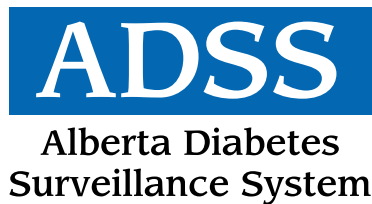


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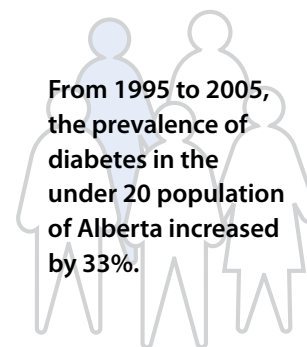


## Diabetes and the Under 20 Population in Alberta

**I**n the Alberta Diabetes Atlas 2007, we only included trends in the adult population over the age of 20 years. We reported that the prevalence of diabetes increased from 3.8% in 1995 to 5.3% in 2005, a 40% increase, with approximately 12,000 new cases identified among the adult Albertan population in 2005. We have recently broadened our surveillance methods to cover the full population, allowing us to report on trends in the under 20 population. We have now established a working group for this population and are now able to begin reporting on

them, beginning with this Newsletter. Unfortunately, the trends are similar in younger Albertans as they are in adults. Here are some of the number we have observed:

*(continued on page 2)*



**From 1995 to 2005, the prevalence of diabetes in the under 20 population of Alberta increased by 33%.**

### What's New: ADSS Alberta-Wide Dissemination Plan

Our Alberta Diabetes Atlas 2007 is of great interest to policy makers at the regional and provincial levels, health care providers, as well as different community and advocacy groups. Although we mailed 700 copies of the Atlas out provincially and nationally, we know it is still necessary to actively disseminate this information in other ways.

At the end of August, we (Dr. Jeffery Johnson and Ms. Stephanie Vermeulen) began a face-to-face dissemination strategy for the ADSS. We visited Lethbridge to make 5 different presentations to various groups within the Chinook Health Region. As an active dissemination strategy, we used these opportunities to communicate the ADSS findings to community stakeholders, as well as an exchange of ideas and brainstorming about how to use this information to improve

the quality of care for people with diabetes.

We presented to the Chinook Health Regional Leadership and Primary Care Network groups, the Building Healthy Lifestyles team (nurses and dietitians), the public, and staff at the Chinook Regional Hospital. Of particular interest for these audiences was the ability of the ADSS to monitor trends in the cities and towns within the region. We know that local information can help local planning. For us, developing long-term partnerships with community stakeholders will help to improve our ability to monitor health care utilization and health outcomes to improve the quality of care for people with diabetes.

Be sure to check the ACHORD website to find out when we will visit a community near you.  
[www.achord.ca](http://www.achord.ca)

### Prevalence of Diabetes

The prevalence of diabetes in the under 20 population has been steadily increasing since 1995 and only slightly slowing down after 2002. From 1995 to 2005, prevalence increased from 0.17 to 0.23 per 100, or 33% (Figure 1). We estimated that there were over 1,900 individuals under 20 years old living with diabetes in Alberta in 2005. It is interesting that females tended to have higher prevalence of diabetes compared to males across the years. This difference has been noted

in some autoimmune diseases, such as thyroid, but not for type 1 diabetes. Within the current ADSS data, we are unable to classify cases as type 1 or type 2, but the majority of the younger cases will be type 1.

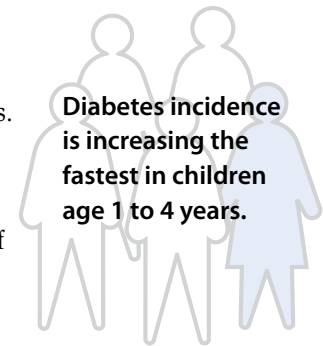
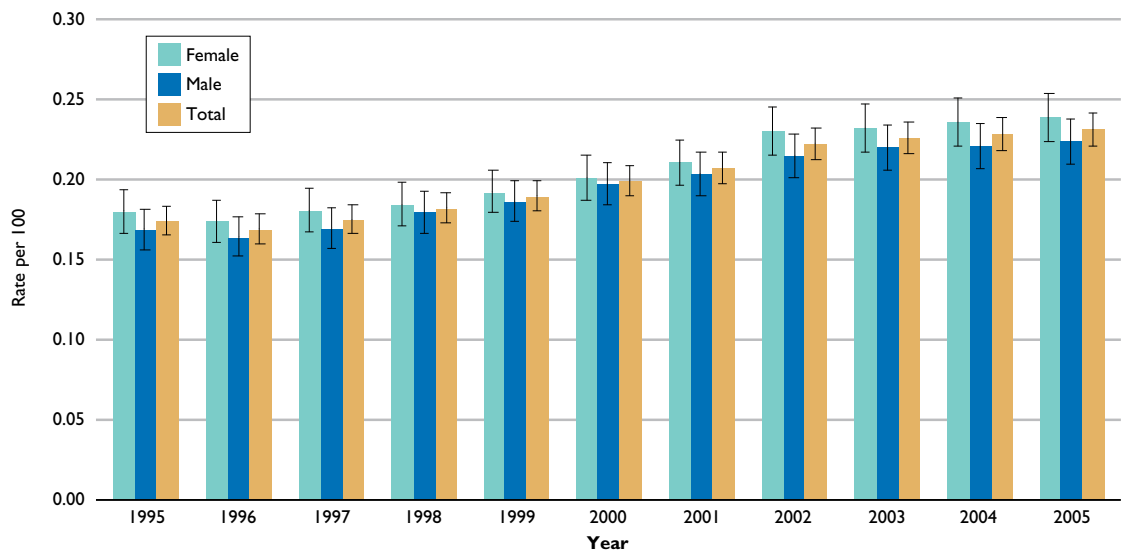


Figure 1 Crude Diabetes Prevalence Rates in the Under 20 year old Population, 1995-2005



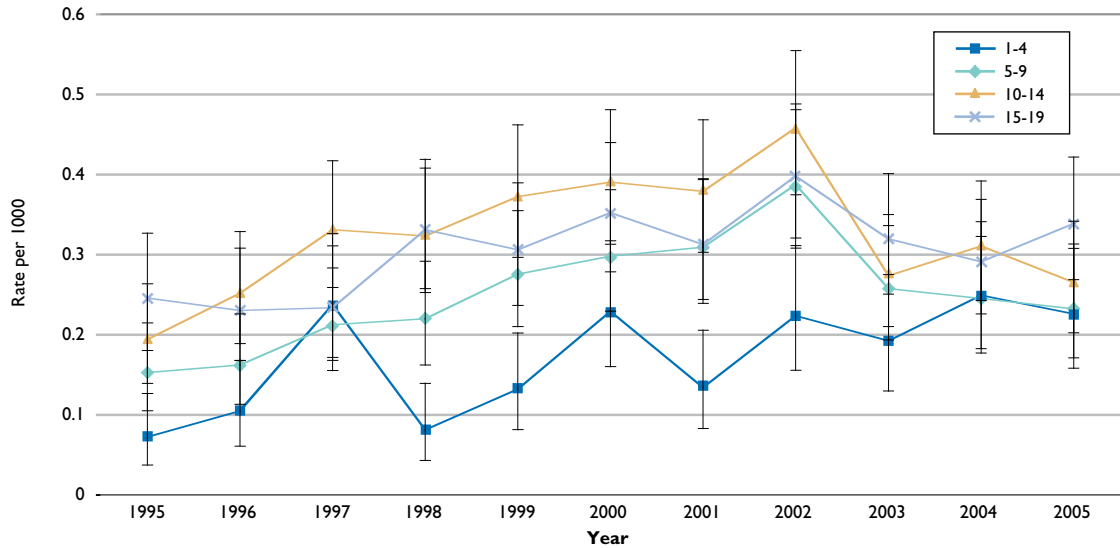
### Incidence of Diabetes

The incident rate of diabetes in the under 20 population increased from 0.17 per 1000 in 1995 to 0.27 per 1000 in 2005. In 1995, there were 133 new cases of diabetes under the age of 20 years, which increased to 224 new cases in 2005. This represents a 59% increase in incident diabetes rates among the under 20 year old population from 1995 to 2005.

However, if we report the increase from 1995 to 2002, we see a 123% increase in incident rates. There is a decrease in incidence after 2002, but after 2003, an increase in rates is seen again. This drop in rate may be an artifact of the change in the diagnostic coding system for hospitals which occurred between 2001/2002, switching from ICD-9-CM to ICD-10-CA codes. We are exploring this further using the administrative databases to see if the source for case identification changed during this time (i.e. physician visit versus hospital visit).

It is interesting to look at age-specific trends in incidence, to get a sense of where the majority of the increase is occurring (Figure 2). Diabetes incidence in the 1-4 year olds increased by 211% (0.07 to 0.23) from 1995 to 2005, while the increases were smaller in the other age groups. From what we understand about diabetes etiology, we can be fairly confident that these diabetes cases in the youngest age group are type 1. Diabetes incidence increased 52% among 5-9 year olds, 36% among 10-14 year olds and 38% among 15-19 year olds between 1995 and 2005. Nonetheless, a large increase was observed in all age groups through this decade. As we noted above, the drop in incidence in the older age groups after 2002 (Figure 2) may be an artifact of the change in coding of diabetes in the administrative data, something we are now exploring in greater detail.

Figure 2 Age-Specific Diabetes Incidence Rates, 1995-2005



### Regional Variation

Across the province, diabetes prevalence rates vary in the under 20 population, just as they did with the older adult population. For the under 20 population, Calgary, Capital and Aspen Health Regions all have lower diabetes prevalence than the overall provincial rate (Figure 3). Chinook Health Region has the highest rate of diabetes prevalence in the under 20 population, at 0.29 cases per 100. There may be different reasons for this, but it is likely that this

is a result of the increased rates of type 2 diabetes in the First Nations population in Chinook region, which was also seen in the adult First Nations population.

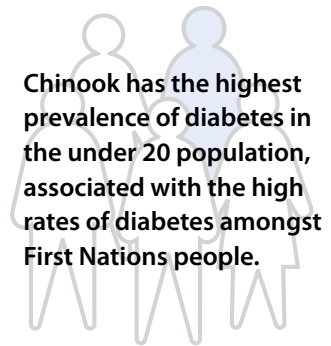
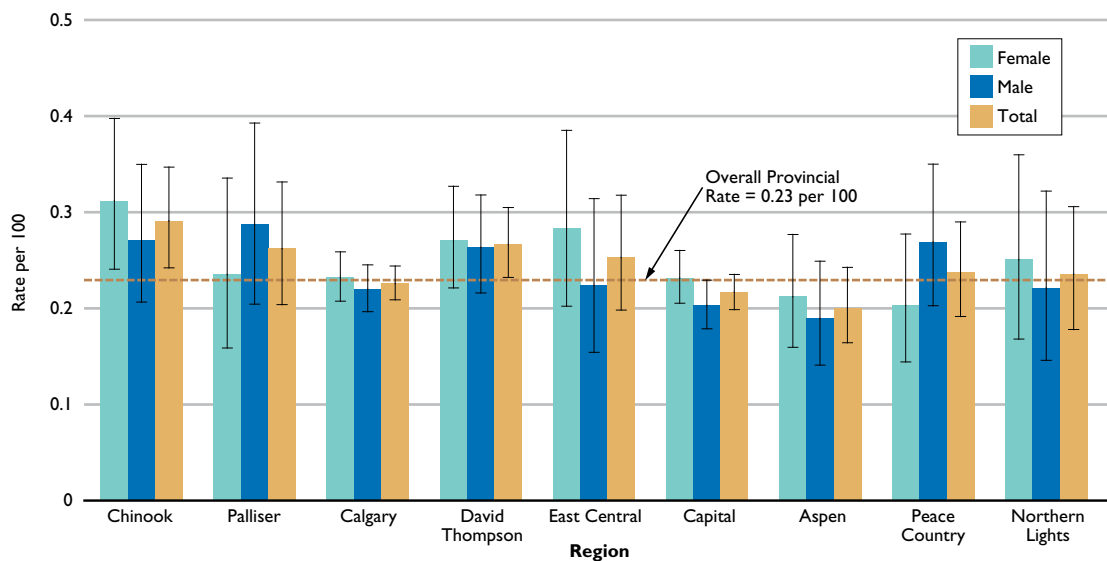


Figure 3 Crude Diabetes Prevalence Rates in the Under 20 year old Population by Region, 2005





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