol abuse and medical allegations receive any kind of discipline. This difference is intriguing, as it may reflect the more flexible attitude of the CPD administration against substance abuse and medical allegations compared with other types of allegations. The reduced amount of discipline against these allegations could also indicate that the CPD may not have an effective way to characterize or gauge the intensity of substance abuse or medical violations. As a result, the department may be unclear regarding what forms of discipline are most appropriate to pursue, if any. Further, perhaps the form of accountability pursued in substance abuse or medical violation cases is different than the usual forms of discipline enacted against other types of allegations. The latter would result in less discipline being recorded for these allegations, as the alternative process may not be incorporated into the standard discipline documentation, or counseling to a substance abuse professional, mental health counselor or other medical professional may be pursued instead. Additionally, as substance abuse and other medical allegations may be restricted under HIPAA policy, there may be some effect on accessibility to use and discipline data.

   We felt that the Tableau implementation for this visualization was straightforward. We discovered the efficiency and value of creating and exporting a csv file from DataGrip, followed by importation into Tableau. Creating the pie graphs was also a user-friendly process, involving the assignment of rows, columns and labels. The one limitation with Tableau for this visualization involved positioning the pie graphs adjacent to one another for the final display. This step had to be performed in another application.

2. **Is the frequency of drug/alcohol abuse allegations versus all other allegations changing over time?**

Drug/alcohol abuse, medical and other allegations against officers demonstrate intriguing trends over time. For both, there appears to be a peak in 1995-2001, though this peak occurs earlier and alongside another lower peak in the early 1990s for drug/alcohol abuse and medical allegations. This pattern may have multiple explanations, given the historical context. In particular, the peaks in drug/alcohol substance abuse and medical allegations correlates with an increase in nationwide substance abuse of every class occurring in the 1990s[1]. Given that both types of allegations peaked in the 1990s, this could also reflect heightened recognition,

attention to, or enhanced documentation or allegation protocol by the CPD during this decade. Perhaps higher crime burden in Chicago was a precipitant for increased officer allegations of all kinds, though this is not well-documented in the literature. Especially given the opioid epidemic beginning in 2016, it is surprising that the number of substance abuse and medical allegations among officers continued to decrease overall. This could reflect the positive influence of referral to substance abuse professionals or the trauma intervention program. The overall decrease in number of all kinds of allegations throughout the 2000s may further reflect the deterrent effect of discipline, whether threatened or imposed.

From a visualization processing standpoint, creating this consolidated line graph was more challenging than the pie graphs for query 1. This was due to the need to merge the x-axis for time associated with the drug/alcohol abuse and medical allegations with the different one associated with the other types of allegations. After multiple attempts to generate a joined csv on DataGrip and use this for plotting on Tableau, this ultimately required the need to use both SQL and Python to generate code that would result in an accurate and visually legible plot of both line graphs using all 3 axes.

References:

1. Blog Team. (2021). Most popular drug in U.S. by decade. *American Addiction Centers National Rehabs Directory*. https://rehabs.com/blog/most-popular-drug-in-us-by-decade/