Description of a cohort of individuals with diagnostic codes for Autism in Alberta between 2002 - 2022

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Background: In Canada, approximately 1 in 37 children are diagnosed with Autism, highlighting the importance of detailed cohort profiling to enhance healthcare and social service planning.

Methods: Utilising administrative health data from Alberta Health services, we describe a cohort of individuals with diagnostic codes for Autism in Alberta from 2002 to 2022. Autism was defined as any of the two diagnostic codes listed with the physician billing record indicating Autism: ICD-9 codes 299.0, 299.8; ICD-9 code 299.00 for Autistic disorder, current or active state is a medical classification as listed by WHO under the range - OTHER PSYCHOSES (295-299) for all in Alberta between 2002 and 2022.

Results: Diagnosis is clustered in the urban centres of Edmonton, Calgary and Red Deer (figure 1). Between 2012-2022 the number of those autism diagnosis codes in Alberta has risen exponentially (figure 2).The median age of diagnosis remained steady at around 5 years between 2002 and 2012. However, a notable rise in both the median age at diagnosis and the number of diagnoses was observed in 2012 (figure 3). More males than females have diagnosis codes for Autism. General practitioners recorded the highest number of codes for Autism.

Conclusions: This work highlights a significant increase in autism diagnostic codes in Alberta over the past two decades, particularly in urban centers. The consistent median age of diagnosis until 2012, followed by a marked increase thereafter, suggests shifts in diagnostic practices or increased awareness. The gender disparity, with more males diagnosed than females, aligns with existing literature.

The higher frequency of diagnostic coding among specialty general practitioners underscores the need for targeted training and resources. These findings underscore the importance of strategic planning in healthcare and social services to accommodate the rising prevalence and evolving demographic trends of autism diagnoses
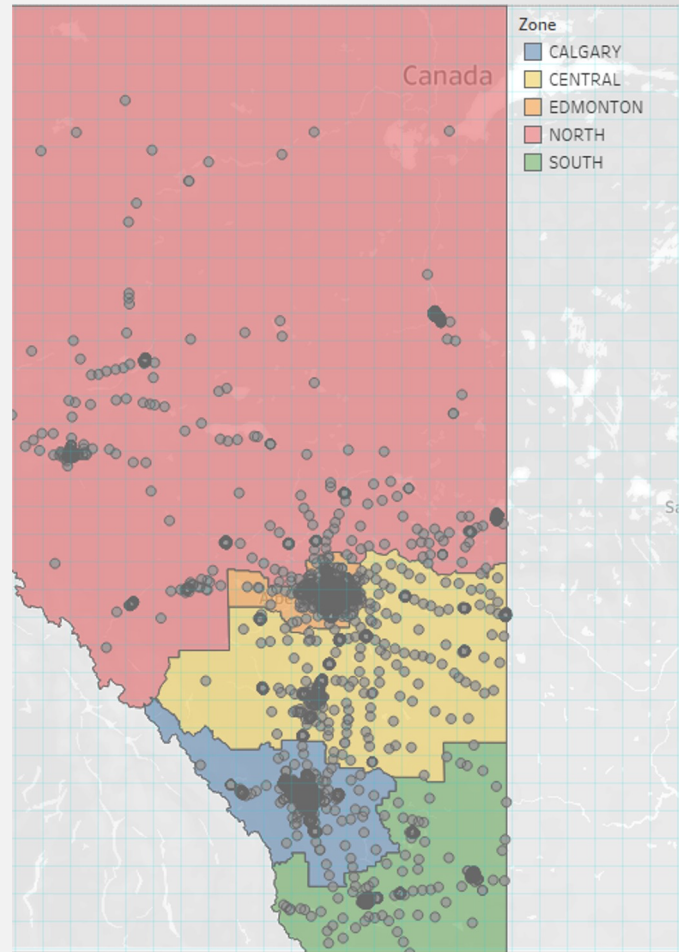
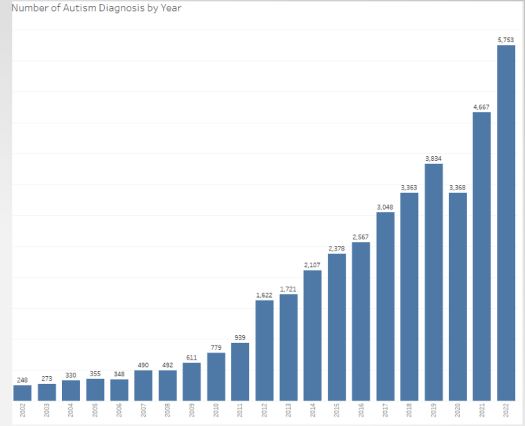

Figure 1: Map of Diagnostic codes for Autism

Figure 2: Autism Diagnostic codes by year

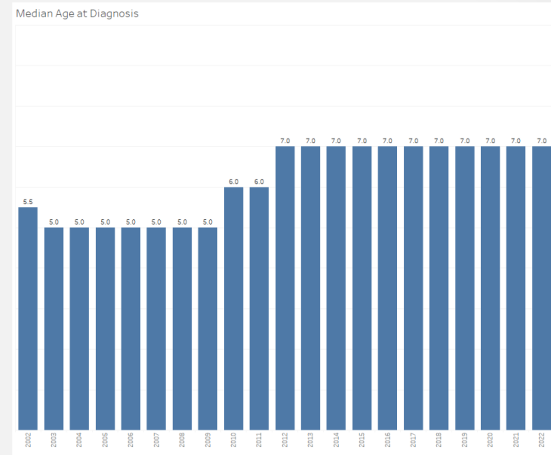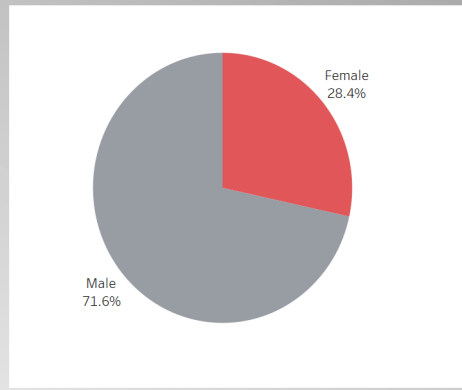**Figure 3: Median age of diagnostic code by year**
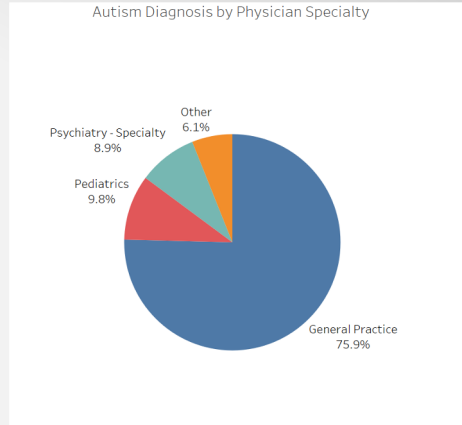

Figure 4: Distribution of Autism coding by gender

Figure 5: Autism Diagnostic codes by Specialty