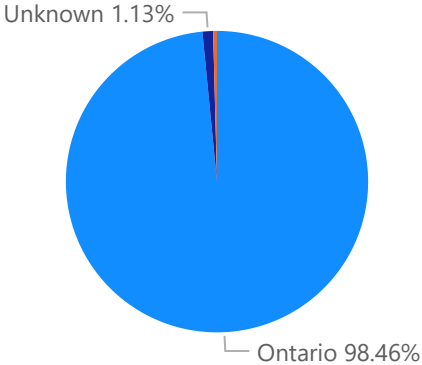
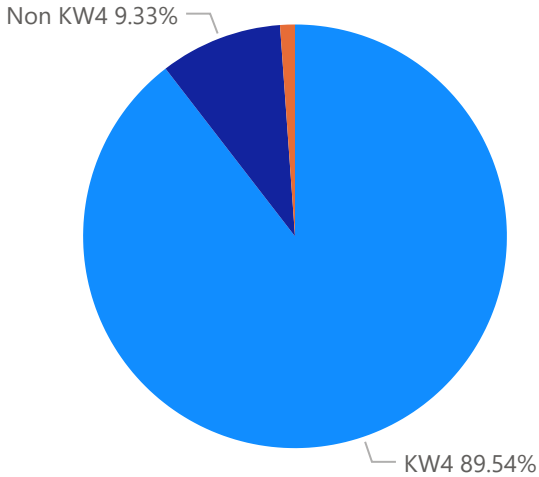


Sum of ED Visits by Province



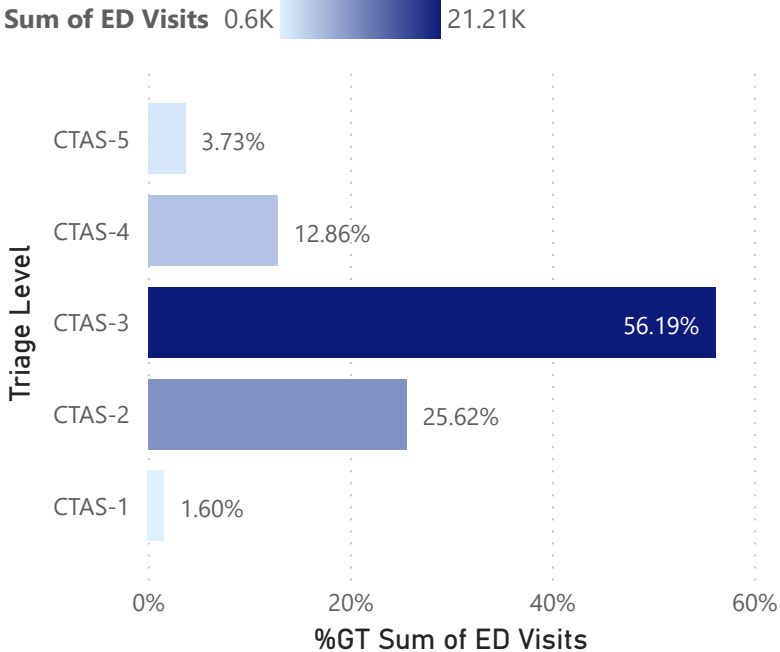
Province	Sum of ED Visits
Non Ontario	156
Ontario	37171
Unknown	427
<b>Total</b>	<b>37754</b>

Sum of ED Visits by Region

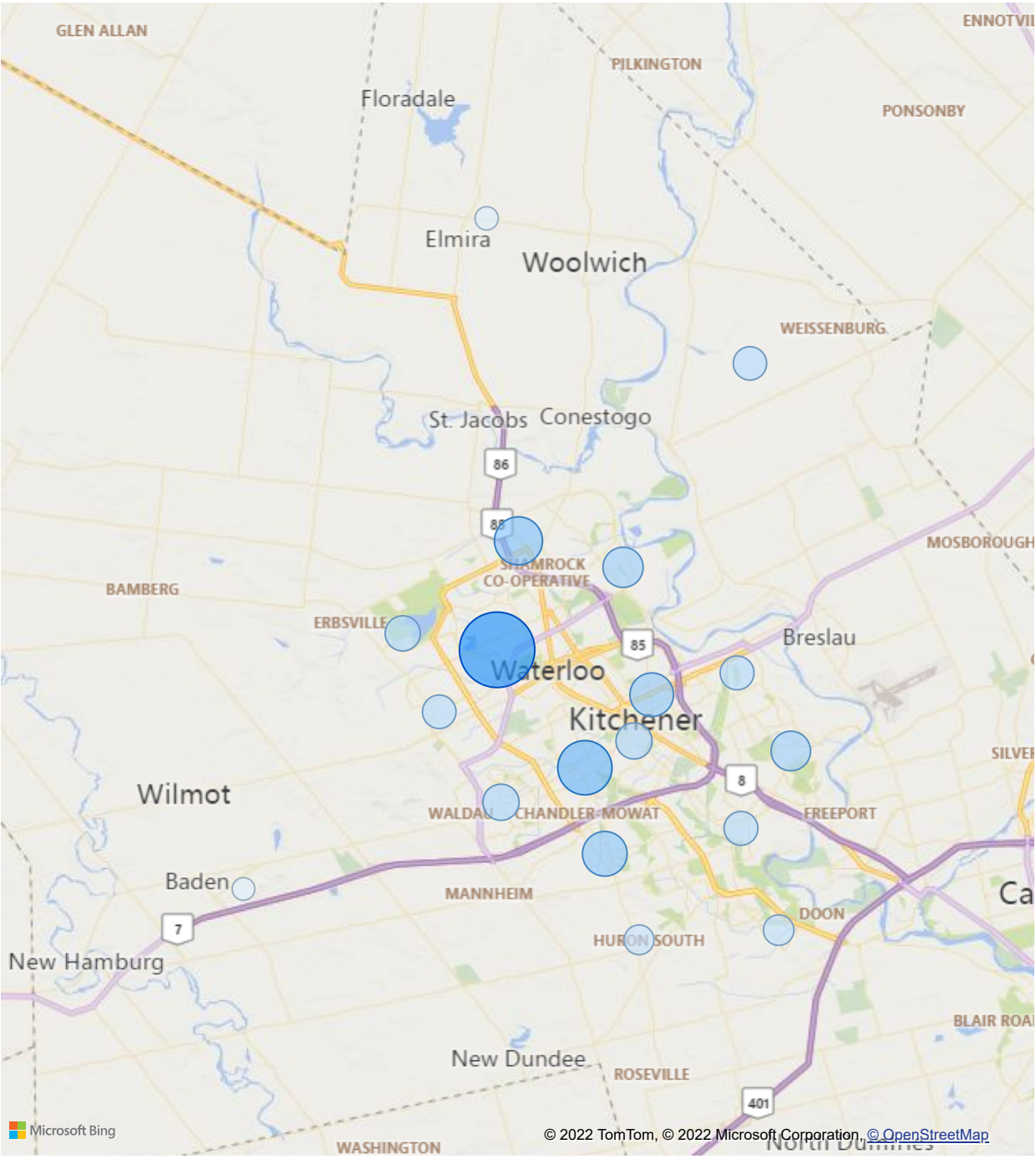


Region	Sum of ED Visits
KW4	33804
Non KW4	3523
Unknown	427
<b>Total</b>	<b>37754</b>

%GT Sum of ED Visits by Triage Level

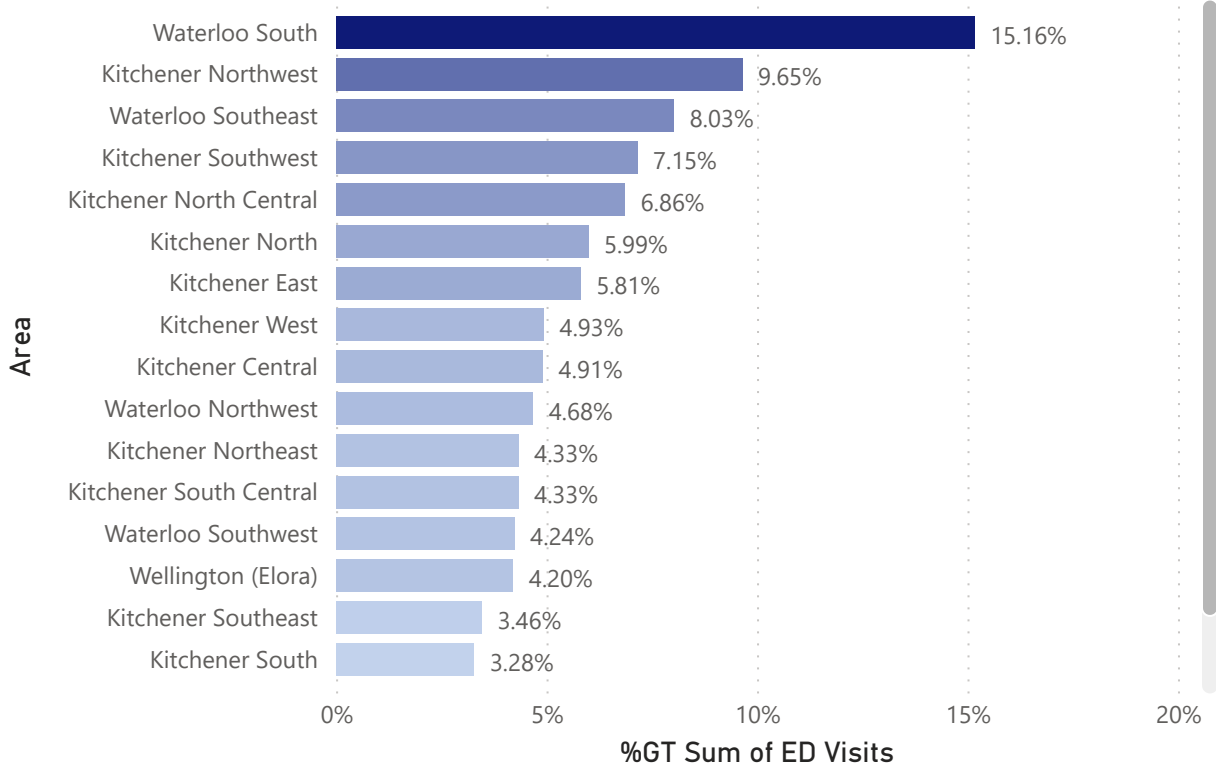


Triage Level	Sum of ED Visits
CTAS-1	604
CTAS-2	9671
CTAS-3	21214
CTAS-4	4856
CTAS-5	1409
<b>Total</b>	<b>37754</b>



%GT Sum of ED Visits by Area

Sum of ED Visits 77 833



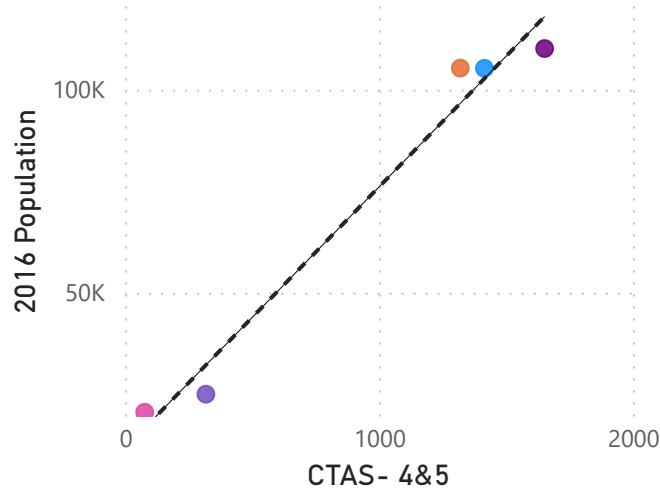
Triage Level	Sum of ED Visits	%GT Sum of ED Visits
CTAS-4	4269	77.70%
CTAS-5	1225	22.30%
Total	5494	100.00%

Area	Sum of ED Visits
Waterloo South	833
Kitchener Northwest	530
Waterloo Southeast	441
Kitchener Southwest	393
Kitchener North Central	377
Kitchener North	329
Kitchener East	319
Kitchener West	271
Total	5494

# 366K

Sum of 2016 Population

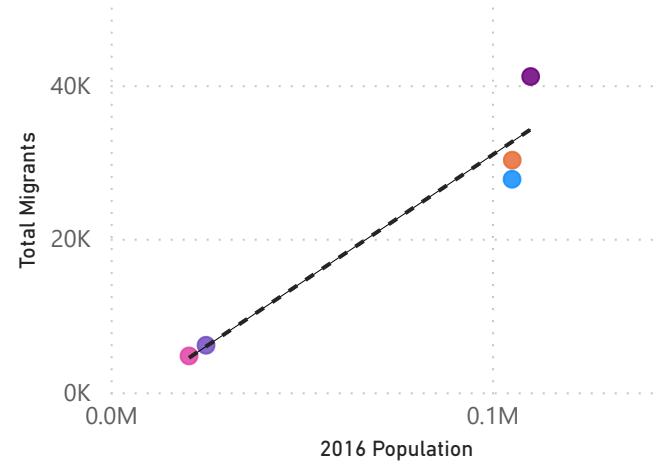
2016



# 11.66%

Population Increase

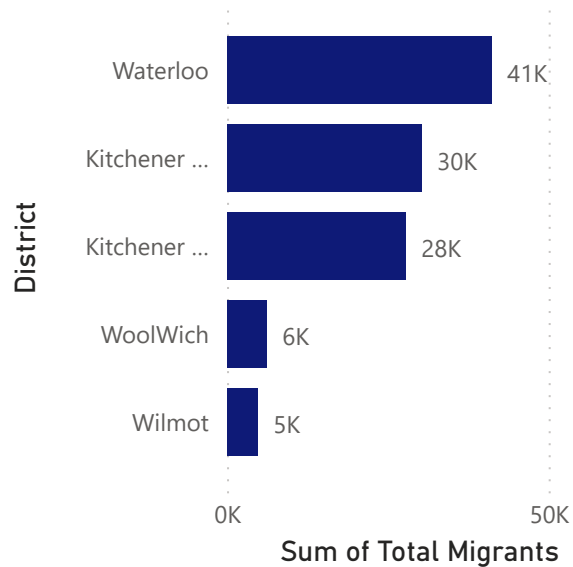
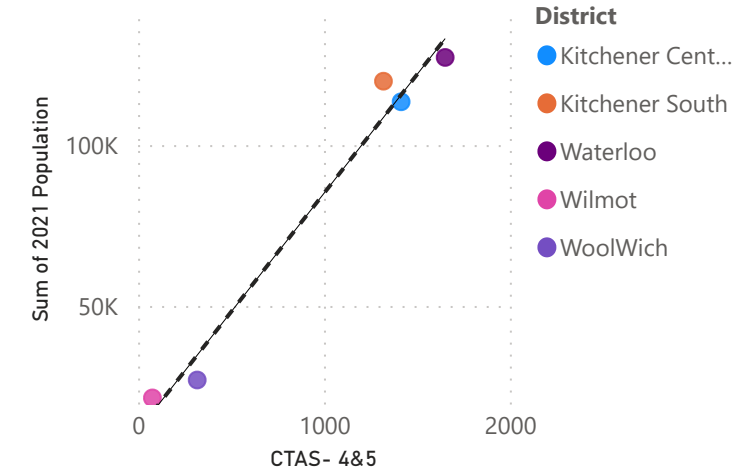
District, 2016 Population and Total Migrants



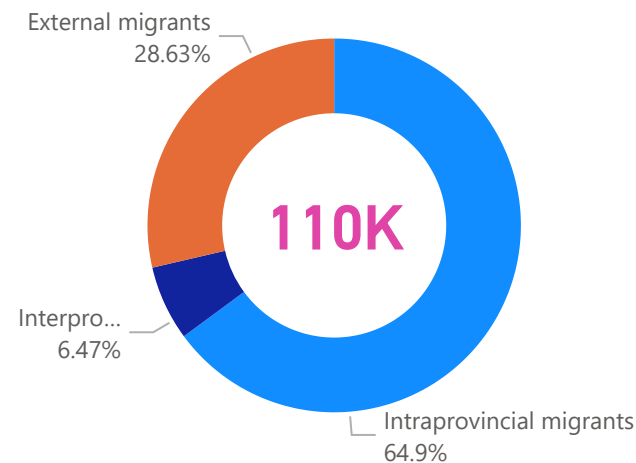
# 409K

Sum of 2021 Population

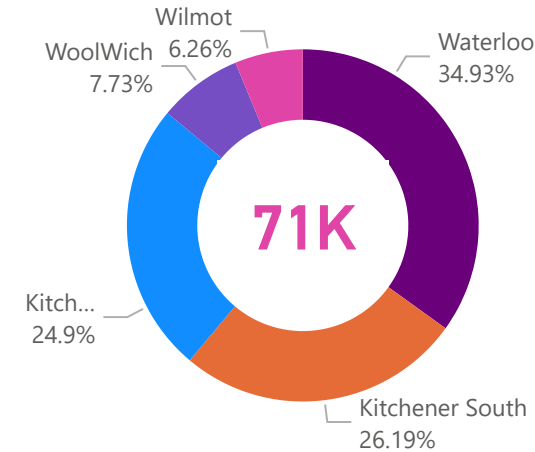
2021



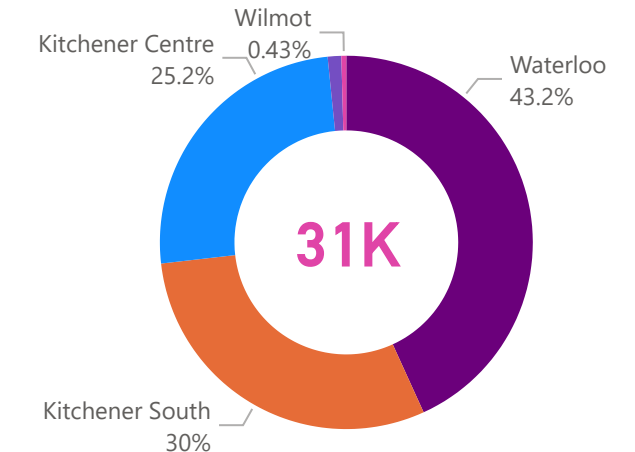
Migrants by Type



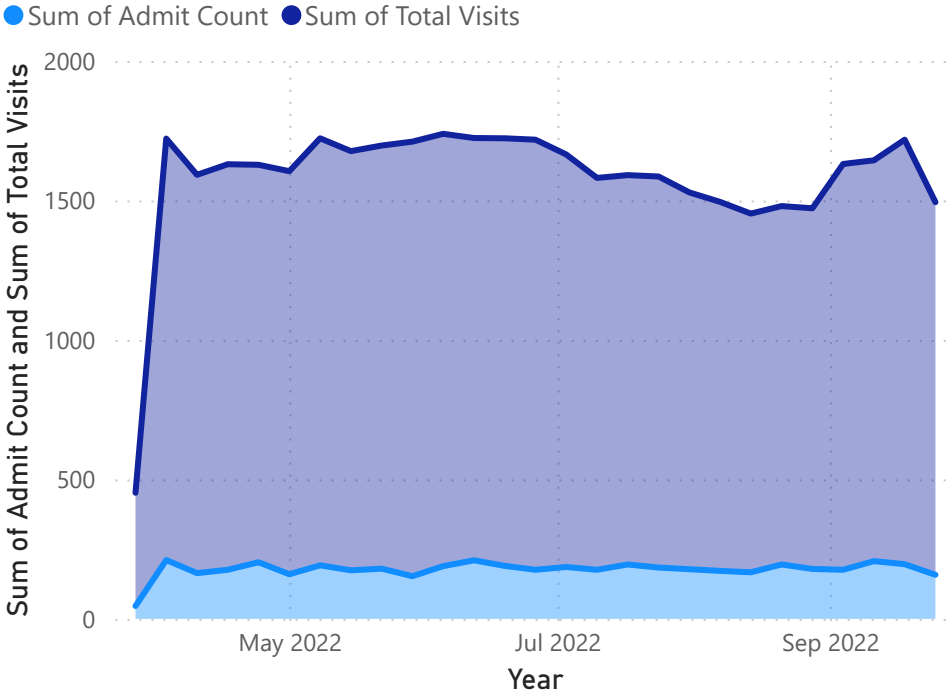
Intraprovincial migrants by District



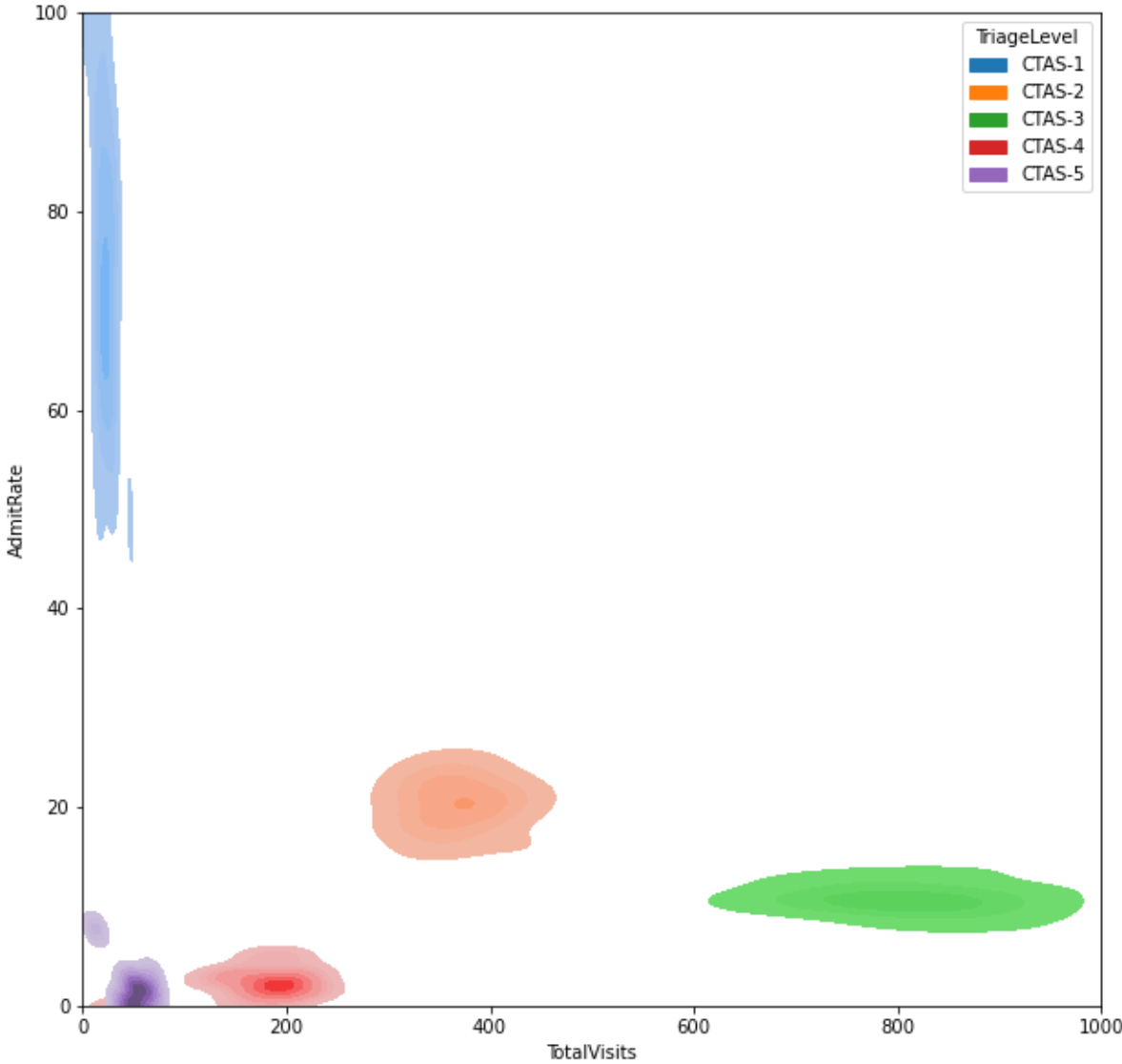
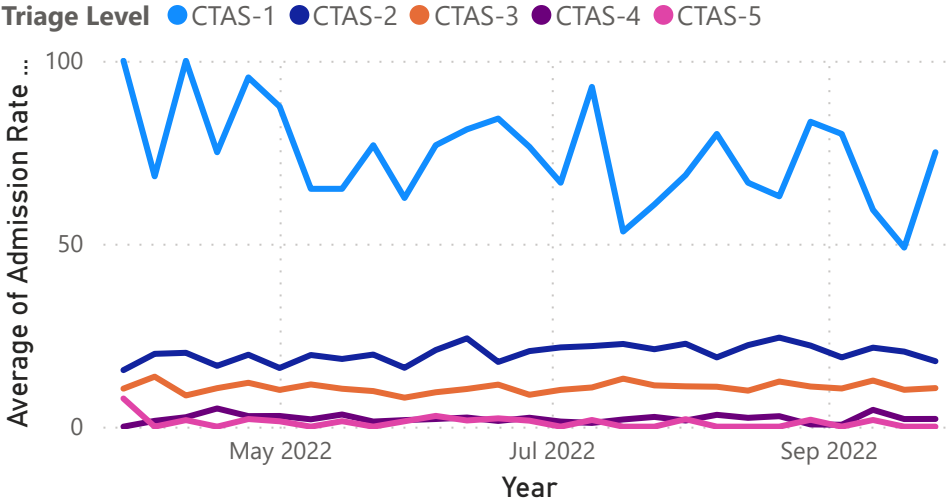
External Migrants by District



Sum of Admit Count and Sum of Total Visits by Year, Quarter, Month and Day



Average of Admission Rate (%) by Year, Quarter, Month, Day and Triage Level



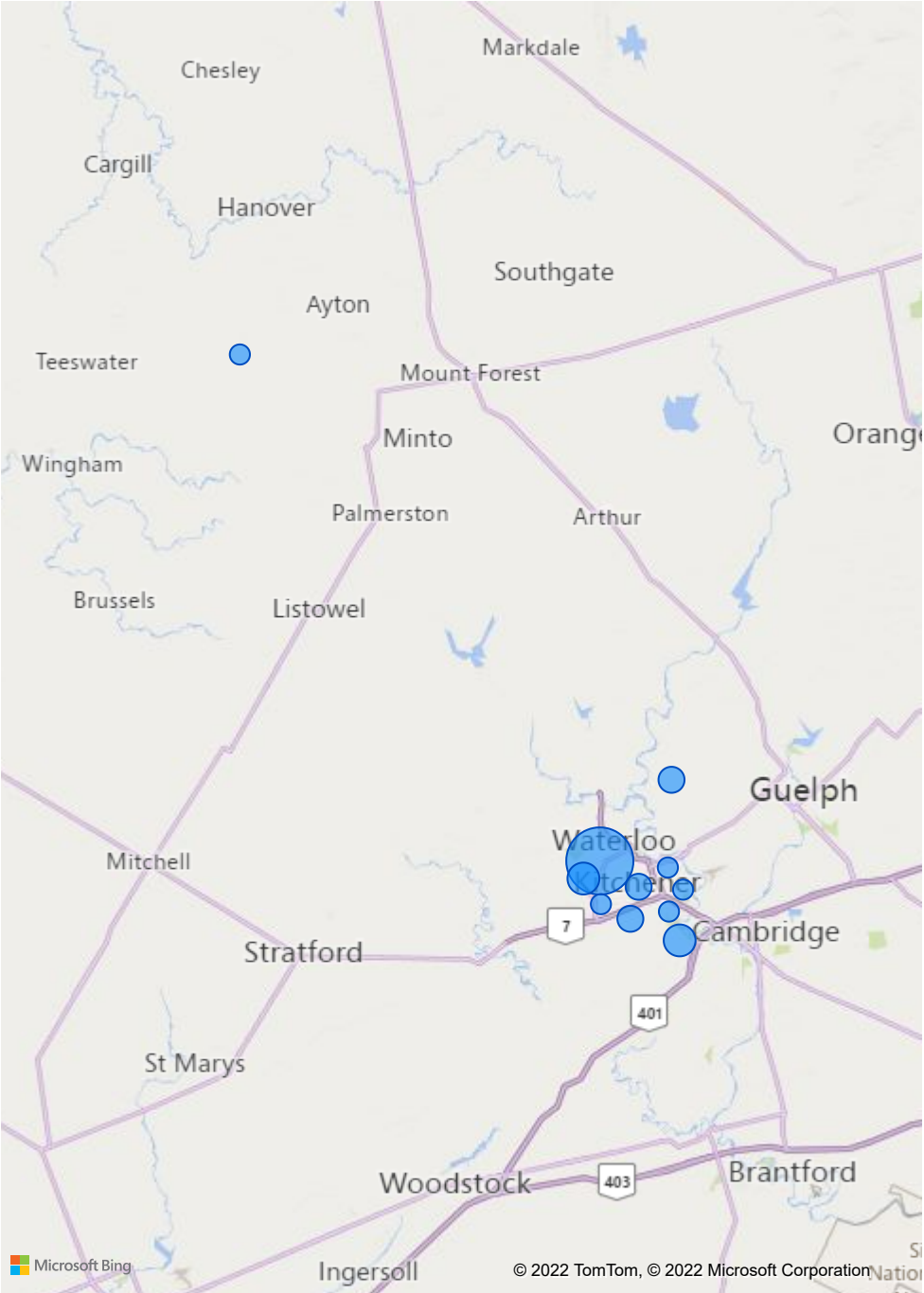
Triage Level	Average of Admission Rate (%)
CTAS-1	74.56
CTAS-2	20.07
CTAS-3	10.68
CTAS-4	2.19
CTAS-5	1.19

**Correlation Coefficient:**

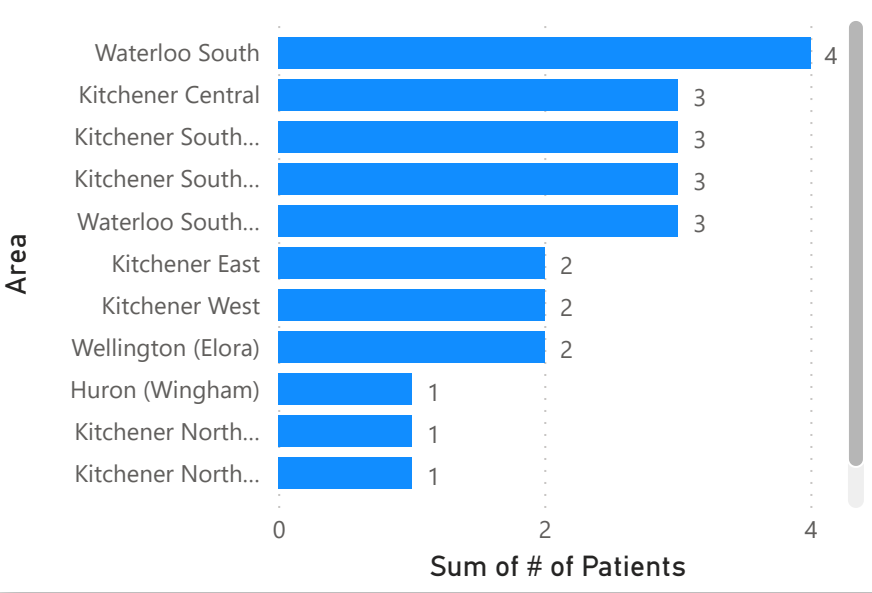
**AdmitRate vs Triage Level = -0.8330**



Sum of Num. of Patients by Latitude and Longitude

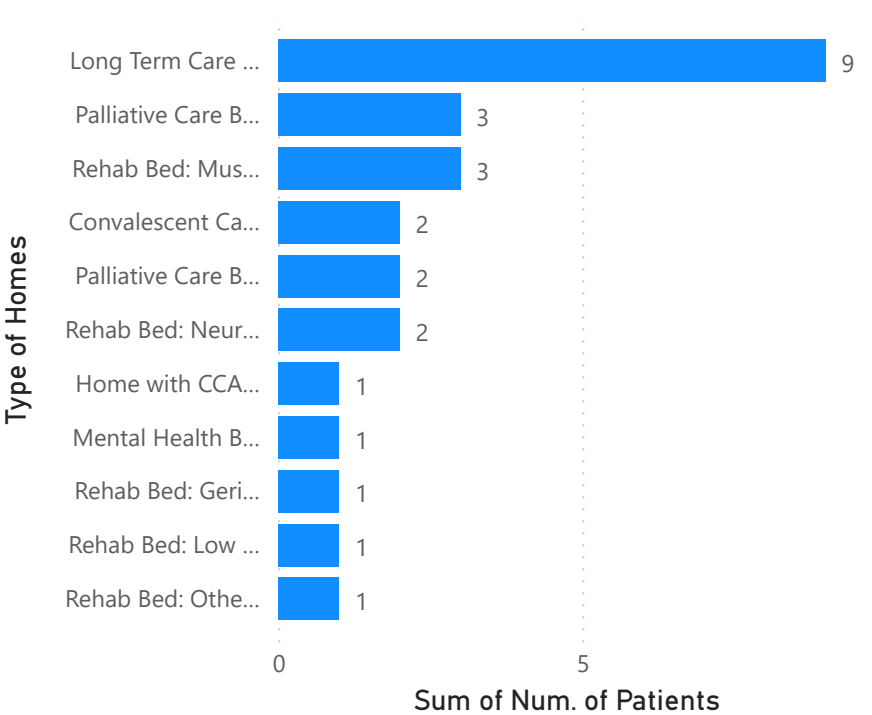


Sum of # of Patients by Area



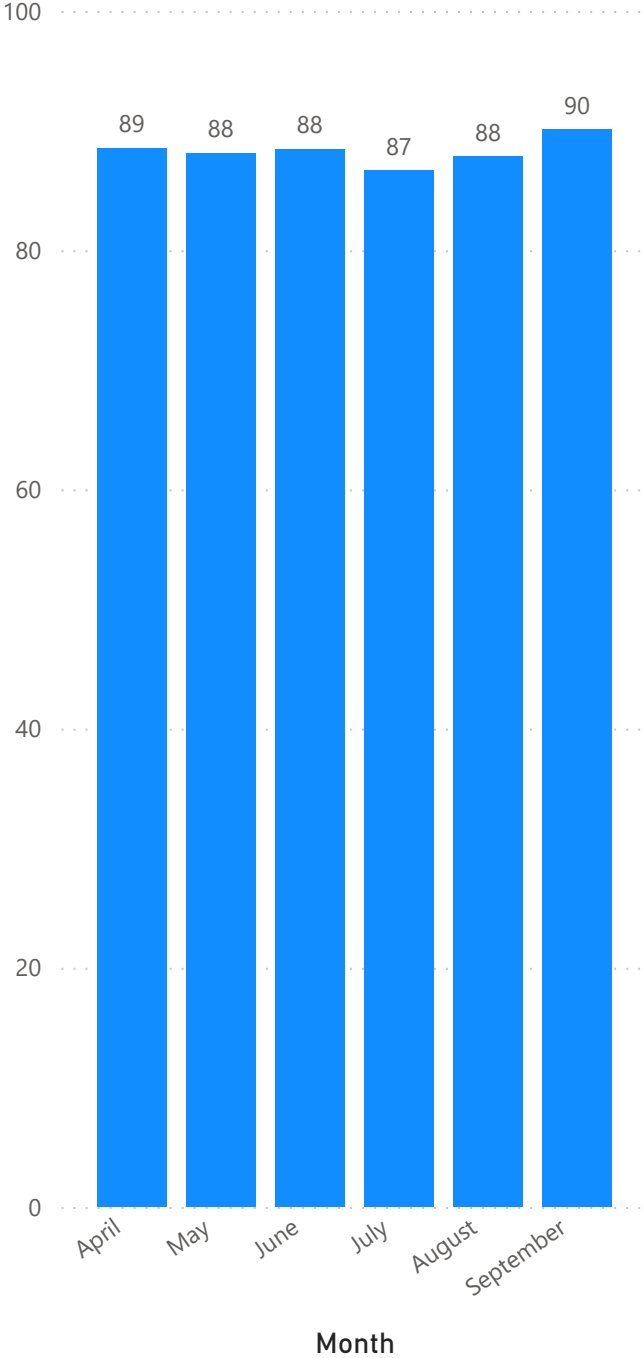
Area	Sum of # of Patients
Waterloo South	4
Kitchener Central	3
Kitchener Southeast	3
Kitchener Southwest	3
Waterloo Southwest	3
Kitchener East	2
Kitchener West	2
Wellington (Elora)	2
Huron (Wingham)	1
Kitchener Northeast	1
Kitchener Northwest	1
Kitchener South Central	1
Total	26

Sum of Num. of Patients by Type of Homes

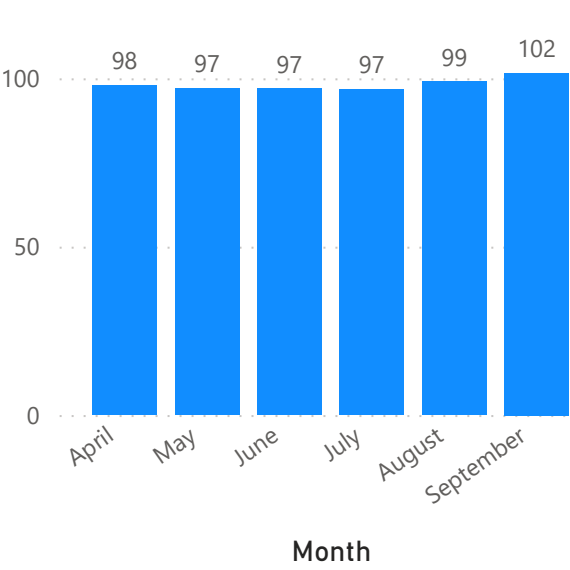


Type of Homes	Sum of Num. of Patients
Home with CCAC Services	1
Mental Health Bed: Inpatient Psychiatric Services	1
Rehab Bed: Geriatric	1
Rehab Bed: Low Tolerance Long Duration Rehabilitation (LTLD)	1
Rehab Bed: Other Rehabilitation	1
Convalescent Care Bed	2
Palliative Care Bed: Palliative Hospital Placement	2
Rehab Bed: Neurological	2
Palliative Care Bed: Residential Hospice Care	3
Rehab Bed: Musculoskeletal (MSK)	3
Total	26

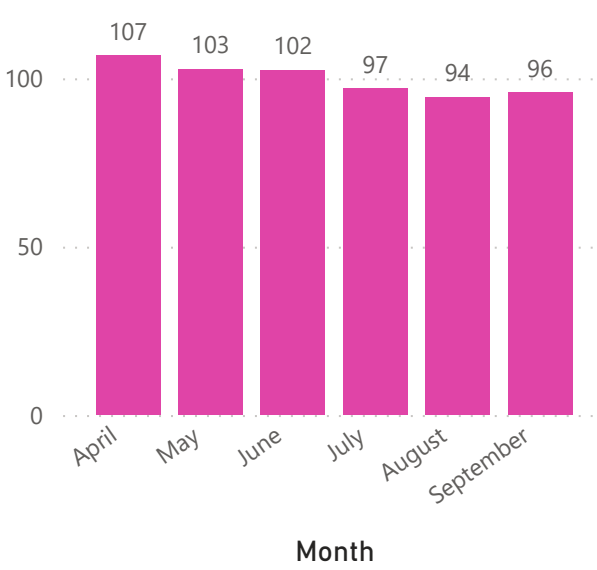
Overall Occupancy by Month



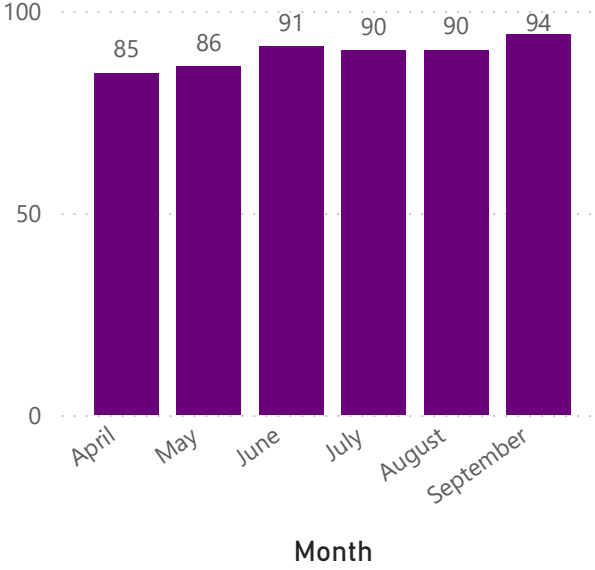
Medicine % Occupancy by Month



MH % Occupancy by Month

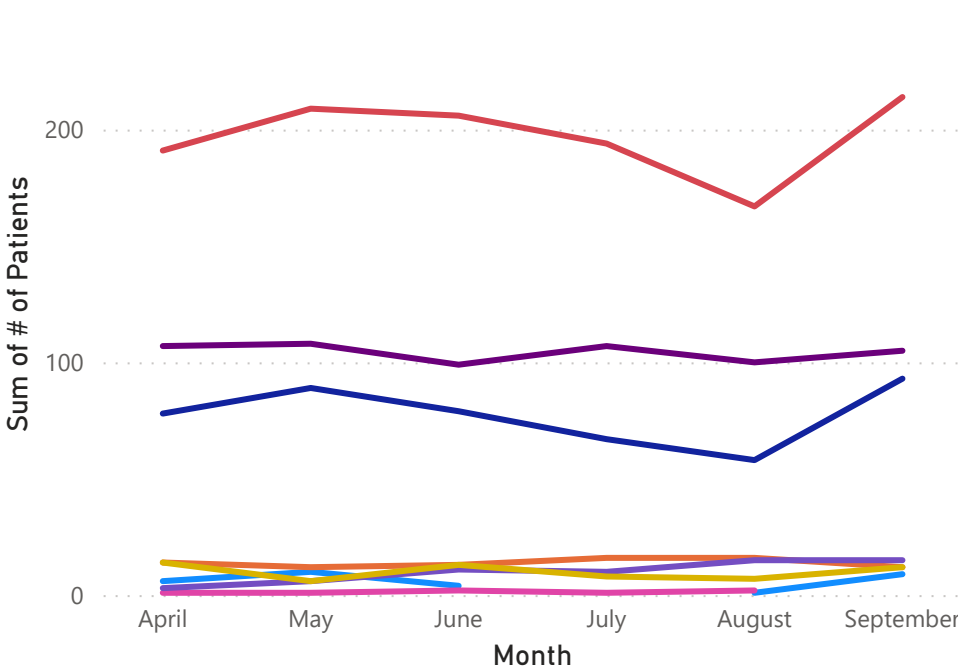


Surgery % Occupancy by Month

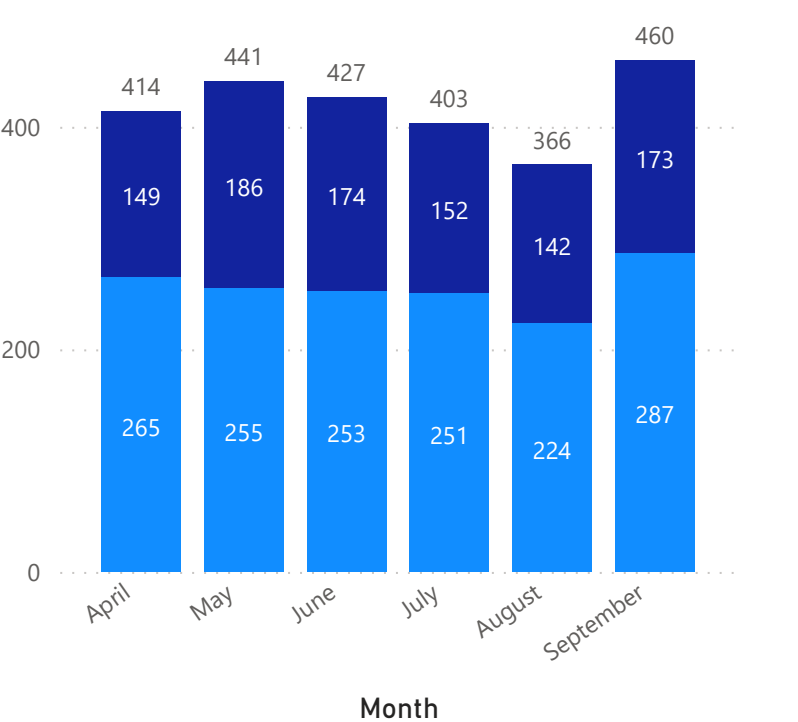


Sum of # of Patients by Month and Program

Program CAIP Children Critical Care Medicine NICU Oncology



Sum of LOS 1 Day Sum of LOS 2 Days



## Findings

1. **Geography:** 98.5% are resident in Ontario and 89.5% of them are in KW-4
2. **Acuity:** CTAS-3 take the highest percentage of ED visits, while CTSA-4&5 share 16.6% of the total
3. **Inside KW4:** Waterloo South has the highest ED visit of 11.8% and 15.1% of CTAS-4&5
4. **Population:** Population increase of 11.7% was observed in KW4 between 2016 and 2021. Waterloo city has the highest percentage increase of 15.5%
5. **Population:** CTAS-4&5 visits are highly correlated with the 2021 population which indicates that the ED visits figures are representative of the population
6. **Immigration:** Waterloo City has the highest immigration count in the last 5 years- 41k representing 37.4% of the total
7. **Immigrants Correlation:** Immigration and 2016 population data were found to be highly correlated for the cities and townships except for Waterloo city which has higher five-year immigrants compared to its population in 2016- This variation is attributed to presence of schools in Waterloo city
8. **Immigration Types:** Intraprovincial immigrants form the majority of immigration counts into KW-4. 69.4% which are almost evenly shared by Kitchener Centre, Kitchener south and Waterloo
9. **External Immigrants:** 43% of external immigrants from outside Canada within the last 5 years settled in Waterloo city. International students most have been the major reason for this.
10. **Admission Rate:** The correlation between Admission Rate and ED Visits by CTAS levels is in line with what was found in literature. The KDE plot gives more illustration on the data points clusters
11. **Occupancy:** Surgery monthly occupancy has an increasing trend for the last 6 months, other programs are relatively flat
12. **LOS:** LOS<1 and LOS<2 days are considerably flat for the last six months except for August that was low compared to other months.

