

**Ontario Association for Families of
Children with Communication Disorders (OAFCCD)**

**SPEECH - LANGUAGE PATHOLOGY
RATIO ANALYSIS**

It is very difficult to calculate the optimum ratio for Speech - Language Pathologists (SLPs) in Ontario schools. This is partly due to the fact that there has been little research connecting SLP workloads, intervention strategies and the incidence of communication disorders. Much of the research has looked at the number of clients that can be managed effectively by a single SLP (Turner, 1999), rather than the ratio of SLPs to clients. There has been some research in Britain to develop a formula for calculating the number of Speech-Language Pathologists required per 100,000 population (Enderby and Davis, 1989). Their formula was based on an estimate of the time each SLP has available per year for direct client service, divided into the number of hours of service required to meet the needs of clients with a particular disorder, multiplied by the incidence for the particular disorder. Their model took into account new referrals on an annual basis, existing caseload and identified two levels of severity. To date there has been no attempt to use this approach in Ontario schools, although there has been some workload analysis of hospital based SLPs in Ontario (Little and Neary, 2000) and school based SLPs in schools across Canada. (Dohan and Schulz, 1999).

The greatest difficulty in calculating a ratio in Ontario schools is that there is no consistency of service delivery models across the school boards. Some boards offer a full range of services including screening, assessment, direct intervention, mediated intervention, consultation, programming, congregated language classes, etc., while others offer only limited consultation services. On the positive side, the limited availability of SLPs has resulted in creativity and innovation in service delivery. Many school board SLPs in Ontario are using a collaborative approach (OSLA, 1999a) and report involvement in curriculum and program development as well as planning and consultation with other members of the school team (OSLA, 1999b).

It will not be possible to use a standard formula to calculate an optimum SLP ratio until there is relevant research and evaluation of the most effective intervention strategies, for each speech and language disorder, within a school setting, and accurate data on the incidence of each disorder. The OAFCCD recommended ration of 1:1500 would allow for a significant increase in SLP services and a more comprehensive range of delivery options in all school boards, but it is not possible to say whether it will be adequate to meet all the needs.

Considerations in determining need for Speech-Language Pathology Services:

1. Incidence of Communication Disorders:

It is estimated that between 6 and 10% of all children will have a communication disorder or delay requiring intervention services from a Speech - Language Pathologist (OAFCCD, 1996). These numbers may be low, considering other studies put the range as high as 14 % (Enderby and Davies, 1989) or 25% (Department of Education, Newfoundland and Labrador, 1986).

Total Number of Students in Ontario (Ministry of Education, 1998) 2,111,622

6% of 2,111,622 = 126,679

10% of 2,111,622 = 211,162

Therefore, between 126,000 and 211,000 students will have a communication disorder or delay. In addition, there is considerable evidence that SLP services can benefit all children, as well as children who have communication delays or are at risk for problems at school (OSLA, 1996; Warr-Leeper, 2000).

2. Level of Need for Intervention Services:

The need for speech-language pathology services varies by age and diagnosis. For example, it is estimated that 20 to 25% of JK and SK students will require intervention services (Warr-Leeper, 2000) while only 3 to 5% of high school students are estimated to require services. There is little concrete data on the needs of older students as most school boards, officially or informally, limit services to students in the primary division. However, there is considerable evidence of the long term nature of communication disorders (Beitchman, et al, 1999; Johnson, et al, 1999).

In addition, students with mild articulation problems will require services for a shorter period of time than students with a language impairment, who have a lifelong disability. Similarly, students who require augmentative or alternative communication systems, or who have developmental, emotional or behavioural problems will have more complex needs and requirements for intervention services.

3. Geography:

The number of Speech-Language Pathologists required will also be impacted by geography. In northern and rural areas, travel time will significantly impact the number of students a SLP can manage. Therefore, 1:1500 would not be feasible and a lower ratio will be required.

4. Service demand and parental expectations:

The Preschool Speech and Language Initiative has significantly increased the number of children who are identified with a communication disorder prior to starting school. Most of these children will have received services prior to school or during Kindergarten and their parents will be expecting the schools to provide speech and language services.

5. Range of Service Delivery Options:

The number of Speech-Language Pathologists required will also depend on the type of intervention services provided and the availability of school resources, such as congregated classes and support personnel. Ideally, all school boards should deliver a full range of services and each student should get the intervention services that best meet their needs.

Current Status in Ontario Schools:

Number of Students in Ontario

(Ministry of Education, 1998)

Elementary
1,413,786
Secondary
697,836
Total
2,111,622

**Number of SLPs currently employed by school boards:
(Ministry of Education, 1998)**

309.4 SLPs

Current provincial average ratio of SLPs to students:

$$2,111,622 \div 309 = 6833.72$$

That is 1 SLP to 6834 students

However, there are significant variations in the distribution of SLPs. According to the Ontario Association of Speech-Language Pathologists and Audiologists (OSLA) survey of school boards in 1999, the present ratios range from:

0 in some school boards

1: 22,454 ((Worst ratio reported)

1: 2,149 (Best reported)

CASELOAD COMPARISONS:

United States:

According to the American Speech-Language Hearing Association (ASHA) "Guidelines to Caseload Size and Speech Language Delivery in the Schools" (ASHA, 1993), in order to provide balance between the amount of time available for appropriate services and the amount of time required to complete other required responsibilities, it is recommended that the maximum caseload size should not exceed 40 students, regardless of the type or number of service delivery models selected. Special populations and circumstances will dictate even fewer students on the caseload, since certain types of services and students are more time intensive than others.

According to ASHA 1997 Omnibus Survey, the mean monthly caseload (number of different patients/clients served in a typical month) in a school setting is 52. According to the national survey of speech-language pathology services in school based settings, completed by ASHA (Fall, 1995), speech-language pathologists employed on a full time basis in school based settings reported an overall mean caseload of 46.

- 1: 40 (ASHA Recommended)
- 1: 52 (ASHA Omnibus Survey - 1997)
- 1: 46 (ASHA National Survey - 1995)

Canada:

There are no national recommendations on standards or caseloads as each province regulates the profession and the Canadian Association of Speech-language Pathologists and Audiologists (CASLPA) is in the process of researching the issue. However, a recent study has reported that caseloads for Speech-Language Pathologists working in schools across Canada range from 10 to 500 with a mean caseload of 95 students, and a median of 80 (Dohan and Schultz 1999). The research indicated that there was no consistency in service delivery methods and that caseloads tended to be determined by severity of communication disorders, number of schools served and travel time between schools.

British Columbia:

British Columbia has not used caseload, but has established a funding model based on a ratio. According to the Inter-Ministerial Protocols for the provision of Support Services to Schools (1989) the Ministry of Education will fund speech and language services for children of school age in public school settings using a formula of 1 unit (SLP) for every 2500 students (Province of British Columbia, 1989).

Saskatchewan:

Saskatchewan Association of Speech-Language Pathologists and Audiologists guidelines indicate that currently the average caseload (preschool and school age) is 125 but with a range between 16 and 347 (Turner, 1999).

Variables that impact on case load include:

- the severity of communication disorder
- the effect of the disorder on the client's ability to function in an academic setting
- overall needs of the child
- number of locations in which services are provided
- travel time between locations
- effect of year round school schedules
- administration time
- number of assistants supervised
- amount of time dedicated to prevention
- activities such as advocacy, lobbying, public education, community development etc.

The Saskatchewan Association of Speech-Language Pathologists and Audiologists (SASLPA), therefore, recommends a maximum caseload size for SLPs serving school age children be 40

(lower in special circumstances). Special circumstances that may require caseload limits:

- Self - Contained classroom
- Technologically dependent children
- Medically fragile children
- Multi-lingual or limited English proficient students
- Home bound students

Newfoundland and Labrador:

The Department of Education in Newfoundland and Labrador says that: “The number of children that a Speech-Language Pathologist can be expected to see on a yearly basis for *direct therapy* is recommended to be 45.” This number does not include those children managed by in-direct therapy, those seen periodically, and children seen for regular assessments. They further indicate that the following considerations should be taken into account when determining caseload:

- 1) the needs of the communicatively disordered child
- 2) availability of programs and scheduling models within the region or area
- 3) total responsibilities of the Speech-Language Pathologist
- 4) the number of students needing assistance
- 5) size of geographic area being serviced and travel constraints (ferries, planes)
- 6) the socio-economic nature of the community
- 7) the number of special educators available
- 8) the support given by administrators, supervisors and staff
- 9) number of schools in which service will be provided

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