Mainstay Life Services

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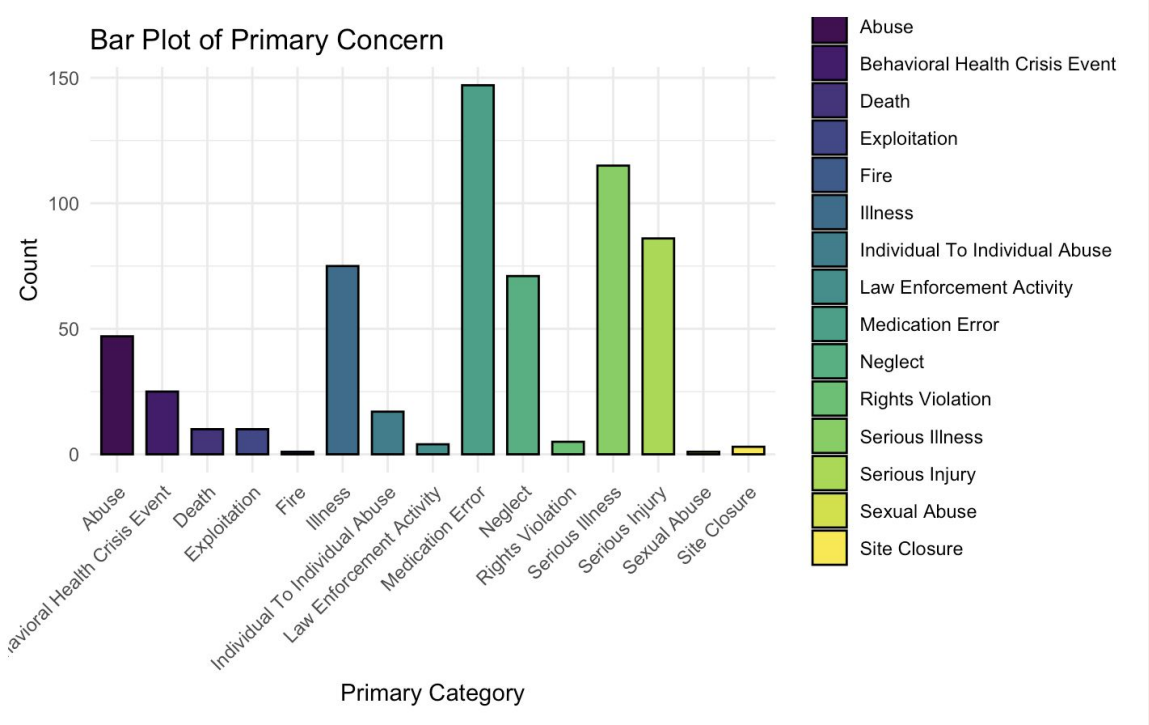
Frequency by Type

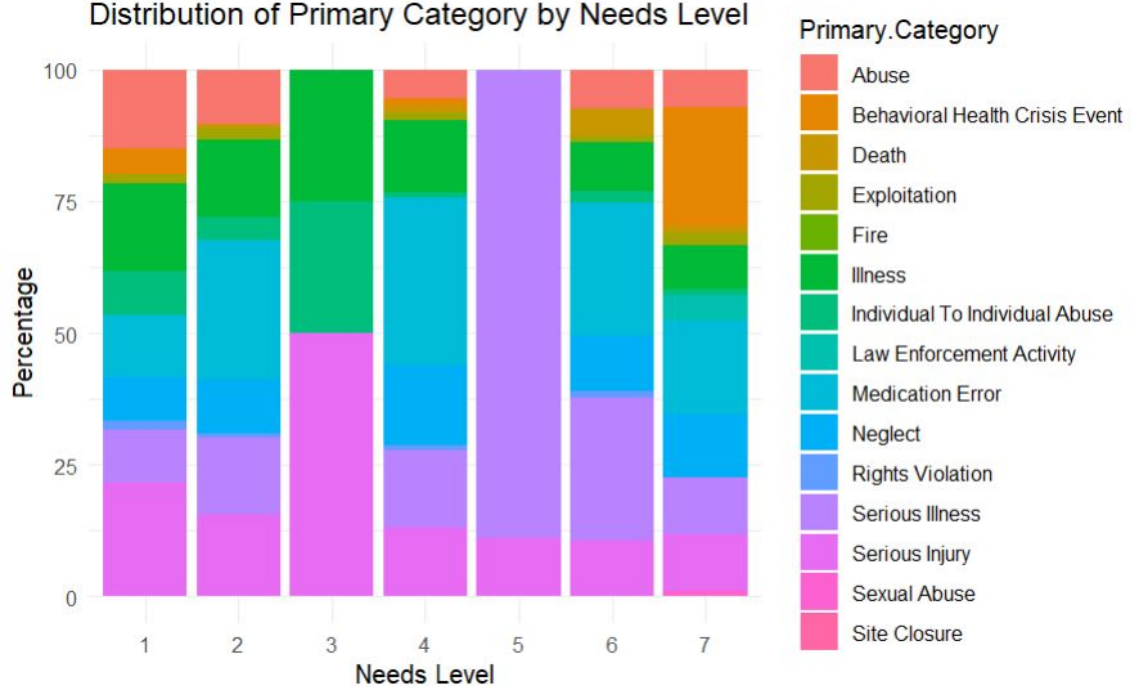


We found that some of the most common conditions over the past three years are:

- Medication error
- Serious illness
- Serious injury
- Neglect

We've made a deeper analysis into all four.

A Look at Needs Level



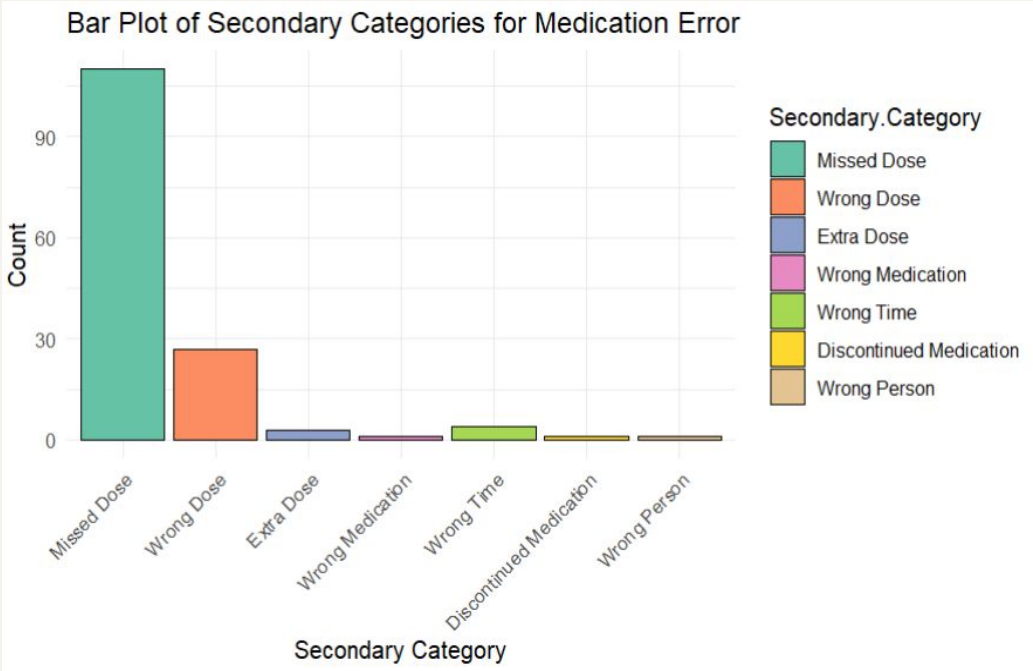
Primary categories are graphed with the percentage within each needs level, allowing for a comparative view of category prevalence.

Higher needs are dominated with serious illness and serious injury, lower levels are more diverse.

Medication Errors

Helen Peng

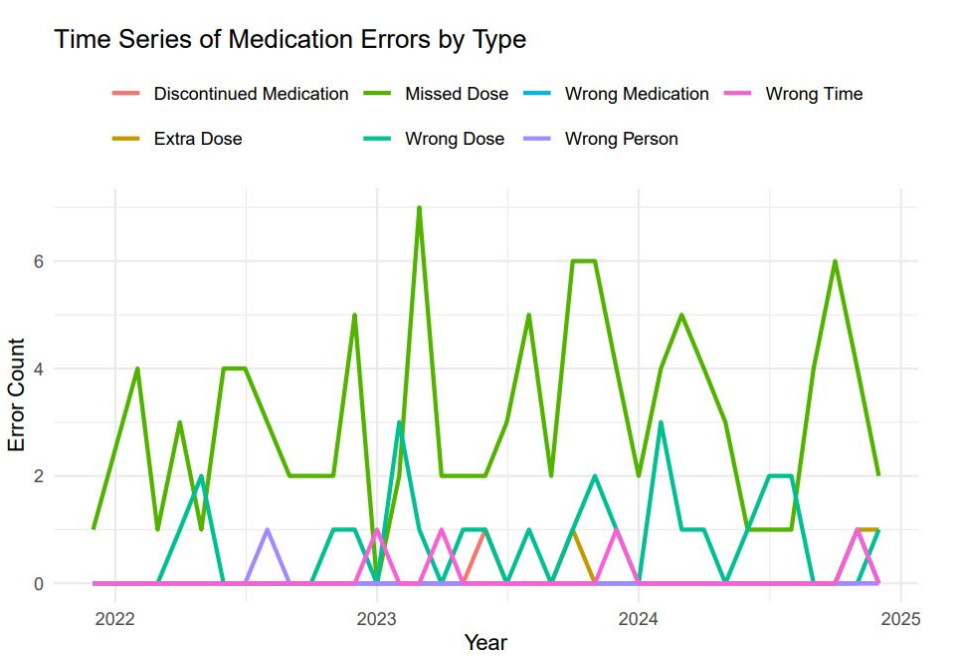
Medication Errors Frequency by Type



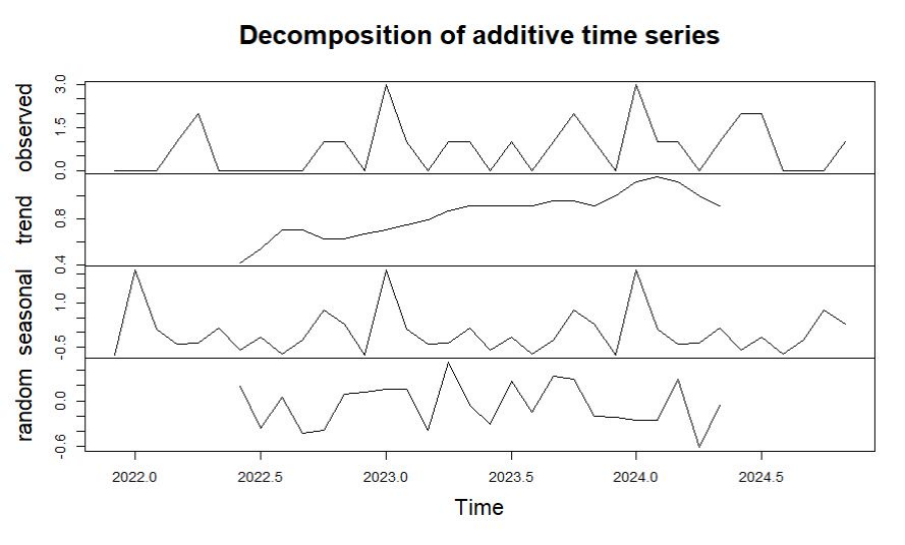
We found that the most common error types are Missed Dose (at 110 counts) and Wrong Dose (at 27 counts).

We've made a deeper analysis into just these two types of errors.

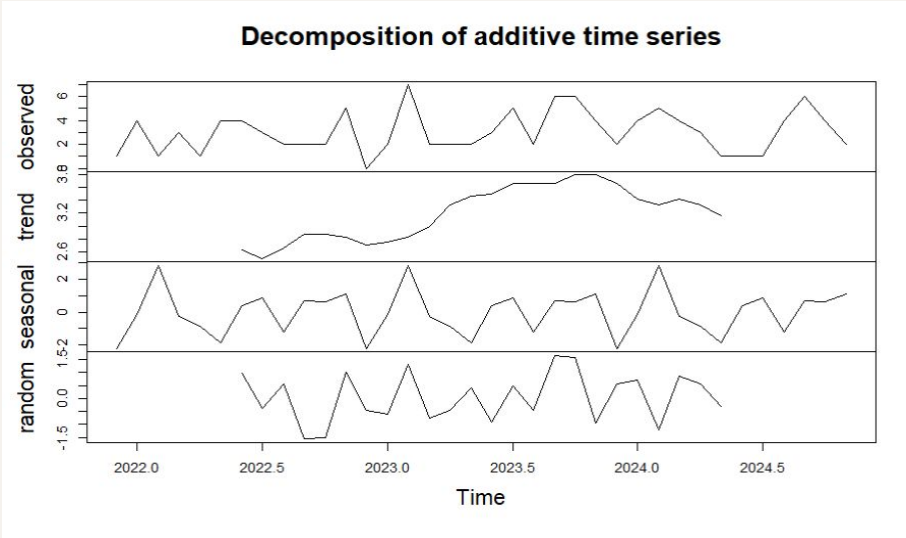
Medication Errors Over Time



Medication Errors Over Time

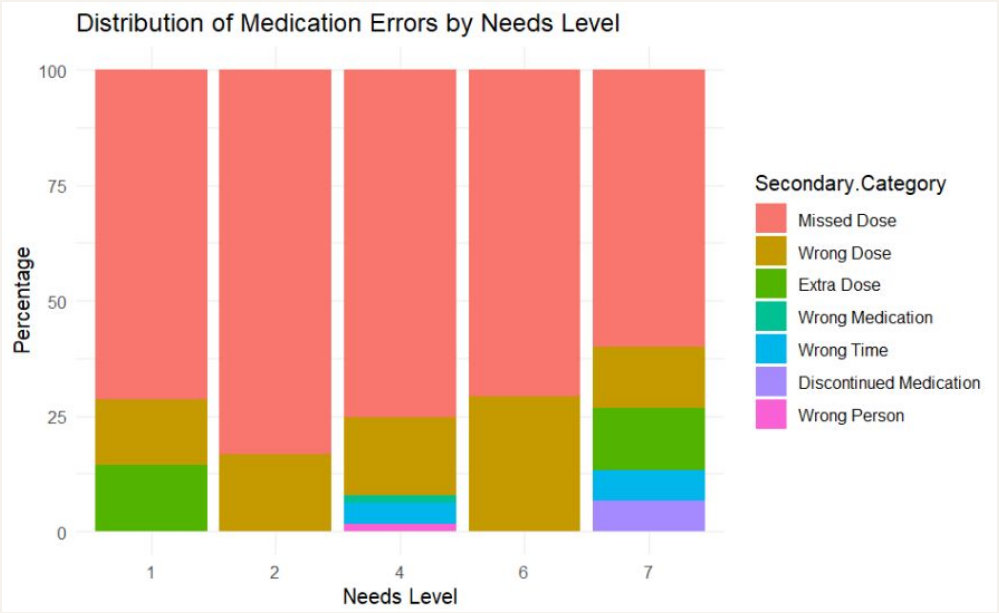


Wrong Dose



Missed Dose

Medication Errors By Needs Level



We found no connection between the level of care needed and the type of medication error.

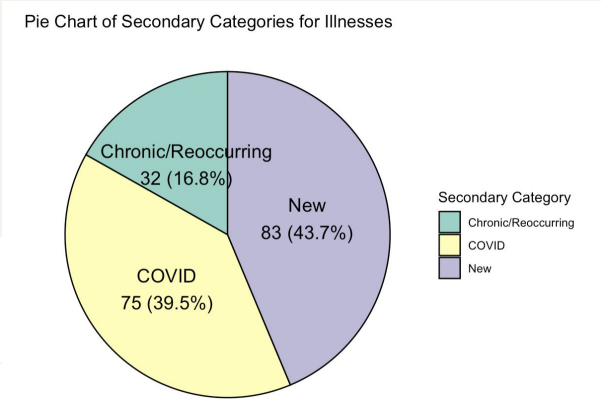
This is a positive outcome as errors are not disproportionately occurring in more critical situations, which would be a larger concern.

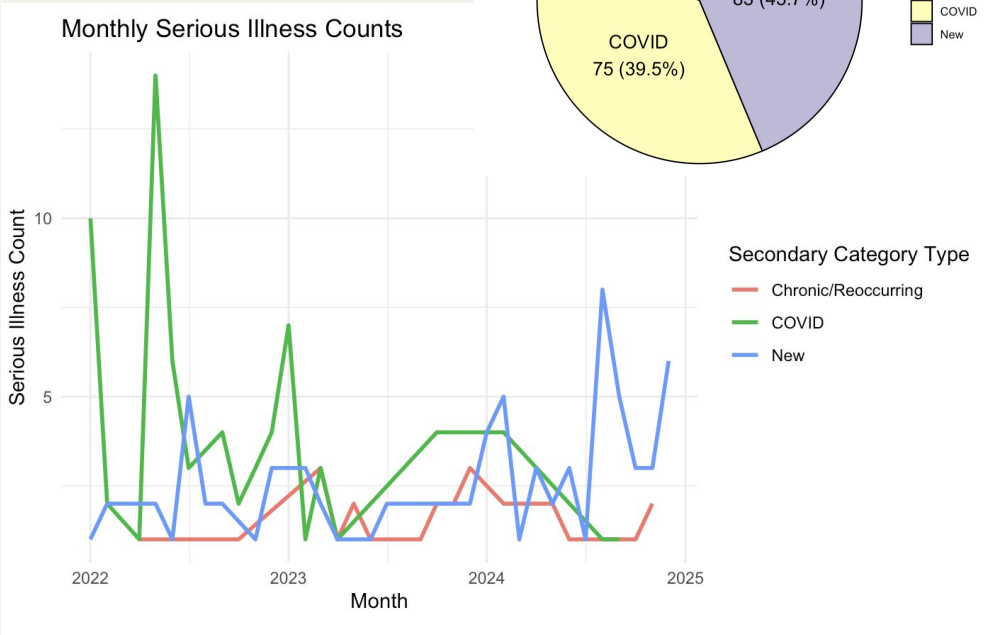
Illnesses

(Serious Illness + Illness)

Emily Zhu

Illness by Type





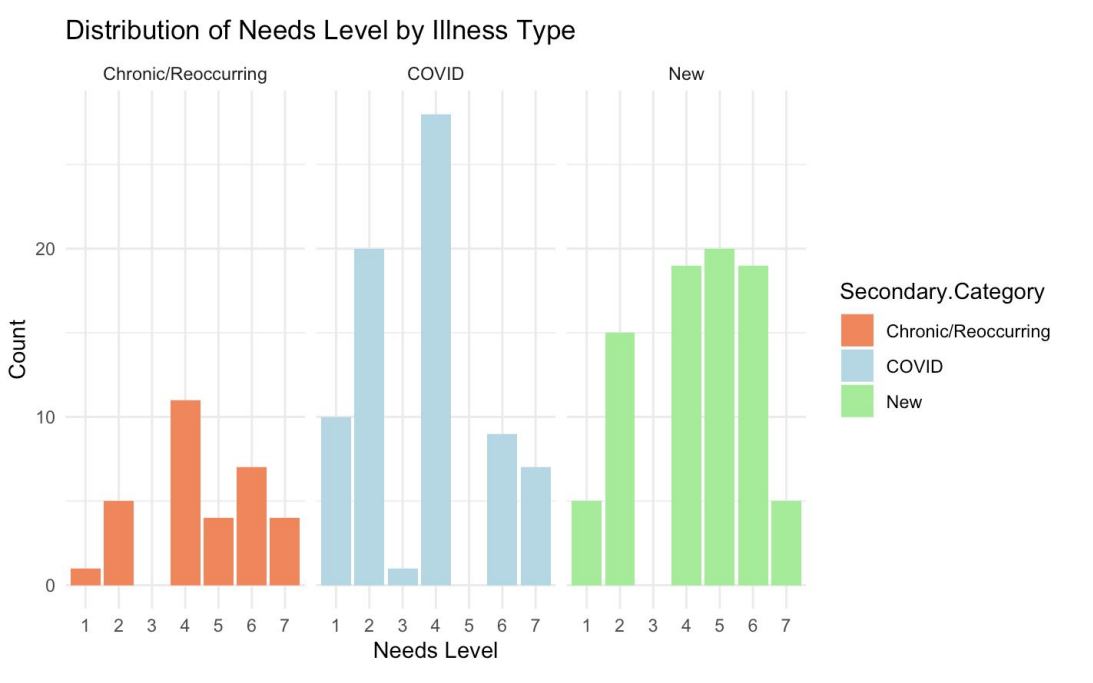
We found that most cases of illnesses are COVID or new ones, but there is a trend of decreasing COVID cases across the years.

Chronic cases have stayed about the same.

New cases have fluctuated but shown increase.

Possible conclusions: shift resources more to new illnesses

Illness Frequency by Type and Needs Level

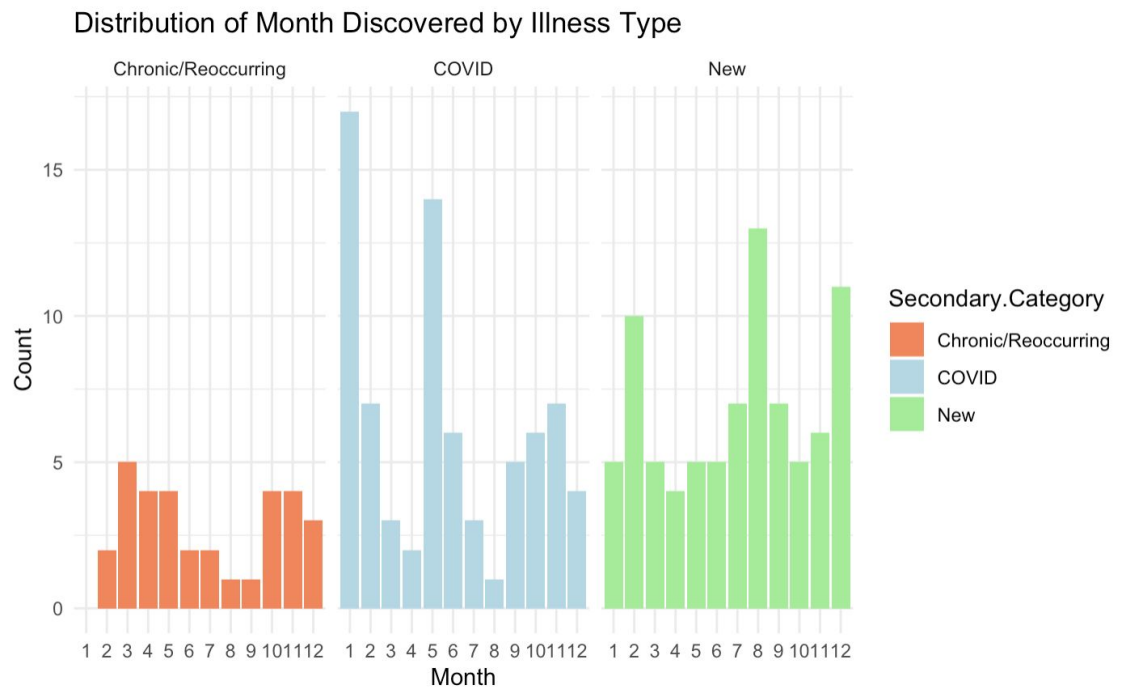


By chi-squared test, we find that the relationship between illness type and needs level is significant.

Applying a linear model reveals that whether or not the illness was COVID is significant in predicting needs level.

Notice that serious illnesses tend to have needs levels around 4 - 6 whereas for COVID the needs levels are around 2 - 4.

Illness Frequency by Type and Month Discovered



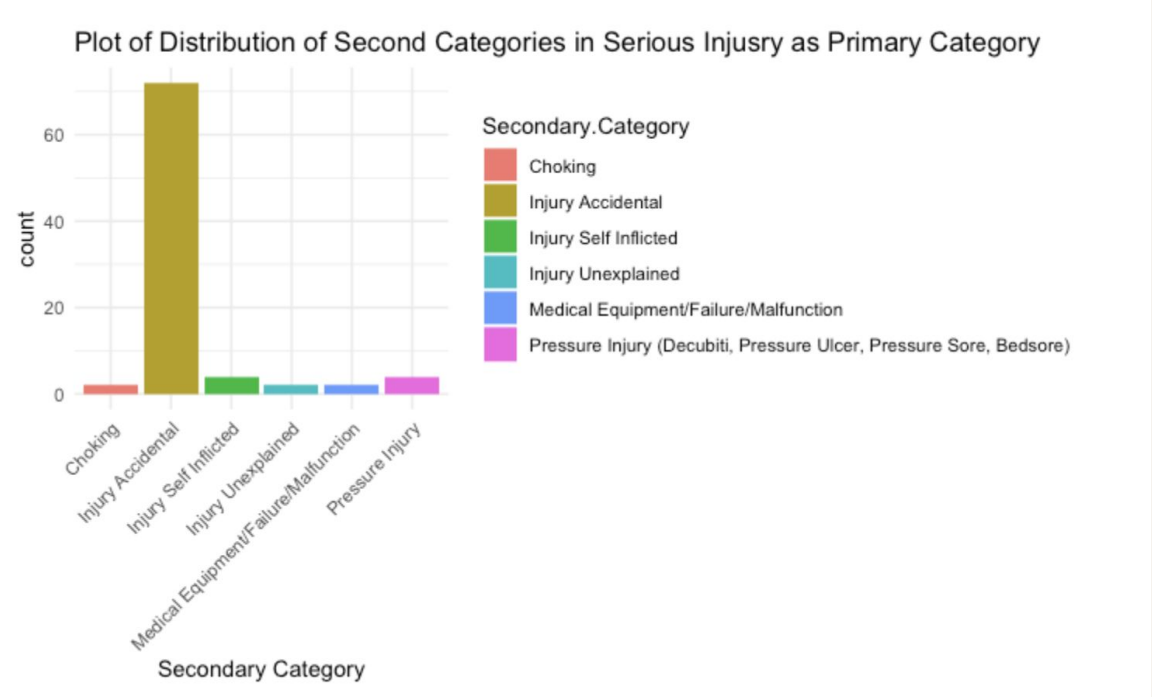
By chi-squared test, we find that the relationship between illness type and month discovered is significant.

Whether the patient had COVID, # of days between occurrence and discovery, and month discovered have significant relationships via linear model.

Serious Injury

Sophia Mou, Alva He

Serious Injury Frequency by Type

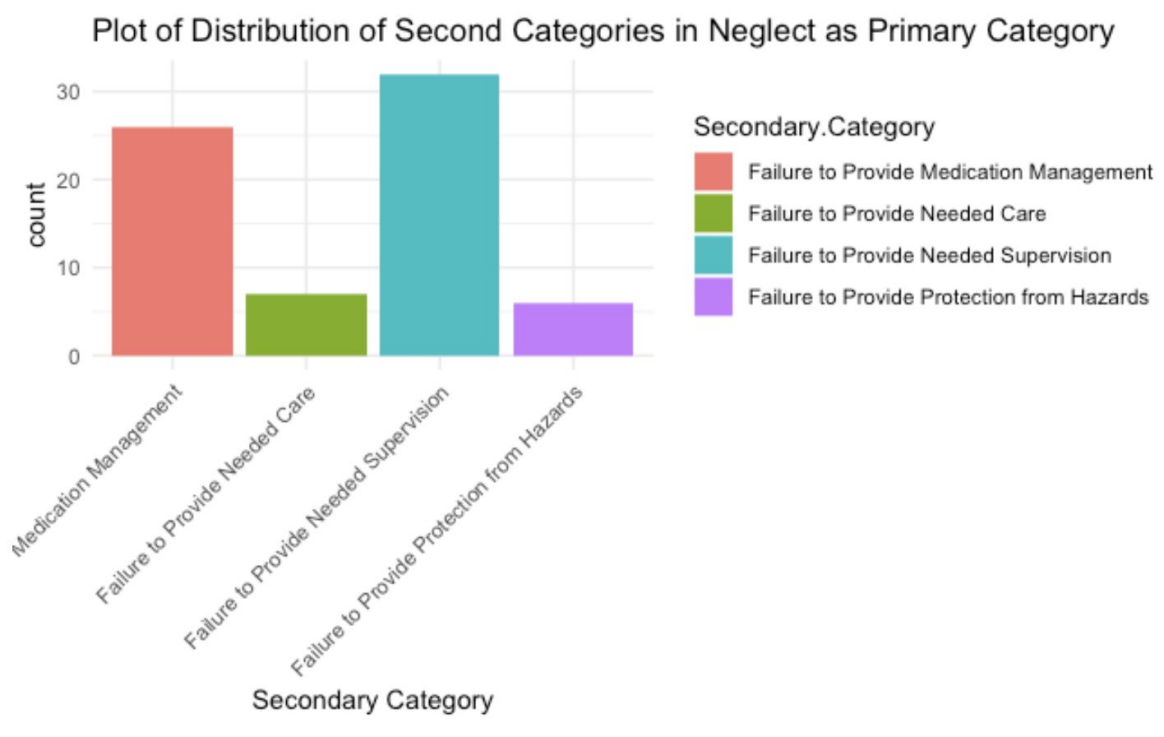


We found that the common secondary category within Serious Injury is Injury Accidental, followed by Pressure Injury. The rest categories have equal frequencies of occurring. There were no patterns of any of these injuries occurring at any specific time of a season.

Neglect

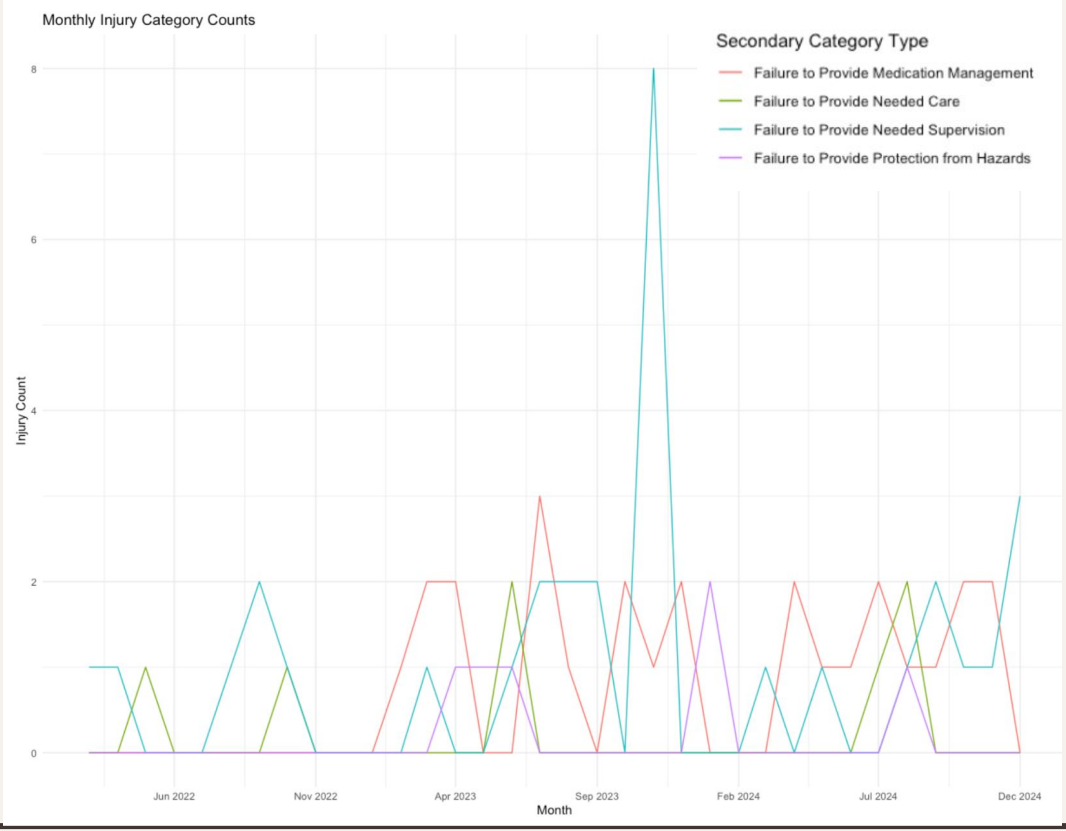
Sophia Mou

Neglect Frequency by Type



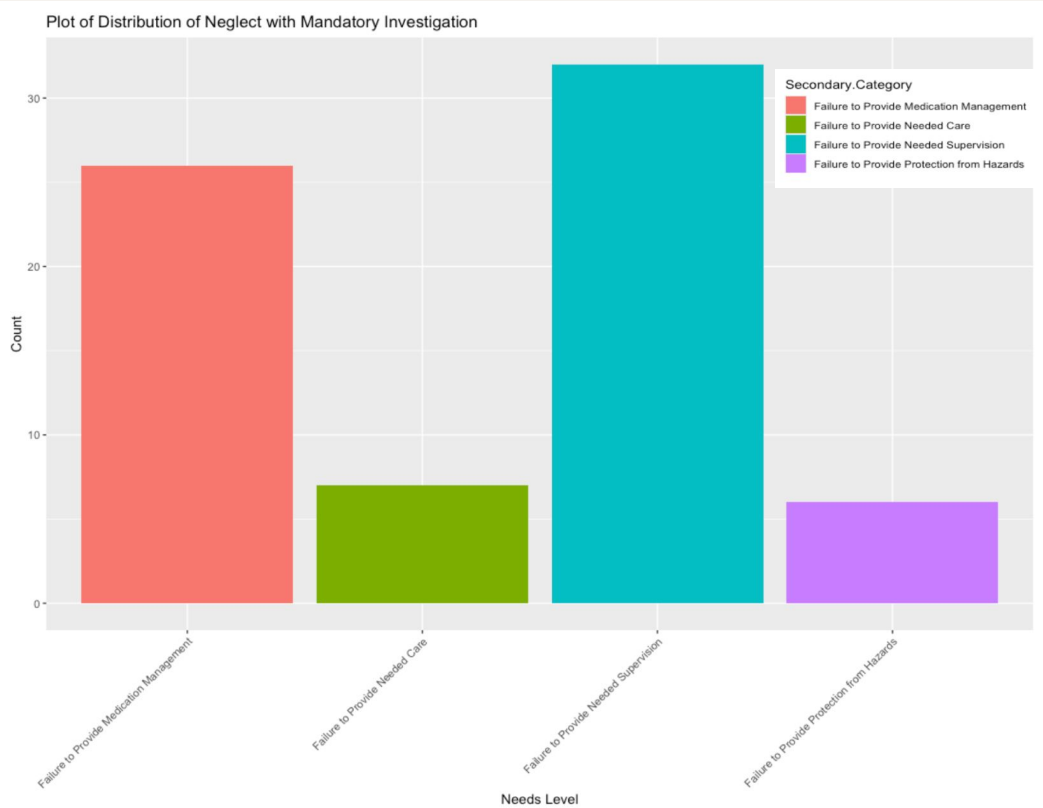
We found that the common secondary category within Neglect is Failure to Provide Needed Supervision, followed by Failure to Provide Medication Management, leading to possibly more personal management needed.

Neglect Frequency by Needs Level



This plot shows the occurrence of Neglect across time between 2022 and 2024. There are more cases of **failure to provide needed supervision** at the end of 2023 and 2024, which makes sense because most people are on holidays, so more attention during that time would definitely help reduce the cases.
There are no obvious trend of a certain type of Neglect occurring in a specific season.

Neglect & Mandatory Investigation

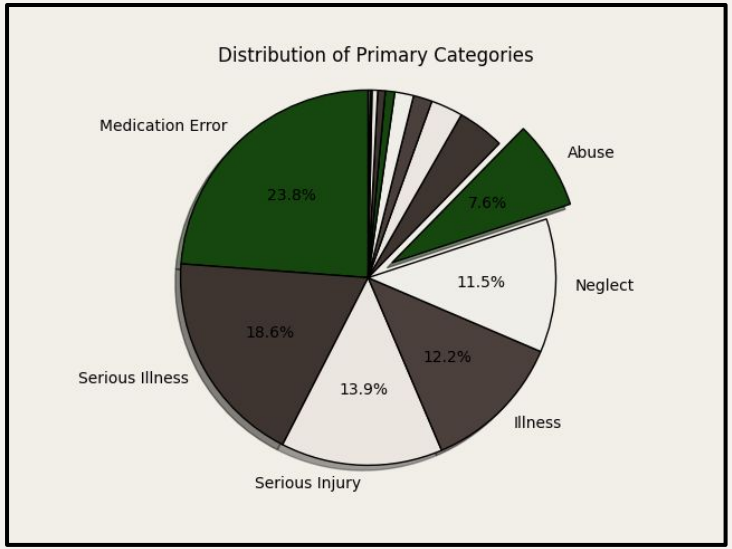


Neglect is also the primary category with the most mandatory investigation, with most of them being failure to provide medical management and failure to provide needed supervision. Hence, these two categories might be something we want to focus on and try to avoid.

Abuse

Edward Brownhill

Basic Abuse Numbers

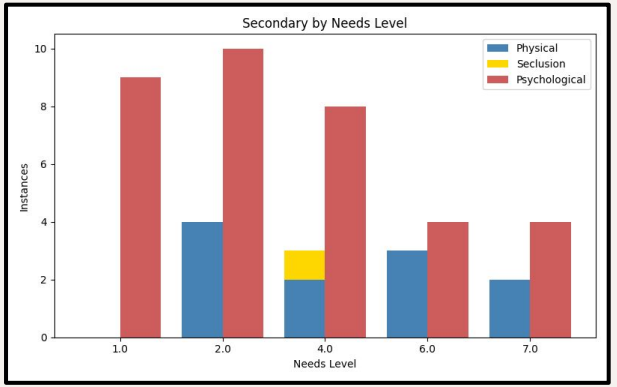


Secondary Category :

Psychological 35

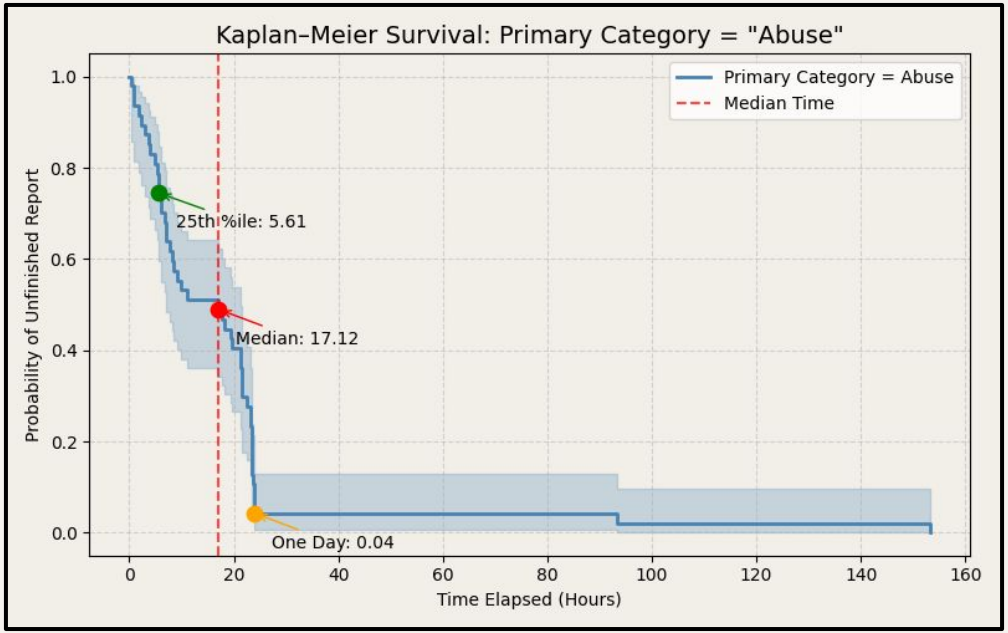
Physical 11

Seclusion 1



No strong evidence that abuse differs by need level, but **limited power to that statement, as we don't have tons of data**

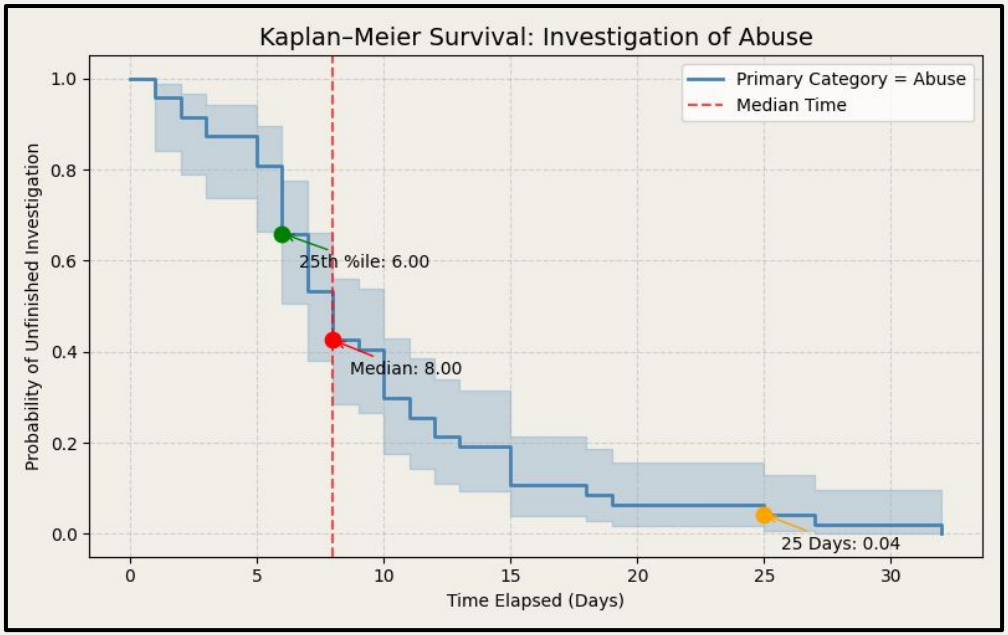
Abuse Reports over Time



Elapsed time, between occurrence and report, of abuse, **only of incidents of abuse that were reported**

No strong evidence that reporting time differs by type of Abuse.
This also holds for year, as we cannot say there is a trend in reporting time by year.
These conclusions are greatly influenced by the very limited amount of cases over the 3-year period.

Abuse Investigations over Time



Elapsed time, between start and end of investigation, of abuse, **only of incidents of abuse that were reported**

No strong evidence that investigation time differs by type of Abuse.
This also holds for year, as we cannot say there is a trend in investigation time by year.
These conclusions are greatly influenced by the very limited amount of cases over the 3-year period.

Overview of Less Common Incidents

Rights Violation (5 cases) :
Service & privacy issues, mid-range needs levels (2-4), investigations took 2-15 days.

Law Enforcement Activity (4 cases):
All cases involve one person (Needs Level 7), handled externally.

Site Closure (3 cases):
Mostly loss of utilities, no follow-up investigations.

Fire (1 case):
Single occurrence, no recorded follow-up.

Fisher's exact test:
When having a Need Level of 7, it is more likely (5 : 79) to fell into one of the categories above than when it has a Need Level lower than 7 (9 : 524).

Thanks!