



SPECIAL EDUCATION IN NORTH DAKOTA

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Autism Spectrum Disorders in North Dakota Public Schools

April 2, 2009

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Data as presented in this report are extracted from the statewide special education case management system (TIEnet). All data presented in this report are accurate as of this date and reflect a point-in-time view of the demographic characteristics of students with autism and students with other eligible disability categories in ND public schools.

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Autism Spectrum Disorder in North Dakota Public Schools

Background

The prevalence rate of children identified with an Autism Spectrum Disorder (ASD) has increased dramatically over the last 10-20 years. In 1992, approximately 15,302 children in the United States between the ages of 6 and 21 were identified as having Autism. In 2004, approximately 165,662 children in this same age range, commonly referred to as "school aged," were identified with the disorder (U.S. Department of Education). This exponential increase in reported rate has placed an extraordinary strain on schools to provide programs and interventions that meet the unique needs of individuals identified as possessing a disability on the spectrum; i.e., Rett's Disorder, Childhood Disintegrative Disorder, and Asperger's Syndrome. (For convenience sake referred to in this report simply as "Autism").

Autism is the most common of the Pervasive Developmental Disorders, affecting an estimated 1 in 250 births (Centers for Disease Control and Prevention, 2003). "CDC's Autism and Developmental Disabilities Monitoring (ADDM) Network released data in 2007 that found about 1 in 150 8-year-old children in multiple areas of the United States had an ASD." (Centers for Disease Control and Prevention, 2007) This means that as many as 1.5 million Americans today are believed to have some form of Autism. And that number is on the rise. Based on statistics from the U.S. Department of Education and other governmental agencies, Autism is growing at a rate of 10-17 percent per year. The overall incidence of Autism is consistent around the globe, but is four times more prevalent among boys than girls. Autism knows no racial, ethnic, or social boundaries, and family income, lifestyle, and educational levels do not affect the chance of Autism's occurrence.

Recognized as a developmental disability, Autism affects verbal and non-verbal communication as well as social interactions. These deficit areas adversely affect a child's educational and social performance and is generally evident before age three. Other characteristics typically associated with Autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in routine and unusual responses to sensory experiences. The symptoms and characteristics of Autism can present themselves in a wide variety of combinations, from mild to severe. Although Autism is defined by a certain set of characteristics, children and adults can exhibit any combination in any degree of severity. Two children, both with the same diagnosis, can act very differently from one another and have varying skills and needs.

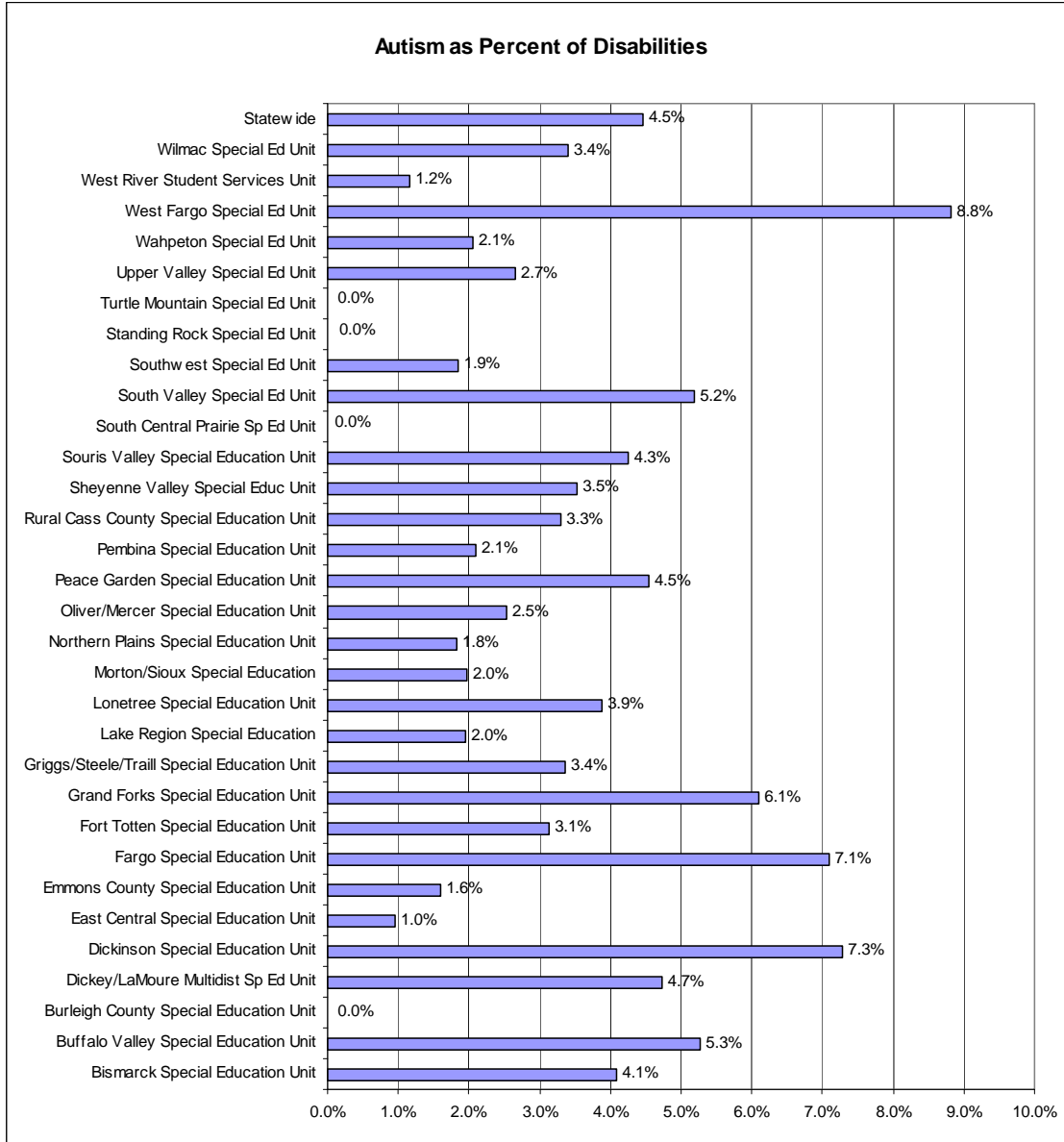
Autism in North Dakota Public Schools

Like most of the nation, North Dakota is on the fast track to mitigate a disorder which has concerned policy makers and practitioners with its apparent rapid growth rate. Before additional resources can be allocated to meeting the unique needs of these children, it is necessary to take a measure of the problem, to answer the question, "What is the scope of the challenge of Autism in the academic environment?" Although the qualitative component of this question is beyond the scope of this initial report, the implied quantitative component which is implied is particularly germane.

Utilizing the Department of Public Instruction (DPI) TIEnet data management and reporting system, a highly accurate picture of the numbers of children being served in the public school system across the state can be obtained. This picture provides a point-in-time snapshot of the demographic characteristics of these children and where they are receiving their education. It must be recognized that, if the last 10-20 years are any indication, this snapshot does not represent a static event and is constantly changing.

Autism Spectrum Disorder in North Dakota Public Schools

However children with Autism are identified, they frequently receive at least part of their education as a “special education student.” As a special education student they are entitled to an individually designed educational opportunity. Within North Dakota, geographically placed administrative units are responsible for overseeing and ensuring that these children receive a free appropriate public education under federal and state law.

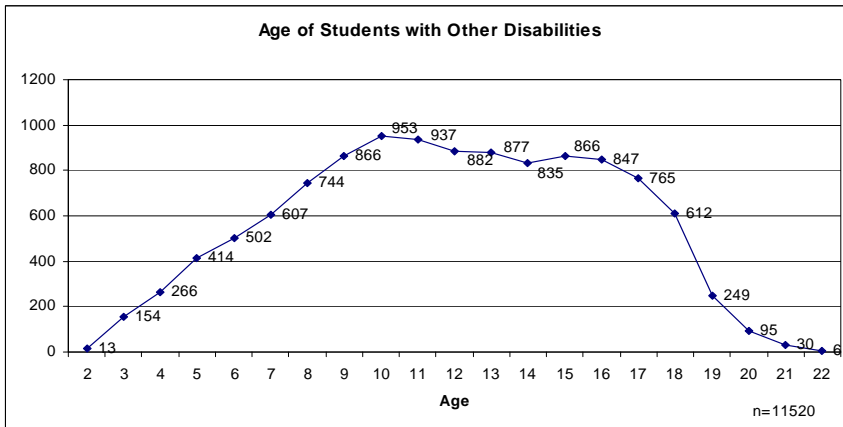
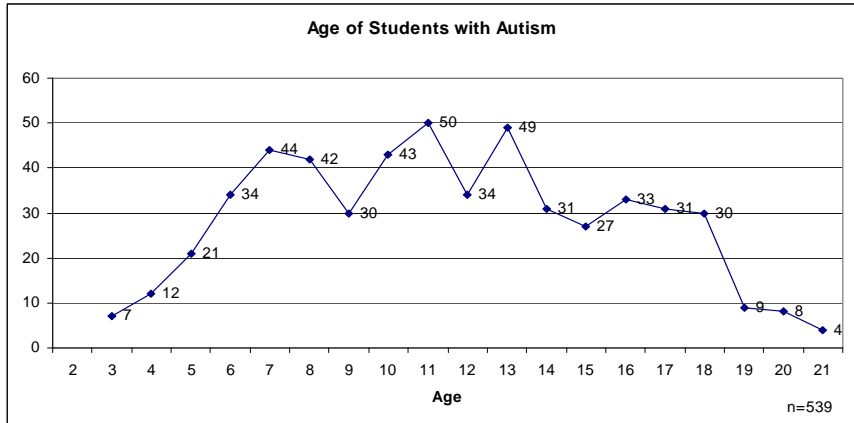


Within North Dakota, 31 of these special education administrative units oversee related services to 12,059 students. Of these, 539 have Autism as their primary disability. Seven of these units serve special education student with an Autism diagnosis in excess of the state average (4.5%); West Fargo (8.8%), Dickinson (7.3%), Fargo (7.1%), Grand Forks (6.1%), Buffalo Valley (5.3%), South Valley (5.2%), and Dickey/LaMoure (4.7%). Four special education units did not have any students with Autism identified as their primary disability; Turtle Mountain, Standing Rock, South Central Prairie, and Burleigh County. These 539 students with Autism are being served in 84 separate school districts. In addition, one child has noted as his district of residence, "State Responsible," which is commonly referred to as "ward of the state." (See Appendix A: Districts of Residence for Students with Autism.)

Autism Spectrum Disorder in North Dakota Public Schools

Age is a factor which can tell us a lot about both the incidence and prevalence of individuals being served. Within special education, it can tell us at what age students are accessing services as well as their age of departure from services. Typically such consideration yields more questions and it is the intent of the current study to directly address these issues; it is the intent though to broach them for future consideration.

At present, students with Autism as their primary disability, range in age from three years to 21 years of age. These 539 students possess a median age of 11 years 4 months. Although spread throughout the distribution, the largest proportion of students (50) were 11 years of age.



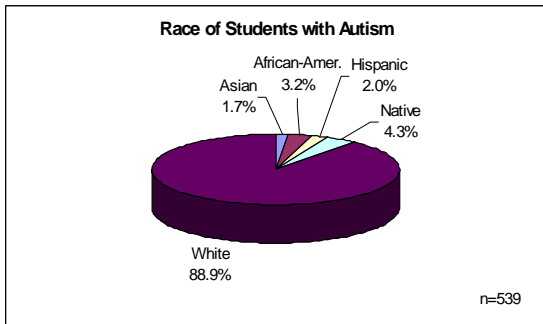
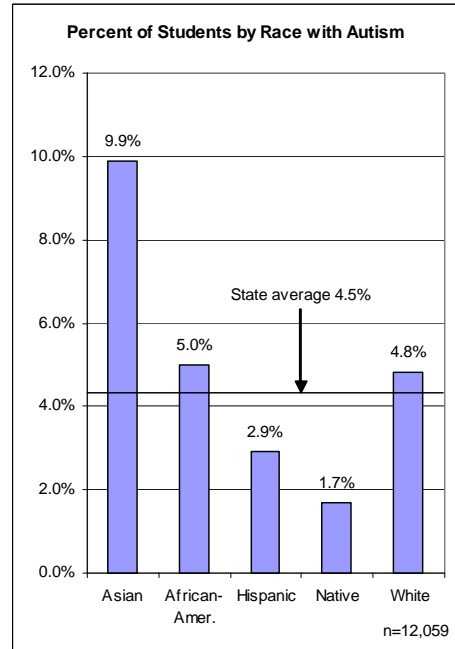
When looking at the age distribution of other students with disabilities served through the special education units, a very similar pattern is realized. These 11,520 students ranged in age from two years to 22 years of age and possessed a median age of 11 years 8 months. Like the preceding age chart of students with Autism, students with other disabilities were also spread-out, but the largest proportion (953) were 10 years of age.

Although one could argue that the age distribution of students with Autism is bi-, if not tri-, modal, it is also interesting that both distributions display a dip in age at 12 years and 14 years. Since larger numbers tend to cancel out such “noise,” this dip is more apparent in the Autism age distribution since there are a fewer number of students.

Autism Spectrum Disorder in North Dakota Public Schools

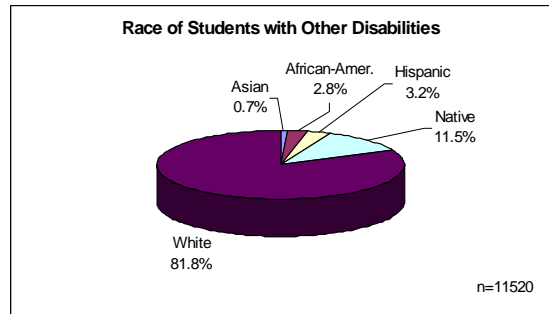
Of the 12,059 students with a diagnosed disability who are being served in special education, 4.5% possess Autism as their primary diagnosis (n=539). When looking at the racial characteristics of students with Autism being served in North Dakota public schools, it becomes obvious that there is a degree of disproportionality. For example, of the 91 students who are Asian and are being served by special education, 9.9% have a diagnosis of Autism as their primary disability. Of students with disabilities who are of African-American descent, 5% possess Autism as a primary diagnosis, and 4.5% of white student possess a similar diagnosis (n's of 340 and 9904 respectively).

Of course not all groups are above the state average (a mathematical impossibility), and only 2.9% of the 375 Hispanic students are being served under category of "Autism." Native-Americans with 1349 students have proportionally the fewest number of students with an Autism diagnosis (1.7%).



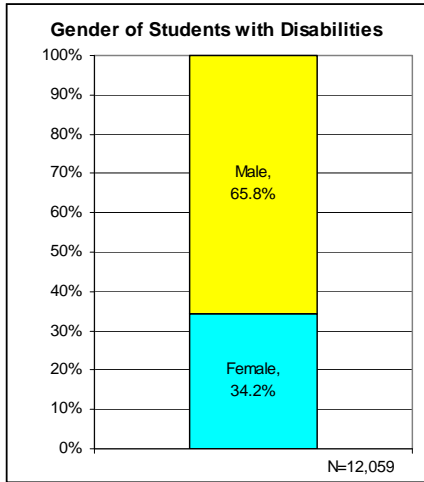
When looking at the racial profile of students with Autism who are being served as special education students (n=539), it becomes immediately apparent that the majority (88.9%) are white. The remaining four racial groups account for approximately 11%, with Native-Americans accounting for 4.3%, African-Americans 3.2%, Hispanics 2%, and Asians 1.7%.

It is worthwhile to take a look at the racial distribution of students with disabilities being served in North Dakota public schools who do not possess an Autism diagnosis (N=11,520). The relative ordering of the racial groups is very similar to that displayed by students with Autism, except for African-American and Hispanic students which have reversed position.



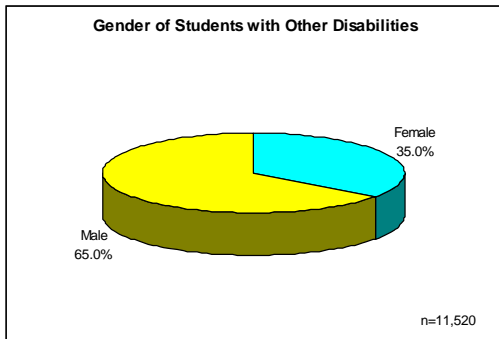
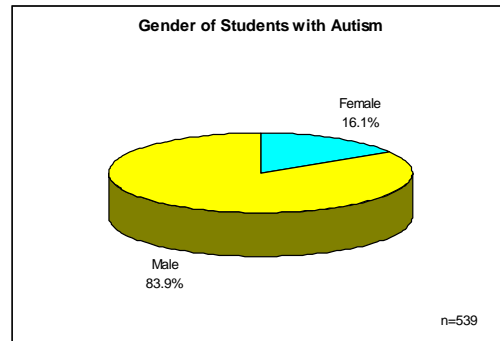
Comparing the racial proportions of students with Autism as a primary disability to those with other disabilities indicates that three groups are over-represented; white, African-American, and Asians.

Autism Spectrum Disorder in North Dakota Public Schools



When looking across all students with disabilities being served in the North Dakota public school system, it is found that male students out-number female students by a factor of almost two-to-one. Male students make up 65.8% of the population of individuals with identified disabilities in the public school system and females make up the remaining 34.2%.

Whereas males make up 65.8% of the overall student population with disabilities, they comprise 83.4% of the students with autism subpopulation. Conversely, females which make up 34.2% of the student with disabilities population are under-represented in the Autism subpopulation (16.1%).

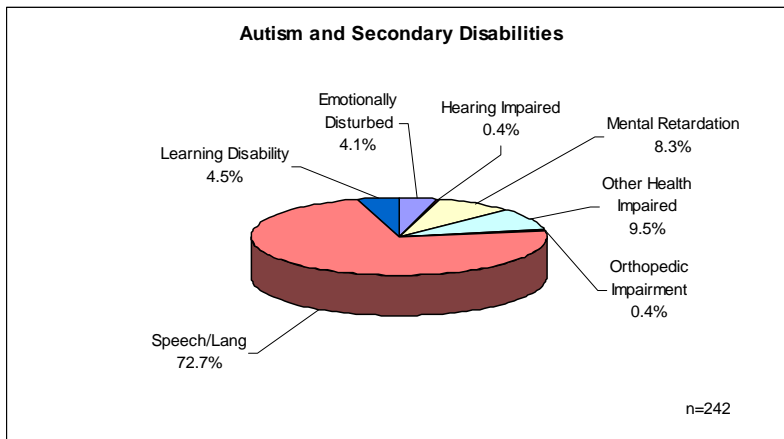
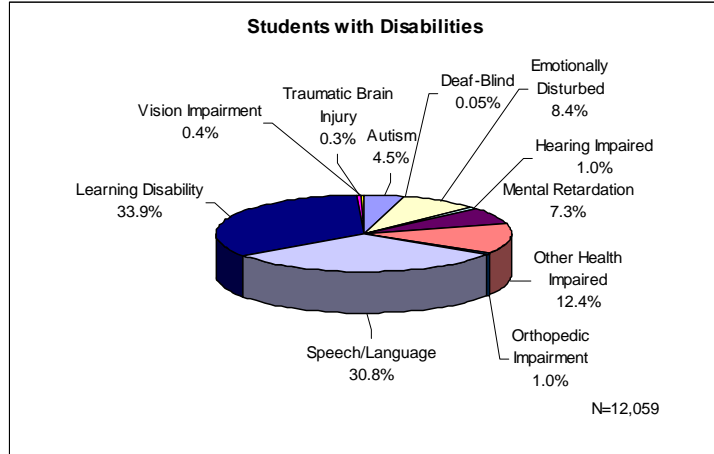


Not surprisingly, the gender distribution of students with other disabilities being served in the North Dakota public school system (65% male and 35% female), because of its greater numbers, is very similar to the distribution of all students with disabilities (65.8% male and 34.2% female).

Autism Spectrum Disorder in North Dakota Public Schools

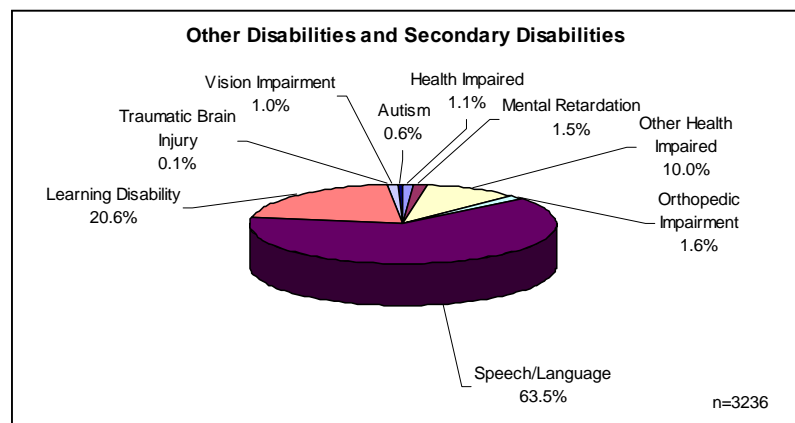
As noted earlier in this report, 4.5% of students receiving special education services in North Dakota Public Schools receive such services with an Autism diagnosis (593). The remaining 96.5% of students receiving special education services receive such services with different qualifying conditions (11,520).

Students with learning disabilities (33.9%) and those with speech/language disorders (30.8%) account for almost two out of every three students served in special education in North Dakota public schools. The remaining disability groups range from 0.05% for students classified as "Deaf/Blind," to 12.4% for students who possess Other Health Impairments. As noted earlier, students with Autism comprise 4.5% of the students with disabilities population.



Of the 539 students with Autism in North Dakota Public Schools, 44.9% possess an identified secondary disability (n=242). Close to three-quarters of these secondary disabilities are in the area of Speech and Language (72.7%). Six additional disabilities range from 0.4% (Hearing Impairments and also Orthopedic Impairments) to 9.5% (Other health Impaired).

Aside from secondary disabilities which students with Autism as their primary disability may possess, 26.8% of other students with disabilities also possess a secondary disability (n=3226). Again, Speech and Language accounted for the largest proportion (63.5%) and the remaining range from 0.1% (Traumatic Brain Injury) to 20.6% (Learning Disabilities). It is interesting to note that 0.6% identified Autism as their secondary disability (n=19).



Appendix A:

Districts of Residence for Students with Autism

Autism Spectrum Disorder in North Dakota Public Schools

District of Residence for Students with Autism

District of Residence	Number of Students
Apple Creek 39	2
Barnes Co North 7	3
Beach 3	2
Beulah School District	4
Bismarck 1	55
Bottineau 1	4
Bowman Co 1	1
Carrington 49	1
Cavalier 6	2
Central Cass 17	1
Central Valley 3	1
Dakota Prairie 1	1
Devils Lake 1	8
Dickinson 1	24
Drake School District	1
Dunseith 1	1
Edgeley 3	1
Elgin-New Leipzig 49	1
Ellendale 40	2
Enderlin Area 24	3
Fargo 1	85
Fessenden-Bowdon 25	2
Ft Ransom 6	1
Ft Totten 30	1
Garrison 51	1
Glenburn 26	1
Grafton 3	6
Grand Forks 1	64
Griggs County Central 18	1
Hankinson 8	2
Harvey School District	1
Hatton 7	1
Hazen 3	1
Hillsboro 9	2
Jamestown 1	11
Kindred 2	5
LaMoure 8	2
Langdon Area 23	1
Larimore 44	2
Lidgerwood 28	1
Linton School District	1
Lisbon School District	6
Litchville-Marion 46	2

District of Residence	Number of Students
Mandan 1	15
Manvel 125	1
Max School District	1
May-Port CG 14	2
McKenzie Co 1	1
Medina 3	5
Midkota 7	1
Milnor 2	2
Minot 1	57
Minto School District	1
Mohall-Lansford-Sherwood 1	2
Montefiore 1	1
Mt Pleasant 4	1
Nedrose 4	1
New 8	1
New Salem 7	1
New Town 1	4
North Border 100	1
North Central 28	1
North Star 10	1
Northern Cass 97	1
Richland 44	2
Rugby 5	4
Sargent Central 6	2
Sawyer School District	1
Selfridge 8	1
South Prairie 70	3
St Thomas 43	1
Stanley 2	2
Surrey School District	2
TGU School District	1
Thompson 61	5
Turtle Lake-Mercer 72	1
United 7	2
Valley City 2	3
Wahpeton 37	4
Washburn 4	1
West Fargo 6	69
Westhope 17	1
Williston 1	13
Wyndmere 42	1
State Responsible	1

N=539