



Special Education in British Columbia: A Population-Based Investigation

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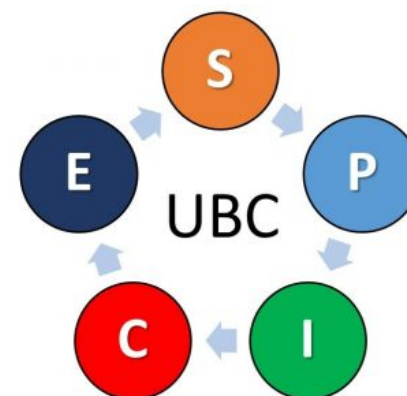




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Background

Why this project?

In the 2015/2016 school year, almost 58,000 (10.5%) K-12 students in British Columbia had a special needs designation [British Columbia Ministry of Education (BC MED) Student Statistics 2015/2016]. Despite these considerable numbers, we know very little about the educational journeys of students with special needs and disabilities.

In December, 2017, we invited public school districts to participate in our SPECIAL EDUCATION IN BC: A POPULATION-BASED INVESTIGATION research study. Participants completed our survey, which was created to help us identify research priorities related to the educational journeys of students with special needs and disabilities.

How Many Participated?

In total, 71 participants completed our survey, representing 43 of BC's 60 public school districts. The average participant had:

- a master's degree;
- a district administrator position; and
- between 20 and 29 years of educational experience.

The majority of participants were experienced in special education.



Who Participated?

We asked a wide range of education professionals to complete this survey, including:

- district administrators;
- district learning support service providers; and
- school staff.

Participation was voluntary.

Findings and Reports

Overall, survey participants agreed on three specific priorities for future research on the educational journeys of students with special needs and disabilities. These priorities were:

1. whether students with special needs and disabilities are completing high school and, if so, with which credential;
2. at what pace, over time, students with special needs and disabilities are progressing through grade levels; and
3. the number of school years students with special needs and disabilities are in the school system prior to receiving their first/initial special needs designation.

We have therefore prepared province-wide reports for each of these three topics. In each report, we break down students' results by their BC MED special needs designation.

We have also created a Methodology fact sheet, which explains the anonymized and de-identified student-level BC MED data we used to generate the reports. It also describes our chosen methods and analyses.



Conclusion

This study is an important step forward in our knowledge about the educational journeys of students with special needs and disabilities. A particular strength of this project is that it describes students' outcomes in these three areas by their BC MED special needs designation. We hope that the results will be useful in guiding policy and program development, both here in BC and beyond.

We thank participating districts for their involvement in our project. We welcome you to get in touch if you have any questions or comments about the reports, or our project more generally. Our contact information is on Page 26.

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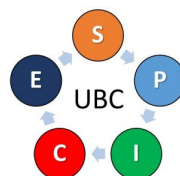
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Methodology

Introduction

We are pleased to share the details of research we conducted as part of our project entitled SPECIAL EDUCATION IN BC: A POPULATION-BASED INVESTIGATION. As researchers, we know the importance of effectively communicating findings, and have strived to be clear, concise, and inclusive. We had approved access to a customized collection of student-level British Columbia Ministry of Education (BC MED) data. We carefully grouped and analyzed these data to create our reports. Here, we explain the methods and analyses used to create these reports.

Data Privacy and Research Ethics

We gathered BC MED data about students with special needs and disabilities, regardless of their race, ethnicity, gender, age, religion, language, abilities/disabilities, sexual orientation, gender identity, socioeconomic status, or geographic location in BC.

The BC MED and the University of British Columbia's (UBC) Behavioural Research Ethics Board provided us with written approval to conduct this research. (UBC BREB Certificate: H16-01712; Dr. Jennifer Baumbusch, Principal Investigator)

The data were customized for our specific use by [Edudata Canada](#) (BC MED's former data broker). Data were also anonymized (broke all the links between the student and their record) and de-identified (extracted personal identities from the records) prior to their release to us.

The data were stored and analyzed in a Secure Research Environment (SRE) hosted by [Population Data BC](#), a multi-university data and education resource. It facilitates interdisciplinary research on the determinants of human health, well-being, and development.



Grant Funding

This project was funded, in part, by an Insight Development Grant awarded by the Social Sciences and Humanities Research Council of Canada (SSHRC) to Dr. Jennifer Baumbusch, Principal Investigator, Associate Professor, School of Nursing, UBC.

Number of Student-level Records

The data included 44,292 student-level records, comprised of five annual cohorts of Kindergarten students. The cohorts were comprised of students who had received *any* BC MED-recognized and -approved special needs designation(s), in one or more school years from Kindergarten through later grades.

Five Special Needs Cohorts

Each special needs cohort included all students enrolled in Kindergarten over a five-year period of time. Students could have received special needs designation(s) in *any* year(s) they were schooled in BC—not just Kindergarten.

Cohort	School Year	Number of Students
1	1999/2000	9,450
2	2000/2001	9,022
3	2001/2002	8,835
4	2002/2003	8,637
5	2003/2004	8,348



Years of Data

Our research data contained student-level variables from the 1999/2000 to the 2015/2016 school years, inclusive. We defined cohorts according to when students were in Kindergarten, then followed each cohort forward in time. We tracked their progress, in many cases, up to and including Grade 12.

Some students showed progress through grade levels each year. For others, the journeys were different. Occasionally, individual student records did not span the entire duration from Kindergarten to Grade 12. In these cases, students may have dropped out of school, moved out of the province, fallen sick, or died prior to reaching or completing Grade 12.

One limitation of the BC MED database was that it did not contain a variable explaining why certain students' records stopped prior to school completion. Also, some students in later cohorts may have reached Grade 12 and/or completed school after the research end date (2015/2016). We were not able to determine this definitively.

Schooling Types and Locations

The data contained records for students living anywhere in BC who were:

- publicly-schooled;
- independently-schooled;
- home-schooled; or
- any combination over time.



Special Needs Designations

Table 1 below describes each of the 12 special needs designations the BC MED routinely tracks, with its corresponding designation or “letter” code, description, funding level, and incidence rate. For example, Code A refers to Physically Dependent, which has Level 1 Funding, and has Low Incidence. Table 1 also includes an “All” grouping, in which we combine all 12 designations together.

Please note that being designated in one of the BC MED's special needs categories is not a requirement for supports and services to be provided to a student. Designation in a special needs category is for the purpose of funding alone, not service or support provision.

You can find information beyond the scope of this research, such as descriptions of the funding levels associated with all of the special needs designations, on the [BC MED website](#).

www2.gov.bc.ca/gov/content/education-training/administration/legislation-policy/public-schools/special-education



Table 1: The BC Ministry of Education’s Special Needs Designations

Code	Description	Funding Level	Incidence
A	Physically Dependent	Level 1	Low
B	Deafblind		
C	Moderate to Severe Profound Intellectual Disability	Level 2	Low
D	Physical Disabilities or Chronic Health Impairments		
E	Visual Impairment		
F	Deaf or Hard of Hearing		
G	Autism Spectrum Disorder		
H	Intensive Behaviour Interventions/ Serious Mental Illness	Level 3	Low
K	Mild Intellectual Disability	Basic per-student allocation only. No supplemental funds.	High
P	Gifted		
Q	Learning Disabilities		
R	Moderate Behaviour Support / Mental Illness		
Z*	All designations combined (A through R, inclusive)	--	--

Note 1: Table format inspired by the [BC Teachers’ Federation Priorities for Public Education Brief](http://bctf.ca/publications/BriefSection.aspx?id=46986). bctf.ca/publications/BriefSection.aspx?id=46986

Note 2: Z is a letter code chosen by the researchers for the purpose of these reports only.



Note about Autism Spectrum Disorder

With respect to Autism Spectrum Disorder (ASD), there was a change of Provincial policy on January 1, 2004, and of Ministry policy for the 2005/2006 school year -- meaning that, beginning in 2005/2006, students received an ASD designation according to the updated guidelines set out in this [Ministry policy manual](https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/inclusive/special_ed_policy_manual.pdf): https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/inclusive/special_ed_policy_manual.pdf. Prior to the change of Provincial policy, the designation was simply referred to as “Autism”, not “Autism Spectrum Disorder”.

Designation Recoding

In the 1999/2000, 2000/2001, and 2001/2002 school years, the BC MED identified three special needs designations (letter codes J, M, and N) that would no longer be used beginning in the 2002/2003 school year. In accordance with BC MED policy, we recoded these three designations for consistency with the other school years of data:

- **J** became **Q**: Learning Disabilities
- Both **M** and **N** became **R**: Moderate Behaviour Support/Mental Illness.

Most Common Special Needs Designation

The lengthy data meant that individual students' special needs designation(s) could vary over time. For analytical purposes, we identified students' records with their *most frequently assigned* special needs designation. In cases of ties between two or more designations, we used the specific special needs designation yielding the higher/highest funding level. (See Table 1: The BC Ministry of Education's Special Needs Designations).

As general disclaimers about all our reports: Although the large majority of students have a consistent special needs designation over time, some students may not have a consistent special needs designation over time (i.e., their designation may change over



time). Also, for the large majority of students, their first/initial special needs designation is also their most common designation. In some cases, however, students' first/initial designation may not be the same as their most common designation.

Most Common School District

The lengthy data also meant that the school district(s) that individual students attended over time could vary. For analytical purposes, we identified students' records with their *most frequently attended* public school district. In cases where students attended, for example, two school districts with equal frequency over time, we assigned 50% of the students to the first of the two districts they attended and the other 50% of students to the second of the two districts they attended.

Reports

We created three reports to meet the most requested topics by our 71 survey participants. They include:

- **High School Completion:** whether students with special needs and disabilities are completing high school and, if so, with which credential;
- **Grade-to-Grade Transition:** at what pace, over time, students with special needs and disabilities are progressing through grade levels; and
- **Time to Designation:** the number of school years until students with special needs and disabilities receive their first/initial special needs designation.

Each report presents our findings and interpretations, as well as fuller descriptions.

As a general disclaimer about all our reports: Population counts and outcome measures within our reports will differ from those reported by the BC Ministry of Education, as our reports follow specific cohorts of students over time, whereas Ministry reporting allows for students to enter and exit cohorts.



Masking Rules for Low Sample Sizes

In accordance with BC MED policy, we have created district-level reports (not presented here) for all public school districts, and whose total count of students with special needs and disabilities was 10 or greater. We could not produce district-level reports for districts with nine or fewer students with special needs, as it could possibly identify individual students. In such cases, districts received only province-level reports.

Even if the total count of students with special needs and disabilities in a particular district was 10 or greater, we were still required to mask (not display) a particular designation's results from the report(s) if the district sample size for that designation was nine or fewer. In contrast, if the designation-specific sample size was 10 or greater, masking was not required and the results could be fully displayed.

Province-level reports (presented here) represent all releasable district-level data compiled to the level of the province.



High School Completion Report

Province

This **High School Completion** report describes whether students with special needs and disabilities completed high school and, if so, with which credential.

The report defines high school completion outcomes as follows:

- **BC Adult Graduation Diploma** = Adult Dogwood
- **BC School Completion Certificate** = Evergreen
- **BC Secondary School Graduation** = Dogwood (BC Certificate of Graduation)
- **Any Type** = Any of the above outcomes.

Results are presented in percentages—specifically, the percentage of students who achieved each outcome.

The numbers in parentheses refer to the designation-specific sample size.

Province-level reports represent all releasable district-level data compiled to the level of the province.



High School Completion Report

Additional Notes

- (1) The **Dogwood** (BC Certificate of Graduation) is awarded to students who successfully complete the provincial graduation requirements -- typically to students aged 18 years old and younger. The **Adult Dogwood** (BC Adult Graduation Diploma) is intended for students who are aged 18 years and older and can combine credits earned at both secondary and post-secondary schools. It is typically awarded to students over the age of 18 years. The overlapping specifications of these programs, however, sometimes result in cases where two students of the same age receive different certifications based on participating in different graduation programs. In the majority of cases, however, students awarded a **Dogwood** are 18 years and younger, and those awarded an **Adult Dogwood** are 19 years and older.
- (2) The **Evergreen** (BC School Completion Certificate) is not a graduation credential; students who receive an Evergreen have not graduated. The Evergreen represents the completion of personal learning goals. For more information about the Evergreen, please [visit: https://www2.gov.bc.ca/gov/content/education-training/k-12/support/school-completion-certificate-program](https://www2.gov.bc.ca/gov/content/education-training/k-12/support/school-completion-certificate-program)
- (3) We retained for this report's analyses only those Cohort 1/2/3 students who had in the database a Grade 12 flag sometime in/before the 2015/2016 school year and, if Grade 12 was not reached, a Secondary Ungraded flag in their "Grade 12" year. This way, we could ensure the students had not, for example, permanently moved out of province between Kindergarten and Grade 12, falsely appearing as a "non-completer" as a result. We opted to exclude from this report's analyses Cohort 4/5 data, as the process of populating the specific database variable containing these students' graduation credential information was only partially complete at the time our customized collection of BC MED data was prepared.



High School Completion Report

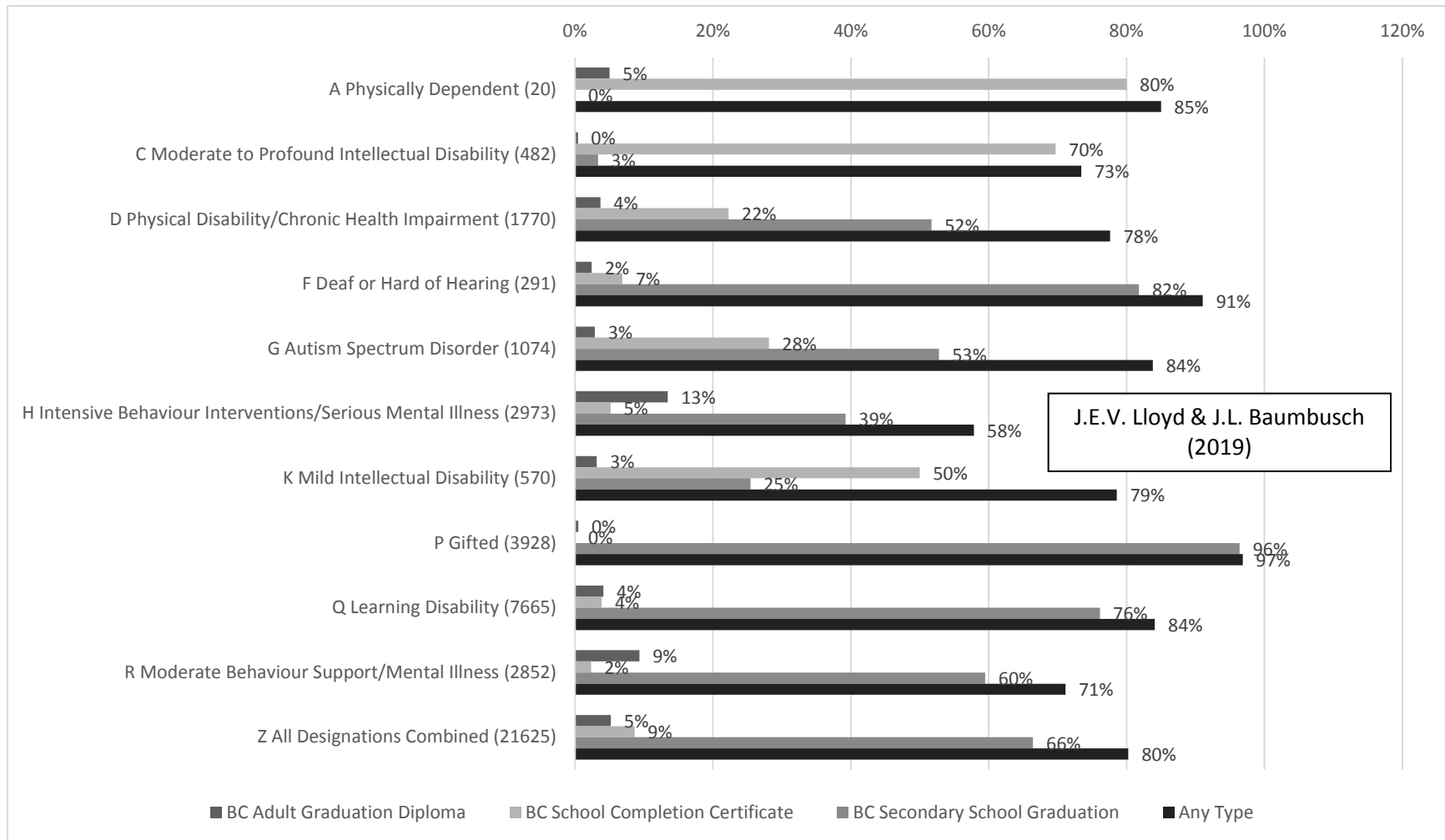
Additional Notes (cont'd)

- (4) As a general disclaimer about all our reports: Although the large majority of students have a consistent special needs designation over time, some students may not have a consistent special needs designation over time (i.e., their designation may change over time). Being designated in one of the BC MED's special needs categories is not a requirement for supports and services to be provided to a student. Designation in a special needs category is for the purpose of funding alone, not service or support provision.
- (5) As a general disclaimer about all our reports: Population counts and outcome measures within our reports will differ from those reported by the BC Ministry of Education, as our reports follow specific cohorts of students over time, whereas Ministry reporting allows for students to enter and exit cohorts.



Province High School Completion Report

Percentage of Students with Special Needs Who Completed High School





Grade-to-Grade Transition Report

Province

This **Grade-to-Grade Transition** report describes the pace, over time, students with special needs and disabilities progressed through grade levels.

We have identified four transition paces, which we define as follows:

- **Typical Pace:** Student reached Grade 12 **on time** (12 years after Kindergarten), and also did not repeat Grade 12 or have any other grade enrollment information after Grade 12.
- **Increased Pace:** Student reached Grade 12 **earlier** than we would anticipate (**fewer** than 12 years after Kindergarten).
- **Decreased Pace:** Student reached Grade 12 **later** than we would anticipate (**more** than 12 years after Kindergarten). Also if student did not reach Grade 12, but was classified as Secondary Ungraded in their “Grade 12” year.
- **Other Pace:** Student followed pace other than those above (see Additional Notes below).

Results are presented in percentages—specifically, the percentage of students who followed a given grade-to-grade transition pace. The numbers in parentheses refer to the designation-specific sample size.

Province-level reports represent all releasable district-level data compiled to the level of the province.



Grade-to-Grade Transition Report

Additional Notes

- (1) The “Other Pace” category includes students who were in Grade 12 two or more times, either: earlier than expected/later than expected, earlier than expected/on time, earlier than expected/on time/later than expected, on time/later than expected, and/or had non-Grade 12 grade enrollment information in the year after Grade 12 was reached.
- (2) We retained for this report’s analyses only those Cohort 1/2/3/4/5 students who had in the database a Grade 12 flag sometime in/before the 2015/2016 school year and, if Grade 12 was not reached, a Secondary Ungraded flag in their “Grade 12” year. Given the numerous ways individual students progress through grade levels, combined with the fact that some students, for example, temporarily moved out of province between Kindergarten and Grade 12, we opted to look only at when Grade 12, specifically, was reached, rather than the specific paces at which the in-between grades were reached.
- (3) Some students in later cohorts, such as Cohorts 4/5, may have reached Grade 12 after the research end date (2015/2016).
- (4) As a general disclaimer about all our reports: Population counts and outcome measures within our reports will differ from those reported by the BC Ministry of Education, as our reports follow specific cohorts of students over time, whereas Ministry reporting allows for students to enter and exit cohorts.



Grade-to-Grade Transition Report

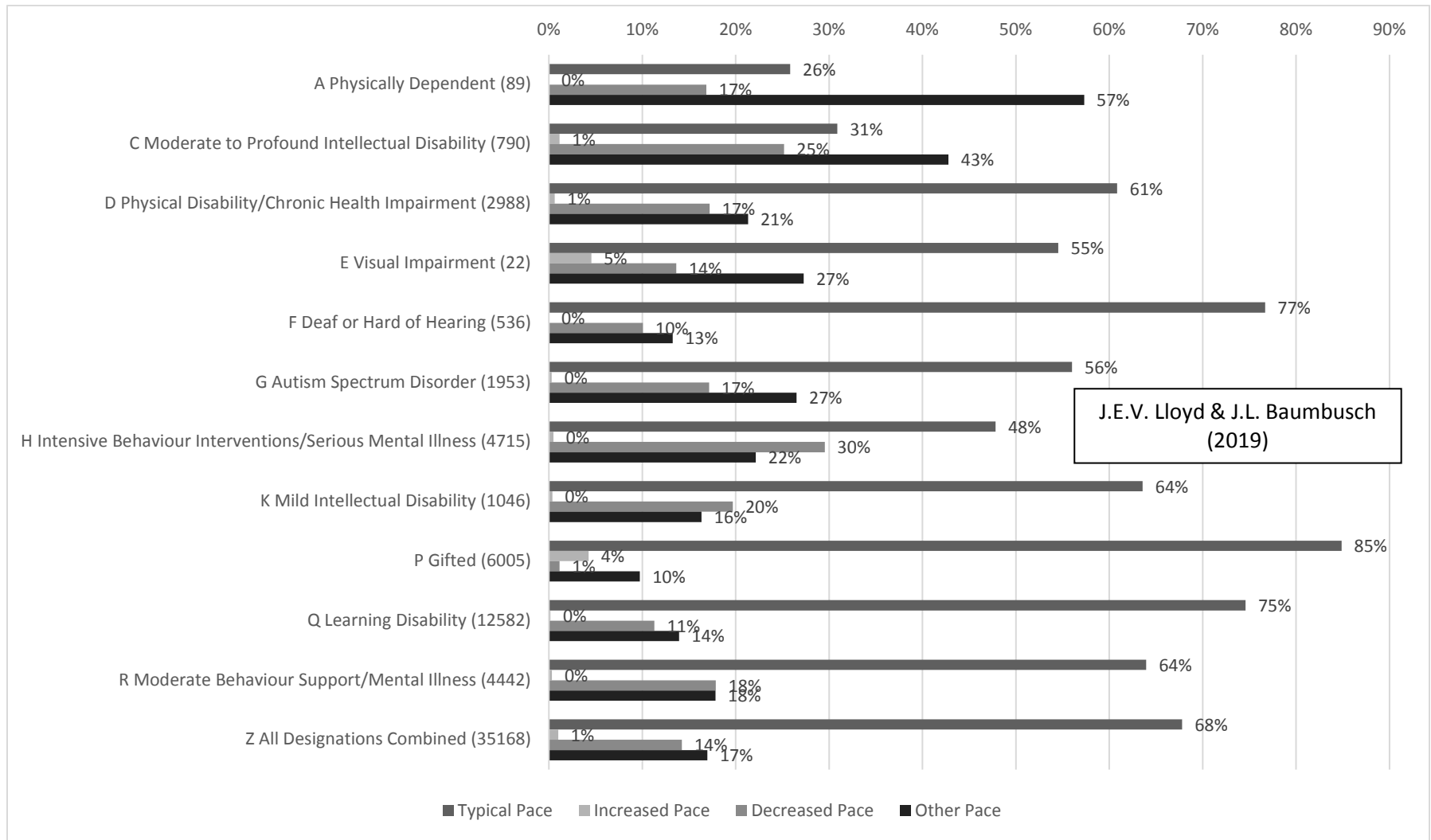
Additional Notes (cont'd)

- (5) As a general disclaimer about all our reports: Although the large majority of students have a consistent special needs designation over time, some students may not have a consistent special needs designation over time (i.e., their designation may change over time). Being designated in one of the BC MED's special needs categories is not a requirement for supports and services to be provided to a student. Designation in a special needs category is for the purpose of funding alone, not service or support provision.
- (6) As a general disclaimer about all our reports: Population counts and outcome measures within our reports will differ from those reported by the BC Ministry of Education, as our reports follow specific cohorts of students over time, whereas Ministry reporting allows for students to enter and exit cohorts.



Province Grade-to-Grade Transition Report

Percentage of Students who Followed Each Grade-to-Grade Transition Pace





Time to Designation Report

Province

This **Time to Designation** report describes the number of school years until students with special needs and disabilities receive their first/initial special needs designation.

Results are presented in percentages of students who had the following times to designation:

- **0 years**
- **1-2 years**
- **3-4 years**
- **5 or more years.**

The numbers in parentheses refer to the designation-specific sample size.

Province-level reports represent all releasable district-level data compiled to the level of the province.



Time to Designation Report

Additional Notes

- (1) For the large majority of students, their first/initial special needs designation is also their most common designation – the latter of which is the method by which we have presented students’ outcomes in this report. In some cases, however, students’ first/initial designation may not be the same as their most common designation.
- (2) Being designated in one of the BC MED’s special needs categories is not a requirement for supports and services to be provided to any student. It is the impact of the students’ needs on their respective educational programs, and not the reported designations, that determine the supports and services provided to students. Designation in a special needs category is for the purpose of funding alone, not service or support provision.
- (3) If the number of school years equals zero, then the corresponding percentage of students received their first/initial special needs designation in the same year they entered the BC school system (here, Kindergarten), and so forth for the other times to designation.
- (4) Because of the diversity of special needs designations the BC MED routinely tracks, there are many reasons why a given student may face a delay in receiving a special needs designation. For example, in the case of unexpected trauma, given students who were non-special needs for a number of school years may suddenly require special assistance years into their schooling. As another example, some special needs may emerge and/or are only able to be validly assessed later in life. In contrast, other students may have had a special need(s) since birth, and therefore may receive a special needs designation in their first school year (here, Kindergarten). In addition, different districts may have different times to designation and in creating Individual Education Plans (IEPs) for their students. Therefore, please interpret results with caution.

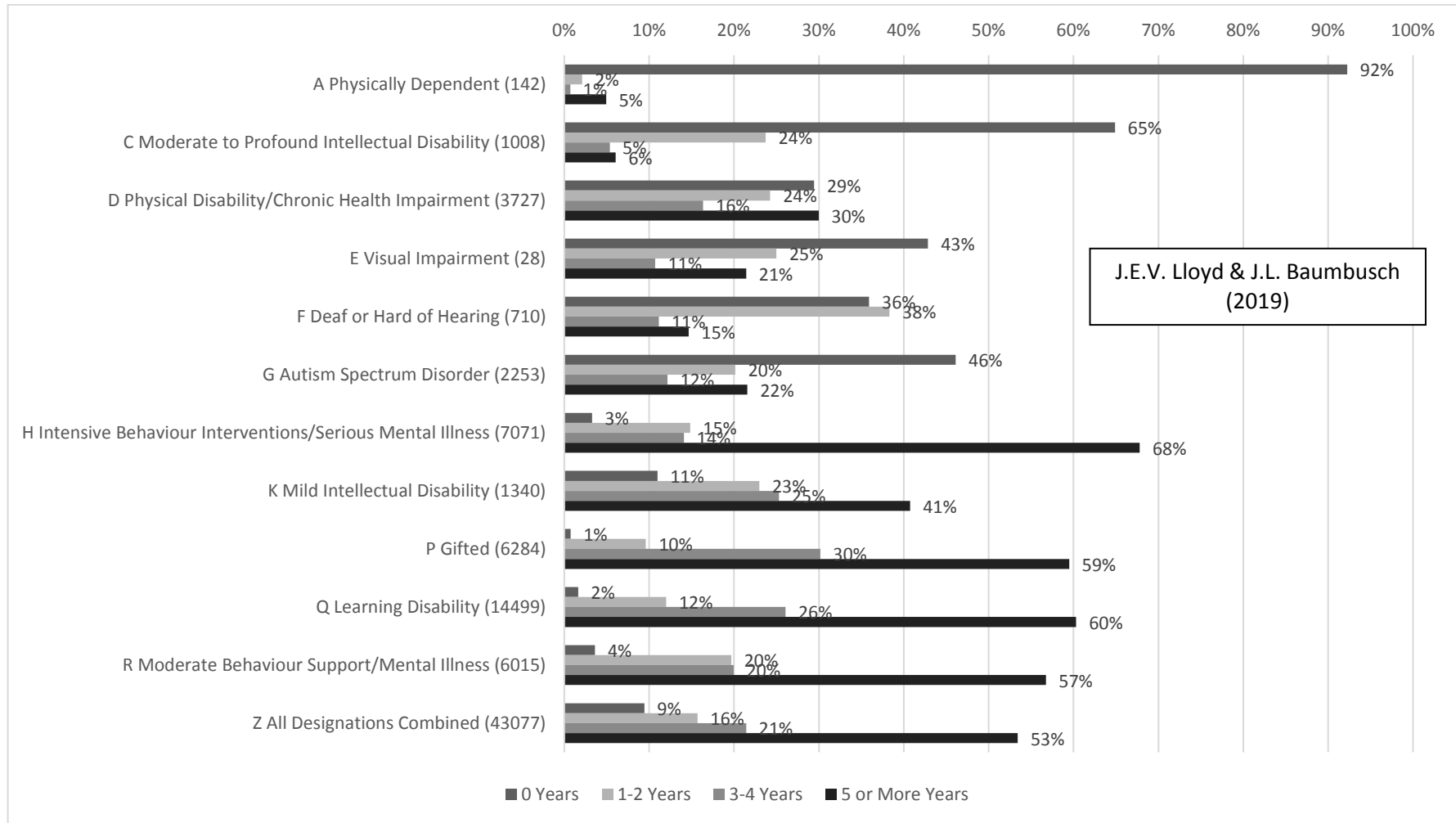


- (5) We retained for this report's analyses only those Cohort 1/2/3/4/5 students who had valid data available.
- (6) Changes in Autism Spectrum Disorder (ASD) diagnostic criteria over time have resulted in some students previously ineligible for diagnosis in this special needs category eventually being categorized as such. Please refer to the METHODOLOGY document for more information about ASD.
- (7) As a general disclaimer about all our reports: Although the large majority of students have a consistent special needs designation over time, some students may not have a consistent special needs designation over time (i.e., their designation may change over time). Being designated in one of the BC MED's special needs categories is not a requirement for supports and services to be provided to a student. Designation in a special needs category is for the purpose of funding alone, not service or support provision.
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Province Time to Designation Report

Number of School Years Before Students with Special Needs Received Designation





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Contact Information

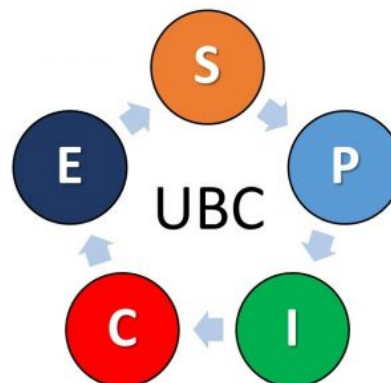
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