

Background

- Type 2 diabetes (T2D) in youth is rising
 - Annual increase in incidence of 4.8% between 2002 and 2012 (US data)
- Canadian Surveillance Data reported minimum annual incidence of 1.54/100,000 in < 18 years
 - 0.7/100,000 in the Atlantic Provinces

Objectives

- To examine the incidence of T2D in Nova Scotia (NS) youth age 0-19 years, from 1994 to 2018
- To describe the demographics in this population

Methods

- Diabetes Care Program of NS (DCPNS) Registry
 - Population based records for all pediatric cases of diabetes (0-19 years) in NS since 1992
- Incidence of T2D (95% confidence intervals [CI]) calculated per 100,000 population for 5-year periods from 1994-1998 to 2014-2018 based on population estimates (0-19 years) from the national census
- Proportions were calculated for demographic variables and compared to corresponding values for the population with Type 1 diabetes (T1D)

Results

- 249 cases of T2D occurred among NS youth between 1994 and 2018
- Incidence increased between 1994-1998 and 1999-2003 after which it stabilized
- A higher proportion were female (55%) contrary to T1D (44%)

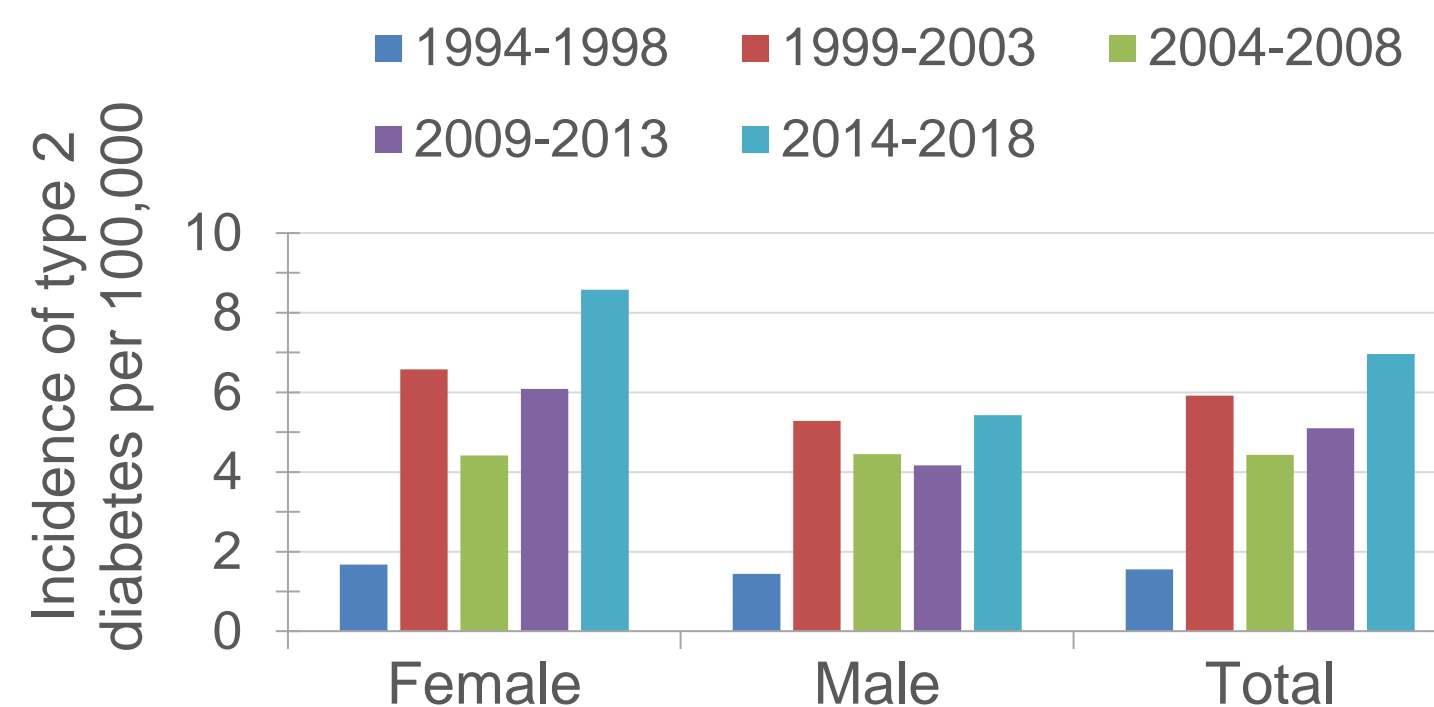
Incidence T2D Age 0-19 years (N = 249)

Years	Incidence	95% CI
1994-2018	4.66	4.08, 5.23
1994-1998	1.55	0.85, 2.25
1999-2003	5.92	4.51, 7.33
2004-2008	4.43	3.16, 5.70
2009-2013	5.10	3.68, 6.51
2014-2018	6.96	5.27, 8.66

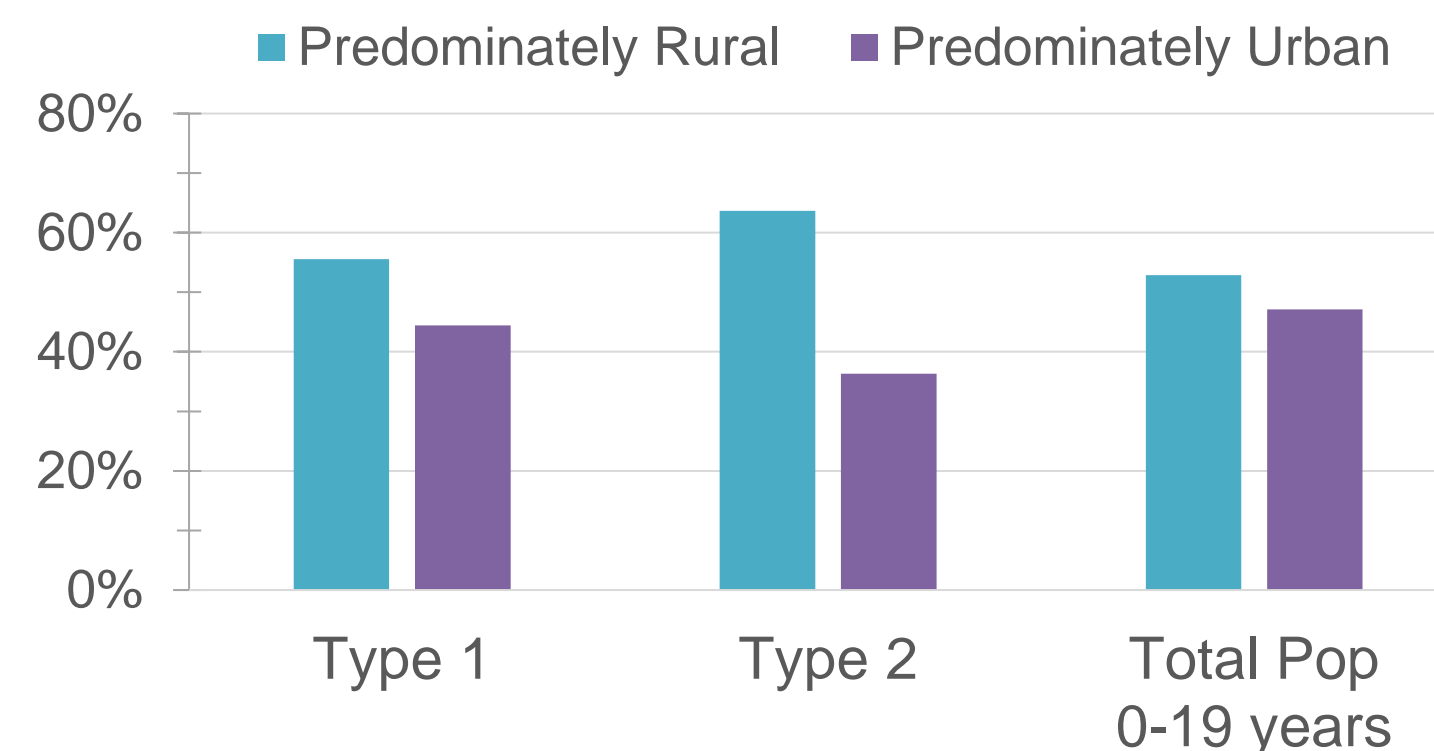
Sex Differences between T1D and T2D in NS Youth

		Female	Male	Total
T1D	Count	708	893	1601
	% within T1	44.2%	55.8%	
T2D	Count	138	111	249
	% within T2	55.4%	44.6%	

Incidence Trends for Sex by 5-Year Time Period



Geographic Distribution of Cases vs Total Population 0-19 years



Conclusions

- The incidence of T2D in NS youth is higher than past reports for our region
 - Likely related to missed cases in past reports and inclusion of cases 0-19 years in our report
- Similar to US trends, we found a marked rise in incidence (2.9-4.5 times higher) between 1994-1998 and 1999-2003, at which point it stabilized
- Consistent with the literature, we found a higher representation of females in pediatric T2D compared to T1D
- There was over-representation of youth with T2D living in predominantly rural areas identifying a need for targeted prevention programs in these regions

References

- Divers J, Mayer-Davis EJ, Lawrence JM, et al. Trends in Incidence of Type 1 and Type 2 Diabetes Among Youths — Selected Counties and Indian Reservations, United States, 2002–2015. *MMWR Morb Mortal Wkly Rep* 2020;69:161–165.
- Type 1 diabetes incidence and prevalence trends in a cohort of Canadian children and youth. Fox DA, Islam N, Sutherland J, Reimer K, Amed S.

Diabetes Treatment in First Year Post Dignosis

	Insulin +/- other agents	Non-Insulin	Missing	Total
Count (%)	59 (23.7)	186 (74.7)	4 (1.6)	249 (100)

Combination of Treatment Across All Visits

Count (%)	125 (50.2)	113 (45.4)	11 (0.04)	249 (100)
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T1 more likely to be male, T2 more likely to be female.

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