



# MLDS CENTER

Maryland Longitudinal Data System

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## MEMORANDUM

**TO:** MLDS Governing Board

**FROM:** Mr. Ross Goldstein, Executive Director

**DATE:** December 8, 2025

**SUBJECT:** Project Approvals and Updates

### Purpose

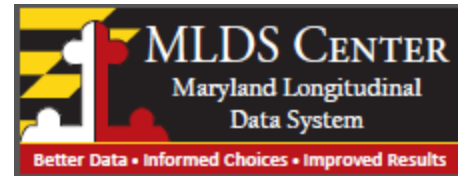
This agenda item is to update the Board on projects that have been reviewed and approved by the Executive Director under *Project Approval and Management Procedures*; projects that, when necessary, require Board review and approval; and updates on ongoing projects. Please note that in addition to the information presented for each new project, this memorandum also includes the complete project abstract submitted by the researcher for your further information and review.

### Projects for Consideration

<b>ERA # 121</b>	Tracking Educational Trajectories: Specialized Services and K–12 to Postsecondary Outcomes for Students with Disabilities and English Learners
<b>Researcher</b>	Dr. Paul Morgan University at Albany, SUNY
<b>Research Questions</b>	<p>Patterns and Predictors of Service Receipt</p> <ol style="list-style-type: none"><li>1. What are the typical patterns of service use for students with disabilities (SWD) and English Language Learners (ELL) from kindergarten through grade 12?</li><li>2. Among SWD, to what extent do these patterns differ by disability category (e.g., specific learning disability, autism, emotional disturbance, speech/language impairment, to the extent that can be determined)? (We acknowledge that some SWD may be coded as having “multiple disabilities,” and so we will be unable to determine specific conditions. For those students coded as “multiple disabilities” we will analyze this group separately).</li><li>3. What student characteristics (e.g., gender, race/ethnicity, socioeconomic status) predict the initial receipt and consistency of specialized service receipt for SWD and ELL?</li></ol>

	<p>4. How have patterns of specialized service receipt changed over time across student subgroups?</p> <p>Predicted Effects on Student Outcomes</p> <p>5. What are the relations between receiving specialized services for SWD and ELL and K–12 outcomes across four domains: (a) academic performance and attainment (e.g., achievement scores, GPA, graduation, drop out), (b) course access and progress (e.g., course completion, CTE credentialing, remediation, AP course taking), (c) engagement and school connectedness (e.g., attendance, retention), and (d) school discipline (e.g., suspension, expulsion)?</p> <p>6. Do the effects of specialized service receipt on these outcomes differ by the timing (i.e., grade/year of first service receipt) and consistency (i.e., continuous versus intermittent receipt across grades) of service receipt?</p> <p>7. Are these relations moderated by student characteristics (e.g., race/ethnicity, gender, socioeconomic status)?</p> <p>8. Does receipt of specialized services for SWD and ELL predict postsecondary education outcomes including college enrollment, persistence, major (e.g., STEM), and degree attainment?</p> <p>9. For cohorts that can be followed into adulthood, how does service receipt predict postsecondary outcomes (college enrollment, persistence, degree attainment) and workforce outcomes (employment, wage continuity, industry)?</p> <p>10. Are students who receive specialized services more or less likely to have contact with the juvenile justice system?</p> <p>11. Are the effects of services on postsecondary outcomes moderated by the timing and consistency of service receipt and by student characteristics?</p>
<b>RPB Review</b>	The RPB was supportive of the project.
<b>Exec. Dir. Determination</b>	Approved. The subject of this project is responsive to the Research Agenda, provides information about student performance that can be used to improve the state's education system, requires the use of longitudinal cross sector data, and is being conducted by a qualified researcher.
<b>Board Action</b>	Informational

<b>ERA # 122</b>	Relationship between Individualized Education Program (IEP) Transition Goals and Postsecondary Outcomes for Maryland Students with Autism
<b>Researcher</b>	Dr. Elise Pas Johns Hopkins University
<b>Research Questions</b>	<ol style="list-style-type: none"> <li>1. To what extent do the transition plan goals set for autistic 16-year-olds translate into postsecondary outcomes (i.e., what proportion of youth engage in the postsecondary activities identified in their transition plan goals?)</li> <li>2. What are the overall rates of high school completion, higher education enrollment, and engagement in workforce preparation and work?</li> </ol>
<b>RPB Review</b>	The RPB was supportive of the project.
<b>Exec. Dir. Determination</b>	Approved. The subject of this project is responsive to the Research Agenda, provides information about student performance that can be used to improve the state's education system, requires the use of longitudinal cross sector data, and is being conducted by a qualified researcher.
<b>Board Action</b>	Informational



\*This form is subject to disclosure in a Public Information Act request.

Project Title	Agency Control #
Tracking Educational Trajectories: Specialized Services and K–12 to Postsecondary Outcomes for Students with Disabilities and English Learners	ERA 121

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### Section 1. Principal Investigator

<b>Principal Investigator (please list additional project team members in Section 7)</b>
Paul L. Morgan
<b>Principal Investigator's Email Address</b>
<a href="mailto:pmorgan3@albany.edu">pmorgan3@albany.edu</a>
<b>Name of University or Organization</b>
University at Albany, SUNY
<b>Principal Investigator Background and Qualification (provide overview of experience and attach a CV)</b>
Paul L. Morgan, Ph.D., is the Director of the University at Albany's Institute of Social and Health Equity. He is also an Empire Innovation Professor and Social and Health Equity Endowed Professor in the Department of Health Policy, Management and Behavior in UAlbany's College of Integrated Health Sciences. Before this, he was the Eberly Fellow Professor of Education and Demography in Penn State's Department of Education Policy Studies. He has served as PI on ten federally funded research projects based on analyses of large longitudinal datasets including projects funded by the National

**Important:** Once submitted, this application is a public document that will be shared with stakeholders throughout the project review process and generally made available pursuant to a *Public Information Act Request*.

## Project Approval - Detailed Application

Science Foundation, the Institute of Education Sciences, the National Institute for Child Health and Human Development, and the Spencer Foundation. Paul's work examines why children begin to struggle academically and behaviorally in U.S. elementary schools and how these children can be better helped, particularly children with disabilities, those of color, and children from other historically marginalized communities. He has published over 80 empirical studies in peer-reviewed journals. This work has appeared in *Pediatrics*, *Journal of Child Psychology and Psychiatry*, *Psychiatry Research*, *Educational Researcher*, *Child Development*, *Developmental Psychology*, *Early Childhood Research Quarterly*, and *Journal of Learning Disabilities*. Paul's findings have been reported on in the *New York Times*, *Washington Post*, *Wall Street Journal*, *U.S. News and World Report*, *USA Today*, *Salon*, *the New Yorker*, *Politico*, *CBS News*, *Fox News*, *Forbes*, *Bloomberg*, *the Atlantic*, and other national media. He is an AERA Fellow. Paul is also an inaugural awardee of a Spencer Foundation's Midcareer Grant Fellowship. He received the Distinguished Early Career Research Award by the Council of Exceptional Children's Division of Research, the Distinguished Researcher Award from AERA's Special Education Research Group, the Distinguished Research Award from the AERA's Division E, and the Kauffman-Hallahan-Pullen Distinguished Researcher Award from the Council for Exceptional Children's Division for Research. His work has been cited by the U.S. Commission on Civil Rights, the American Academy of Pediatrics, the American Psychiatry Association, the World Bank, the Editorial Board of the *Los Angeles Times*, and the National Academies of Science, Engineering, and Medicine. Paul has also advised the White House's Office of Management and Budget and President Obama's Domestic Policy Council. You can follow his work here at Google Scholar: <https://scholar.google.com/citations?user=I9wtnTMAAAAJ&hl=en>

A completed form is available [here](#) for your review.

## Section 2. Project Information

### Background and Purpose of the Study

(No more than 500 words; please include references; references do not count toward the word count)

Students attending U.S. schools including in Maryland can be provided with specialized services. These include services for disabilities and services to support English language acquisition. The number of students receiving special education services under the Individuals with Disabilities Education Act (IDEA) has steadily increased in recent decades. In 2022–2023, more than 7.5 million students ages 3–21 in the U.S. received IDEA services, representing 15% of all public school students (National Center for Education Statistics [NCES], 2024a). About 5.3 million students who are English language learners (ELL) attend U.S. schools, with about 93% of these students receiving language support services (NCES, 2024b).

Services for students with disabilities (SWD) and ELL are designed to help these student groups achieve academic success, participate meaningfully in school life, and successfully transition to postsecondary education and employment. Yet little is known about patterns of service use by SWD and ELL including over time and across student and family background characteristics (e.g., race or ethnicity, gender, and economic status).

Even less is understood about how school-based disability services and language support services influence outcomes across kindergarten through 12th grade (K–12) and into postsecondary life. Prior studies have typically relied on cross-sectional surveys or small-scale samples, limiting generalizability and the ability to examine service trajectories and long-term impacts (e.g., Kuper et al., 2014; Kvande et al., 2019; Schwartz et al., 2021; Shin, 2018). Few studies have leveraged longitudinal administrative data that link educational records with postsecondary education including community college and college attendance, employment and work force participation at the individual student level. Without this evidence base, policymakers and educators are left with limited guidance on how to improve service provision and how best to support students most in need for additional supports. Prior work suggests inequities in access to specialized services in U.S. schools based on analyses of large, longitudinal datasets (e.g., Morgan et al., 2025); however, it remains unclear whether and how these inequities contribute to differences in student outcomes due to data limitations in prior studies.

Our project aims to address these knowledge gaps by leveraging the Maryland Longitudinal Data System (MLDS), which links multi-year, multi-agency administrative data across K-12<sup>th</sup> grade to postsecondary education and workforce participation. We will examine SWD who received special education services under IDEA, focusing on those with a primary disability classification (e.g., specific learning disability, autism, emotional disturbance, speech/language impairment, to the extent this information is available. [For students with “multiple disabilities,” we will analyze this group separately), as well as those who are ELL in receipt of English language supports. We intend to investigate two aims:

1. **Patterns and Predictors of Service Receipt:** We will identify typical patterns of service use from K-12 and examine how the likelihood and consistency of service receipt vary by student characteristics and over time.

## 2. Predicted Effects on Student Outcomes:

We will examine whether receipt of specialized services is predicted of improved student outcomes from K–12 through postsecondary transition. Specifically, we will assess how service receipt relates to academic performance, course progression (e.g., GPA, advanced coursework), and high school completion. We will then evaluate whether earlier or more consistent receipt of services predicts more favorable postsecondary trajectories, including postsecondary enrollment, persistence, and completion, as well as workforce outcomes (employment entry, wage continuity, industry sector). Analyses of postsecondary outcomes will be more descriptive and correlation, not causal, and will contextualize differences based on the service goals.

### References:

- Kuper, H., Monteath-van Dok, A., Wing, K., Danquah, L., Evans, J., Zuurmond, M., & Gallinetti, J. (2014). The impact of disability on the lives of children; cross-sectional data including 8,900 children with disabilities and 898,834 children without disabilities across 30 countries. *PloS one*, 9(9), e107300. <https://doi.org/10.1371/journal.pone.0107300>
- Kvande, M. N., Bjørklund, O., Lydersen, S., Belsky, J., & Wichstrøm, L. (2019). Effects of special education on academic achievement and task motivation: A propensity-score *and* fixed-effects approach. *European Journal of Special Needs Education*, 34(4), 409–423. <https://doi.org/10.1080/08856257.2018.1533095>
- Morgan, P. L., Hu, E. H., & Oh, Y. (2025). Racial and Ethnic Disparities in School-Based Disability Identification. *Educational Researcher*, 0(0). <https://doi.org/10.3102/0013189X251347279>
- National Center for Education Statistics. (2024a). Students With Disabilities. *Condition of Education*. U.S. Department of Education, Institute of Education Sciences. Retrieved from <https://nces.ed.gov/programs/coe/indicator/cgg>.
- National Center for Education Statistics. (2024b). English Learners in Public Schools. *Condition of Education*. U.S. Department of Education, Institute of Education Sciences. Retrieved from <https://nces.ed.gov/programs/coe/indicator/cgf>.
- Schwartz, A. E., Hopkins, B. G., & Stiefel, L. (2021). The effects of special education on the academic performance of students with learning disabilities. *Journal of Policy Analysis and Management*, 40(2), 480-520. <https://doi.org/10.1002/pam.22282>
- Shin, N. (2018). The effects of the initial English language learner classification on students' later academic outcomes. *Educational Evaluation and Policy Analysis*, 40(2), 175-195. <https://doi.org/10.3102/0162373717737378>

### Research Project Question

#### Patterns and Predictors of Service Receipt

- What are the typical patterns of service use for SWD and ELL from kindergarten through grade 12?

- Among SWD, to what extent do these patterns differ by disability category (e.g., specific learning disability, autism, emotional disturbance, speech/language impairment, to the extent that can be determined)? (We acknowledge that some SWD may be coded as having “multiple disabilities,” and so we will be unable to determine specific conditions. For those students coded as “multiple disabilities” we will analyze this group separately).
- What student characteristics (e.g., gender, race/ethnicity, socioeconomic status) predict the initial receipt and consistency of specialized service receipt for SWD and ELL?
- How have patterns of specialized service receipt changed over time across student subgroups?

#### **Predicted Effects on Student Outcomes**

- What are the relations between receiving specialized services for SWD and ELL and K–12 outcomes across four domains:
  - (a) academic performance and attainment (e.g., achievement scores, GPA, graduation, drop out),
  - (b) course access and progress (e.g., course completion, CTE credentialing, remediation, AP course taking),
  - (c) engagement and school connectedness (e.g., attendance, retention), and
  - (d) school discipline (e.g., suspension, expulsion)?
- Do the effects of specialized service receipt on these outcomes differ by the timing (i.e., grade/year of first service receipt) and consistency (i.e., continuous versus intermittent receipt across grades) of service receipt?
- Are these relations moderated by student characteristics (e.g., race/ethnicity, gender, socioeconomic status)?
- Does receipt of specialized services for SWD and ELL predict postsecondary education outcomes including college enrollment, persistence, major (e.g., STEM), and degree attainment?
- For cohorts that can be followed into adulthood, how does service receipt predict postsecondary outcomes (college enrollment, persistence, degree attainment) and workforce outcomes (employment, wage continuity, industry)?
- Are students who receive specialized services more or less likely to have contact with the juvenile justice system?
- Are the effects of services on postsecondary outcomes moderated by the timing and consistency of service receipt and by student characteristics?

#### **Research Methods**

**(Please include information for: Sample/Cohort and Justification; Definition of Measures and Constructs; Analysis Approach)**

##### **Sample/Cohort and Justification**

We will use a retrospective cohort of students identified as receiving specialized services under the Individuals with Disabilities Education Act (IDEA), as well as for English Language Development Programing (ELDP) in Maryland public schools. The analytic sample will include students who entered Maryland public schools in kindergarten and were followed longitudinally through grade 12 and into



the postsecondary years (up to the latest available MLDS data linkage). We will focus on students with a recorded primary disability classification (e.g., specific learning disability, autism, emotional disturbance, speech/language impairment) as reported in the special education records, as well as students receiving ELDP. For SWD with “multiple disabilities,” we analyze this group separately.

Specifically, for SWD: 2015–16 kindergarten cohort (outcomes through high school) and 2015–16 middle school cohorts (outcomes through postsecondary/workforce). For EL: earliest available cohorts (2007–08 onward), enabling analyses into postsecondary.

Comparison groups will include (a) students who were never identified as needing special education services and ELDP, (b) students who were identified later in their educational trajectories, and (c) students themselves when they no longer receive services. This approach allows us to examine not only the effects of receiving specialized services but also the timing and consistency of specialized service receipt for SWD and ELL. We will use the full statewide cohort to maximize generalizability and leverage MLDS’s rich data linkages.

#### **Definition of Measures and Constructs**

- **Service Use:** We will construct longitudinal indicators of specialized service receipt, including timing of first identification, number of years receiving services, disability category, and consistency of receipt across grades. We will use latent class and mixture modeling to identify patterns (e.g., continuous, late-starting, or intermittent service use).
- **Student Characteristics:** Sociodemographic covariates will include sex, race/ethnicity, eligibility for Free and Reduced-Price Meals (FRPM), and school-level characteristics.
- **K–12 Outcomes:**
  1. *Academic performance and attainment:* standardized test scores (e.g., Maryland School Assessment [MSA], Partnership for Assessment of Readiness for College and Careers [PARCC], Maryland Comprehensive Assessment Program [MCAP]), grade point average (GPA), high school graduation, dropout, GED/NEDP completion.
  2. *Course access and progress:* course enrollment and completion, CTE and AP participation and credential attainment, remediation course placement.
  3. *Engagement and connectedness:* attendance, chronic absenteeism, grade retention.
  4. *School discipline:* suspension, expulsion, in-school discipline events.
- **Postsecondary Outcomes:**
  1. *Education:* college enrollment (2- or 4-year), persistence, time to degree, degree attainment.
  2. *Workforce:* quarterly wage continuity, industry classification
  3. *Justice system:* arrest, incarceration, age at first contact with juvenile.

### Analytical Approach

We will use descriptive and advanced statistical methods tailored to the structure of longitudinal, multi-agency data. These include:

- **Descriptive and clustering models:** Latent profile analysis and growth mixture models will identify common patterns of specialized service receipt across grades.
- **Predictive models:** Multivariable logistic and multilevel regression models will estimate the likelihood of service receipt and educational outcomes conditional on student background and baseline indicators.
- **Temporal modeling:** Discrete-time event history models will examine the timing of service entry, exit, and consistency, as well as time-varying outcomes such as graduation or justice involvement.
- **Plausible causal inference:** We will use panel data models with student fixed effects and lagged dependent variables to control for unobserved time-invariant confounding. Propensity score matching with inverse probability weighting will adjust for observed differences between students who do and do not receive specialized services for SWD and ELL. We acknowledge that we will not be able to make strong causal inferences from these analyses, as the methods are quasi-experimental and are not based on random assignment. Instead, the analyses help to address omitted variable bias and so can be characterized as providing predicted effect estimates or plausibly causal estimates. We will acknowledge limitations of these analyses including in regard to the inability to make strong or unambiguous causal inferences.

### How will this research benefit the State of Maryland in terms of state or local policy and/or practice?

This project will provide the State of Maryland with actionable, data-driven insights into how specialized services are accessed and delivered, how best to ensure equal access to these services, and how these services predict students' educational and life course trajectories. By leveraging the MLDS's unique ability to link data for individual students over time and across sectors, the study will inform key state policy and practice priorities in three ways:

1. **Improve Service Delivery and Equity:** By identifying which students are more or less likely to receive specialized services, and when they receive them, the study will help state and local education leaders address gaps in access, ensure timely identification, and reduce **disparities** in service provision across schools, districts, and student groups.
2. **Support Educational and Workforce Outcomes:** Findings on the short- and long-term impacts of specialized services will offer evidence to guide program development and resource allocation. Understanding how services relate to graduation, postsecondary enrollment, employment, and justice involvement can help optimize transition planning and workforce readiness supports for SWD and ELL.
3. **Guide Interagency Coordination and Prevention Efforts:** Results related to postsecondary, workforce, and justice outcomes will help agencies beyond education, such as the

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<p>Departments of Labor, Human Services, and Juvenile Services, to better align their services with students’ needs, identify early risk indicators, and inform coordinated interventions that improve long-term outcomes.</p> <p>Ultimately, the project supports Maryland’s broader goals of increasing opportunity, reducing barriers, and improving outcomes for SWD and ELL by identifying where existing systems work well and where they can be strengthened.</p>
<b>Explain why this research requires longitudinal cross-sector data?</b>
<p>Our research project requires longitudinal cross-sector data to fully capture the timing, consistency, and long-term outcomes of specialized service receipt, and none of which can be adequately assessed using data from a single agency or time point.</p> <p>First, identifying when SWD and ELL begin receiving services, how long they receive these services, and whether their service use is continuous or intermittent necessitates multi-year educational records. These longitudinal data allow us to observe full K–12 trajectories including early identification, service duration, and grade-level transitions.</p> <p>Second, understanding the long-term and comprehensive impact of specialized services requires connecting educational data with outcomes beyond K–12 schooling. Postsecondary enrollment, degree attainment, employment, wages, and justice system involvement are critical indicators of long-term well-being, and each resides in a different administrative system. Linking K–12 education records to data from higher education, labor, and justice agencies enables a comprehensive assessment of how school-based specialized services shape life course outcomes.</p>
<b>Proposed Center Output</b>  <b>(Typical products for the MLDS Center include a research series presentation to stakeholders and a research brief in the MLDS Center template).</b>
<p>We propose to produce two primary deliverables in collaboration with the MLDS Center:</p> <ol style="list-style-type: none"> <li>1. <b>MLDS Research Series Presentation:</b> We will present preliminary and final findings in a stakeholder-facing format that highlights key insights across each of the two aims across the three student groups.</li> <li>2. <b>MLDS Research Brief:</b> We will prepare concise and accessible research briefs, using the MLDS Center template, that summarizes our research questions, methods, key findings, and actionable takeaways.</li> </ol>
<b>Timeline for the proposed project (identify major deliverables and approximate dates)</b>
<p><b>Year 1</b></p> <ul style="list-style-type: none"> <li>● <b>Months 1–3:</b> <ul style="list-style-type: none"> <li>○ Finalize data access agreements and data security protocols</li> <li>○ Develop detailed data management and analysis plan</li> </ul> </li> </ul>

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- o Begin data cleaning and variable construction
- **Months 4–6:**
  - o Conduct latent profile and event history analyses for Aim 1
  - o Generate preliminary descriptive findings on patterns of specialized service receipt
  - o Prepare presentation for internal project team and MLDS Center feedback
- **Months 7–9:**
  - o Complete regression and quasi-experimental modeling for Aim 2 (K–12 outcomes)
  - o Begin Aim 3 data preparation (linking education to postsecondary/workforce/justice outcomes)
- **Months 10–12:**
  - o Submit MLDS Research Series presentation (preliminary findings from Aims 1 and 2)
  - o Begin drafting MLDS research brief
  - o Prepare conference proposal for AEFP, SRCD, AERA, CEC, or SREE

### Year 2

- **Months 13–15:**
  - o Complete analytic models for Aim 3
  - o Conduct subgroup and sensitivity analyses across all aims
- **Months 16–18:**
  - o Finalize full results for Aims 1–3
  - o Submit MLDS Research Brief (in Center template)
- **Months 19–21:**
  - o Prepare and submit three manuscripts for peer-reviewed journal
  - o Present findings at national research conference (e.g., SREE or AERA)
- **Months 22–24:**
  - o Prepare next three manuscripts (if applicable)

### Year 3

- **Months 25–29**
  - o Final Project report to MLDS Center
  - o Plan for additional research studies

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<ul style="list-style-type: none"> <li>o Submit initial grant applications to further support and extend the project (e.g., to NSF, NICHD)</li> </ul> <ul style="list-style-type: none"> <li>● <b>Months 30-36</b> <ul style="list-style-type: none"> <li>o Revise and resubmit if applicable previously submitted manuscript</li> <li>o Revise and resubmit if applicable grant applications</li> <li>o Finalize any MLDS Research Briefs</li> <li>o MLDS Research Series Presentation on final results</li> </ul> </li> </ul>
<b>Plans for further development (i.e. journal submission, etc)</b>
<p>We plan to disseminate findings from this project through multiple academic and policy channels. Specifically, we intend to prepare multiple peer-reviewed journal manuscripts based on the study's major aims. Potential target outlets include <i>Educational Researcher</i>, <i>Exceptional Children</i>, <i>Educational Evaluation and Policy Analysis</i>, and <i>Gifted Child Quarterly</i>.</p> <p>We also plan to present results at national research conferences such as the Association for Education Finance and Policy (AEFP), the American Educational Research Association (AERA), and the Society for Research on Educational Effectiveness (SREE).</p> <p>Finally, we anticipate using the preliminary findings from this study to support future grant proposals, including larger-scale federal funding applications (e.g., IES, NIH, or NSF if applicable) and private foundations funding (e.g., William T. Grant Foundation, Spencer).</p>

### Section 3. MLDS Center [Research Agenda](#)

Does your project relate to one of the following areas which the General Assembly has specifically directed the MLDSC to study:	Yes	No
The impact of a State or federal education program? <sup>1</sup>	Yes	
The performance of educator preparation programs?	Yes	
Best practices regarding classroom instruction?		No
The impact of child welfare programs on the educational and economic outcomes of students?		No
An analysis of social determinants, provided by State agencies <sup>2</sup> and appropriate local agencies, that impact education performance of students and indicate the need for wraparound services for students.	Yes	

<sup>1</sup> All projects must relate to a state or federal education program. If you are not sure, please contact [ross.goldstein@maryland.gov](mailto:ross.goldstein@maryland.gov).

<sup>2</sup> State agencies include: Maryland Department of Health, Department of Human Services, and Department of Juvenile Services

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Does your project use State or Federal financial aid <sup>3</sup> data?		No
<b>If you are requesting to use FAFSA data please explain how this research will benefit the administration of Title IV federal financial aid.</b>		
Not applicable.		
<b>Research Agenda Category (page 2 of the <a href="#">Research Agenda</a>) – Which category does the project address? Please explain.</b>		
<p><b>Research Agenda Categories Addressed</b></p> <ol style="list-style-type: none"> <li>1. <b>Pathways and Pipelines</b> Our project investigates how SWD and ELL move through the PreK–12 system and into postsecondary education and the workforce. We will model trajectories of specialized service receipt across time and examine how variations in timing, duration, and consistency of service use shape later educational and workforce participation. This research addresses the agenda’s call to understand the sequence of educational and labor market events for SWD, and ELL, and how system pathways can better support successful transitions for these student groups.</li>   <li>2. <b>Educational, Service, and Workforce Outcomes</b> Our project also examines a comprehensive set of outcomes across K–12 and postsecondary stages, including academic performance (test scores, GPA, course taking), school engagement (attendance, retention), discipline (suspensions, expulsions), high school graduation, college enrollment and persistence, major and degree completion, wage levels and industry, and justice system contact. By analyzing how these outcomes are associated with specialized service receipt, the study will provide critical insights into how Maryland’s education and workforce systems can better support SWD and ELL in achieving optimal long-term outcomes.</li>   <li>3. <b>Program and Policy Evaluations</b> The project evaluates the effectiveness of specialized services by estimating their <b>associations</b> with key academic and postsecondary outcomes. Using quasi-experimental methods to reduce selection bias, we will assess whether receiving school-based services including the timing and consistency of service receipt predicts greater reading and math achievement, GPA, course completion, high school graduation, postsecondary enrollment, industry, and reduced justice system involvement. These findings will help to inform local and state education policies, including service delivery models, placement practices, and resource allocation for SWD and ELL.</li> </ol>		
<b>Research Agenda Themes (page 2-3 of the <a href="#">Research Agenda</a>) - Which cross cutting theme is incorporated in the project? Please explain.</b>		

<sup>3</sup> Financial aid data derived from the FAFSA may only be used in research to improve the administration of federal financial aid programs.

**Research Agenda Themes Addressed:**

**1. Supports and Barriers**

Our project examines *structural and administrative factors, including policies*, that shape when and how SWD and ELL access school-based services from pre-kindergarten through postsecondary education. For instance, we assess how school-level practices (e.g., variation in special education referral, evaluation, and placement procedures) or district-level administrative policies (e.g., differences in resource allocation, staff capacity, or service delivery models) may support or inhibit early and consistent access to services. We also evaluate how these structural factors relate to outcomes such as academic progress, discipline incidents, and workforce participation, helping identify policy levers that may reduce fragmentation and inequities in service delivery across education and workforce sectors in Maryland.

**2. Social Determinants**

Our study incorporates *environmental conditions in the places where people live, learn, and work* by examining how student outcomes vary by factors such as socioeconomic status, school characteristics, and community context. These determinants are included as explanatory variables or moderators in our statistical models to help interpret variation in both service access and postsecondary outcomes (e.g., labor market engagement and justice system involvement).

**3. Equity and Inclusion**

Our project also focuses on *access and opportunities available to individuals who have been historically underrepresented* in education and employment systems. By disaggregating findings by race/ethnicity, socioeconomic status, English learner status, and gender, the study directly addresses equity in both educational service provision and long-term outcomes. Analyses will highlight whether certain groups are systematically underserved or receive less consistent support through special education and ELD, informing strategies to improve inclusion and success across Maryland for SWD and ELL including from historically marginalized communities.

#### Section 4. Data and Cross Sector Analysis

Please review the MLDS Center [Data Inventory](#) and the MLDS Center [Data Gap Analysis](#) prior to completing this section.

<b>Sectors*</b> <b>*The data falling within each sector is outlined below. The purpose of this section is to ensure the project is cross sector. Projects will not necessarily use all data elements within the sector (see methods section for definitions of measures).</b>	<b>X</b>
Early Childhood Education Sector	
K-12 Education Sector	X
Adult Education Sector	
Justice Involved Youth Sector	X
Child Welfare Sector	
Postsecondary Education Sector	X
Other Completions and Credentials Sector	X
Workforce Sector	X

**Put an 'x' next to each data sector your project will include. You must have at least 2 sectors.**

<b>Do you plan to request to include <a href="#">external data</a> as part of your project?</b>
No.

#### \*Sectors

##### Early Childhood Education Sector

- PreK Academic Engagement

##### K-12 Public School Education Sector

- Enrollment and attendance
- Assessments
- Courses and grades
- Completions
- Discipline
- Public School Characteristics

##### Adult Education Sector

- GED/NEDP Exam Results
- Apprenticeship
- Adult Education
- Correction Education

##### Juvenile Justice Sector

- Juvenile Justice Records
- Juvenile Education Records

##### Child Welfare Sector

- Out-of-Home Placements

##### Postsecondary Education Sector

- College and University Enrollment
- College and University Courses, Credits and Grades
- College and University Degrees
- College and University Workforce Training
- Financial Aid

##### Other Completions and Credentials Sector

- Industry Certifications
- Licenses

##### Workforce Sector

- Public School Teachers
- Public School Staff
- Workforce visibility/participation
- Workforce Earnings
- Workforce Industry



**Section 5. Financial Information**

**The MLDS Center incurs costs for every project related to: (a) IT support and infrastructure; (b) assistance from subject matter experts, (c) criminal history background checks; and (d) creation of an analytic data set. Average project costs are between \$1,000 and \$3,000. A detailed, customized estimate will be provided prior to project initiation. (Please indicate your answer with an “X”)**

<input checked="" type="checkbox"/>	I will reimburse MLDS for all applicable fees.
<input type="checkbox"/>	I will only be able to provide partial reimbursement.
<input type="checkbox"/>	I will need a waiver.

**Grant Funding** (indicate with an ‘X’)

<input type="checkbox"/>	This project has already received funding
<input checked="" type="checkbox"/>	I plan to apply or am in the process of applying for grant funding
<input type="checkbox"/>	No grant funding is planned

**Name of Grantor**

William T. Grant Foundation to begin with, and then consider NSF, NICHD, IES as additional grant opportunities emerge federally

**RFP or Grant Program Information (you may provide a link to the grantor’s website)**

<https://wtgrantfoundation.org/funding/research-grants-on-reducing-inequality>

**Amount of grant funds sought or awarded.**

\$350,000

**Grant Application Date**

August 6, 2025 3:00 pm EST

**Do you intend to proceed without grant funding?**

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Yes
<b>Are you receiving other funding for this proposed project? If yes, how much?</b>
None currently

## Section 6. Special Considerations

**Principal Investigators NOT affiliated with a Maryland College or University – please provide information on:**

- a. Your familiarity with Maryland policies affecting your research topic; and
- b. How your project meets a specific Maryland research need?

**Please also upload (with this form) any letters of reference or endorsement from a Maryland researcher or a State or local agency that vouches for your qualifications and expertise.**

**a. Familiarity with Maryland Policies**

Although our team are not currently affiliated with a Maryland college or university, we have established a working relationship with Dr. Angela K. Henneberger, the Research Director and Principal Investigator of the Research Branch of the MLDS Center. We have consulted with Dr. Henneberger about the project's scope and design, and will continue working closely with her and the MLDS team to ensure our research aligns with all relevant Maryland state policies and administrative protocols concerning education, special education, and data privacy.

**b. Alignment with Maryland Research Needs**

Our project directly addresses a key research need for Maryland: understanding the access to and effectiveness of school-based services for SWD and ELL across the P-20 education pipeline and into the workforce and justice system. Maryland's statewide commitment to improving outcomes for these student groups is reflected in the MLDS Research Agenda, including priorities related to educational transitions, service delivery, and long-term outcomes. For example, our project agenda aligns well with the recommendations outlined in the *Blueprint Special Education Workgroup Report*, including monitoring, conducting adequacy study, and developing a plan to improve secondary transition, among others. By leveraging longitudinal, cross-sector data, our study aims to generate evidence to support data-informed decision-making around equity, service coordination, and postsecondary success for this student population in Maryland and how to support these student groups as they age into adulthood and participate in the state's post-secondary, workforce, and justice systems.

**For projects that involve a small population, please confirm that you are aware of the MLDS Center's [data suppression policy](#) and explain how you will report your findings while conforming to the suppression requirements.**

Our research team is fully aware of the MLDS Center's data suppression policy and is committed to adhering to all data confidentiality and reporting requirements.

We have extensive experience working with restricted-use datasets from the National Center for Education Statistics (NCES), including the Early Childhood Longitudinal Studies (ECLS-K:1998, ECLS-K:2011), High School Longitudinal Study of 2009 (HSL:2009), and restricted-use NAEP student-level data. Our team is well-versed in standard suppression procedures and protocols for working with restricted-use datasets. We follow all guidelines for secure data handling, including

## Project Approval - Detailed Application

accessing data only in approved secure environments, maintaining data confidentiality through encryption and password protection, and ensuring that only authorized personnel are involved in data analysis. In conducting analyses, we routinely check for disclosure risks, apply appropriate statistical techniques to minimize identification, and validate outputs to ensure compliance with data use agreements. When reporting findings, we adhere to strict suppression protocols, such as rounding cell counts to the nearest ten, avoiding the use of percentages with more than one decimal place when subgroup sizes are small, and suppressing data entirely when necessary to protect individual privacy.

For this project, we will ensure that all findings are reported in aggregate and in compliance with MLDS suppression guidelines. We will use appropriate disclosure avoidance techniques in all public-facing products (e.g., research briefs, presentations), and we are prepared to consult with MLDS Center staff during the reporting phase to ensure full compliance.

**For projects that involve a single school system, university, or program, please explain the statewide implications of the project.**

**Please also upload (with this form) any letters of support from the subject (i.e. school system or university) of the study.**

Not applicable for our project.

### Section 7. Project Team

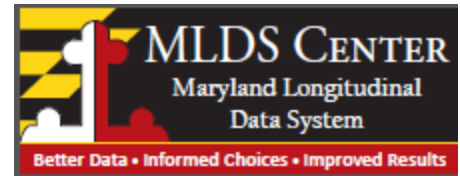
<b>Project Team</b> <ul style="list-style-type: none"> <li>- Please list all members of the research team and indicate roles and responsibilities.</li> <li>- If the Principal Investigator listed in Section 1 above is NOT the primary point of contact for the project (including research, data access, and presentations to stakeholders), please indicate which team member is the primary point of contact and provide that individual's contact information.</li> </ul>		
Name and Organization	Role	Is system access needed? (Yes/No)
Paul L. Morgan, University at Albany - SUNY	PI	Yes
Eric Hengyu Hu, University at Albany - SUNY	Research Scientist	Yes
Qingqing Yang, University at Albany - SUNY	Research Scientist	Yes
Yoonkyung Oh, University of Texas Health Science Center at Houston	Methodology Expert & Consultant	Yes

### Section 8. Submission

Once this form is completed, please complete the online application ([here](#)) and upload this form, CVs for all members of the research team, and any other supporting materials.

**Appendix A. Planned Cohorts and Outcome Availability**

<b>Service Group</b>	<b>Earliest Entry Year</b>	<b>Entry Grade</b>	<b>Data Coverage</b>	<b>Outcomes Observable</b>
SWD (Special Education Services)	2015–16	Kindergarten	2015–16 to most recent MLDS data	K–12 outcomes (academic, course-taking, attendance, discipline, graduation). No postsecondary yet.
SWD (Special Education Services)	2015–16	Middle School (e.g., Grade 6)	2015–16 to most recent MLDS data	K–12 outcomes <b>and</b> postsecondary enrollment, persistence, degree attainment, workforce (wages, industry), juvenile justice contact.
EL (English Language Development Programing)	2007–08 onward	Kindergarten and Elementary cohorts	2008–09 to most recent MLDS data	K–12 outcomes, postsecondary enrollment/persistence/degree, workforce outcomes, juvenile justice contact.



\*This form is subject to disclosure in a Public Information Act request.

Project Title	Agency Control #
Relationship between IEP Transition Goals and Postsecondary Outcomes for Maryland Students with Autism	ERA 122

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### Section 1. Principal Investigator

<b>Principal Investigator (please list additional project team members in Section 7)</b>
Elise Pas, PhD
<b>Principal Investigator's Email Address</b>
<a href="mailto:epas@jhu.edu">epas@jhu.edu</a>
<b>Name of University or Organization</b>
Johns Hopkins Bloomberg School of Public Health
<b>Principal Investigator Background and Qualification (provide overview of experience and attach a CV)</b>
Dr. Elise Pas is a research professor at the Johns Hopkins Bloomberg School of Public Health and a trained school psychologist. She has two decades of experience conducting school-based research, and a long history of analyzing archival education records data. She is one of two PIs of the CDC-funded Autism and Developmental Disabilities Monitoring (ADDMM) study in Maryland, to which the proposed study is linked. She is also the Co-PI of a research study linking to MLDS data to examine the long-term impact of a school-based prevention model (PI: Henneberger). Through this, Dr. Pas has undergone the required background checks and training to access MLDS data.

**Important:** Once submitted, this application is a public document that will be shared with stakeholders throughout the project review process and generally made available pursuant to a *Public Information Act Request*.

A completed form is available [here](#) for your review.

## Section 2. Project Information

### Background and Purpose of the Study

(No more than 500 words; please include references; references do not count toward the word count)

We propose examining the extent to which IEP transition plan goals are related to actual education and work outcomes for youth with autism who were 16 in 2020 and 2022 (i.e., through a linkage of our 2020 and 2022 high school data with high school exit information from MSDE, and participation in higher education from MHEC and workforce from Labor in 2022-2025, for those who were 16 in 2020 and 2024-2025 for those who were 16 in 2022).

The Centers for Disease Control and Prevention (CDC) initiated a public health network, called the Autism and Developmental Disabilities Monitoring (ADDMM) Network, to serve as an ongoing source of high-quality, reliable, timely data on the extent and distribution of autism among children. Since 2000, data have been collected through independently contracted coordinating sites, collectively known as the ADDMM Network. The Johns Hopkins Bloomberg School of Public Health has served as the Maryland ADDMM site since 2000. ADDMM has since expanded focus from childhood autism to early diagnosis and recently began to examine services provided to adolescents.

Data are collected from local agencies by participating sites, de-identified, then shared back to the CDC for analysis and summary (i.e., the CDC has no access to identifiable data). Summary prevalence and characteristics data of children with autism are reported biennially in the CDC's weekly Morbidity and Mortality Weekly Report (MMWR). The most recent report, [summarizing 2022 data](#), was released April 2025.

These reports, spanning from 2000 to 2022, demonstrate that the known number of children with autism has markedly increased.<sup>1-8</sup> As of 2022, over 3% of 8-year-old children have autism<sup>9</sup> (note: historical prevalence numbers have been derived from 8-year-olds and not the more recently included 4- and 16-year-olds). These children will continue to grow into adolescents and then autistic adults.<sup>10</sup> Despite the substantial number of adolescents with autism living in our communities, little is known about their outcomes once they leave the K-12 education and pediatric health systems. In recognition of this gap, in 2018, the CDC began to examine the school-based transition services provided to 16-year-olds in a small number of sites including Maryland. Through a memorandum of agreement with the Maryland State Department of Education, the Maryland site currently collects information from special education evaluations and IEP services from all students aged 16 in a specific calendar year, biennially, and within five counties (Baltimore [County, not City], Carroll, Cecil, Harford, and Howard).

During the current project period, the CDC asked the ADDMM Network sites to pilot data linkages between ADDMM and other datasets to enable the examination of longer-term outcomes for adolescents with autism. To maximize quality data linkages, we focus on the cohort of adolescents who were 16 in 2020 and for whom we collected data about their transition plans.

We seek to have the 16-year-old ADDMM data linked to MLDS data to examine the extent to which transition plans during high school translate into postsecondary outcomes (e.g., high school



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completion and receipt of a certificate or diploma, enrollment in higher education and workforce engagement). This supports the goals of MLDS by evaluating the federally mandated transition planning within the special education process, which requires the inclusion of goals related to education and employment. This can support state and local education agencies in their planning and decision making. The processes of MLDS mean that we will receive de-identified data in order to examine these longer-term outcomes.

### Research Project Question

We will answer the following research questions among:

- 1- To what extent do the transition plan goals set for autistic 16-year-olds translate into postsecondary outcomes (i.e., what proportion of youth engage in the postsecondary activities identified in their transition plan goals?)
- 2- What are the overall rates of high school completion, higher education enrollment, and engagement in workforce preparation and work?

### Research Methods

**(Please include information for: Sample/Cohort and Justification; Definition of Measures and Constructs; Analysis Approach)**

The 16-year-olds including in Maryland ADDM will be included in this study. In the five ADDM counties (Baltimore [County, not City], Carroll, Cecil, Harford, and Howard), there were a total of 22,874 births in 2020 and 22,358 births in 2022 (estimated using CDC Wonder). We will provide MLDS with:

- the child identifier (e.g., name, student ID),
- basic demographic data (e.g., sex, race/ethnicity) for replication by MLDS (noting that the bulk of our information is from the Maryland State Department of Education, which appears within MLDS along with other sources for this information),
- data we (as a data partner) uniquely collected but will be masked in the linkage process, includes:
  - our indicated statuses for autism and intellectual disability
  - information on education, employment, and independent living goals (e.g., if they are listed on the diploma or certificate track at age 16, postsecondary plans, and employment plans).

To ensure full protection of identities, variable names and labels/categories for disability status specifically that we provide to MLDS will not be specified (e.g., variables will just be named variable 1, 2, 3, etc. and no mapping of variable names or label categories will be shared). Thus, the MLDS analysts will not be able to identify if a child has autism, ID, both, or neither in instances where that was not documented already in the MLDS data. Note that no medical or health record data are being provided to MLDS; only our summary variable. As is always the case with MLDS linked data, the data we will access after the linkage by MLDS will be fully de-identified data (i.e., names and IDs will be removed) and securely housed within the MLDS data infrastructure (i.e., we will not receive a dataset that we can access anywhere else).

Below are the data elements we seek from MLDS, listed by data partner.

To measure K-12 completion outcomes, we seek the following from the MSDE data partner:

- Year entered high school (i.e., to calculate on-time and delayed graduation)
- Last completed grade

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- High school exit status code
- High school exit year (we will calculate on-time and delayed graduation)
- Receipt of a diploma or certificate from high school

To assess industry training and certification, we seek the following from MSDE, MDH, and Certiport (indicating which below)

- Completion of industry certification (MSDE, High School Data Completion)
- Technical skills assessment results (MSDE, High School Data Completion)
- Microsoft Certification (certiport, the pass/fail/incomplete and test date elements)
- Health Occupation License type and license date (MDH)- noting this is only available for 2023
- Apprenticeship status, type, and start and end date (from Adult Education sector)
- Non-credit workforce completer system (NWCS) course or sequence type, start date, and date completed
- Non-credit workforce completer system (NWCS) licensure or certification

To measure higher education outcomes, we seek the following from the MHEC data partner:

- Year of enrollment in higher education
- Name(s) of higher education institution(s)
- Degree sought and course of study
- Higher education credits accrued (to assess whether student is on-track for graduation)

To measure workplace preparation outcomes, we seek the following from the Adult Education data partner:

- WIOA activity data
- WIOA program data
- Adult education program
- Highest school grade and education level completed on entry

To measure employment and income outcomes (i.e., we will calculate a quarterly income using all income and wage sources), we seek the following from the Labor data partner:

- Length of employment since high school graduation (computed by research team using graduation and employment year data)
- Sector of employment (NAIC Code)
- Quarterly Wages (i.e., for all quarters *after* graduation; calculated using wage quarter and year in comparison to the K-12 exit date)
- Under the adult education sector, through the WOIA Title I and III source, “receiving SSI” (i.e., Supplemental Security Income (SSI)) and “receiving SSDI” (i.e., Social Security Disability Insurance (SSDI)).

Our access to additional data from MLDS falls within the purview of our CDC-funded work, for which we serve as a public health authority under the HIPAA Privacy Rule and meets applicable local Institutional Review Board and privacy/confidentiality requirements under 45 CFR 46. The ADDM Network is a public health monitoring system, which does not require participant consent for record

review. The data we provide is uniquely collected by us; though it includes review of health/medical records, no health/medical records are provided in this proposal (i.e., our team does not have such records to share). Regarding our linkage to MLDS data, this meets the FERPA exemption for evaluating an existing federal program (i.e., examining how youth with autism receiving special education perform on transition-to-adulthood outcomes). We propose additional data privacy protections in sharing masked disability variables to MLDS; MLDS has protections by not releasing identified data.

**Analysis plan for current study:**

We will provide MLDS with categorical data reflecting the above-listed variables and the transition plan goals (education, employment, and independent living); only the ADDM team will know what the variables and values signify.

Utilizing the above-listed MLDS data, we will create categories that match the transition goal categories and then determine the match between the goals and actual activities (i.e., yes/no) and summarize the data descriptively.

We will also descriptively summarize the overall rates of engagement in each postsecondary activity (i.e., higher education enrollment, workforce engagement). For income, we will provide median and mean incomes, by quarter, in the quarters following high school graduation. We anticipate this can span multiple years for those who were 16 in 2020 and about a year for those who were 16 in 2022.

**Details on our ADDM methodology:** The ADDM Network has a specific, population-based data collection approach with some specific requirements that led us to focus on the 5 identified counties (Baltimore [County], Carroll, Cecil, Harford, and Howard). First, they require that we identify a contiguous set of census areas within the state (i.e., counties must be touching). Second, the total population of the identified geographic area for each targeted age group (i.e., 4-, 8-, and 16- year-olds) in the specific study year had to be between 12,000 - 25,000 (e.g., meaning that there is a limit to how large each county can be, particularly if working with multiple counties). Based on these rules laid out by the CDC and staying consistent with prior years, the geographic areas for 2020 and 2022 included the populations in Baltimore (County), Carroll, Cecil, Harford, and Howard counties.

The CDC also dictates how we review records and identify children and adolescents with autism. Specifically, we review health and education records. This includes evaluation reports from health agencies, for which we work directly with health institutions with centers for autism evaluation and diagnosis to access records through a Memorandum of Agreement. We also access schools' special education evaluations, IEPs, and transition plans, for which we work with the Maryland State Department of Education. For education records, we have a Memorandum of Agreement (MOA) with the Maryland State Department of Education (MSDE) to serve as a conduit for our education sources. MSDE provides us with information for all children in our counties of interest in specific age groups (e.g., 4, 8, and 16 years) who receive special education services under any special education classification. Based on the list that MSDE provides us, we access the records of these students within the digital records keeping platform (e.g., Maryland Online IEP).

The Maryland ADDM team reviews evaluations and, for children with an autism indicator anywhere in their record, enters all statements conveying there was an autism diagnosis made, an autism special educational classification, or an autism International Classification of Diseases (ICD) code into a secure, HIPAA-compliant REDCap data system. Additional information is collected from records to provide information about demographic characteristics and other important health conditions, such as co-occurring intellectual disability. Testing utilized and scores (e.g., an intellectual quotient or IQ

score) are recorded to support these determinations. These data are then summarized within a variable indicating presence of autism and intellectual disability, per CDC definitions. This variable, in a masked form, will be shared to the MLDS. Only a small number of team members have access to personally identifiable data, and all team members undergo extensive training in privacy and confidentiality. All data is de-identified (i.e., all personally identifiable data are removed) and then electronically submitted to the CDC through a highly secured (sftp) network.

**How will this research benefit the State of Maryland in terms of state or local policy and/or practice?**

Federal policy dictates that all students receiving special education services must have transition planning by the age of 16; Maryland policy dictates that this must begin by age 14. The federally- and state-mandated aspects relevant to this proposal are the setting of education and employment goals; independent living goals are set as needed.

The findings from this proposed study are relevant to the evaluation of the federally mandated transition planning that occurs as part of the special education process. Our examination of the match between set goals and actual high school completion, adult and postsecondary education, and workforce outcomes helps to assess how effective these processes are in setting the pathways intended for transition out of K-12. The findings can inform policy and practice guidelines for the (K-12, adult, and postsecondary) education and labor sectors. As we do with ADDM results, we will provide data findings directly to the MSDE and the specific counties (Baltimore [County], Carroll, Cecil, Harford, and Howard) in which findings will be relevant, through state and county-specific reports. Counties can share these data with their community (i.e., leaders, special educators, educators, and families), identify target areas for improvements (e.g., additional focus on certain types of transition goals and services), and identify internal data that they may want to monitor. We will also provide the data to the MLDS (see below). We also plan to disseminate statewide findings to agencies supporting autistic youth and their families. The linked data that we will analyze will be de-identified and thus no person-level identifying information will be available to the researchers or the public. As expanded below, data suppression will be utilized for any findings about 10 or fewer people, to further protect identities.

The proposed analyses address questions and objectives set out by MSDE and the local school systems, stakeholders in the Maryland Advisory Stakeholder Group on Autism-Related Needs (ASGARN) and are of keen interest to community and familial advocates. The analysis aligns to the recently released Maryland Strategic Plan for Autism-Related Needs (2025-2030), and thus, we believe findings are of interest to policymakers and fiscal decision-makers. The MSDE regularly reports on aggregate outcomes of this nature but based only on special education classification (i.e., there are students who have autism but either do not receive special education services or do under a different classification who are missed by these methods). The recent strategic plan also outlines objectives related to transition plans and outcomes.

**Explain why this research requires longitudinal cross-sector data?**

As the known population of children with autism has increased, and as these children have aged, the CDC extended its focus to include 16-year-olds in 2018, with attention on IEP services and transition plans. These plans touch upon cross-sector outcomes, with required goals being set for education and employment. Thus, the study of how these plans translate into outcomes requires cross-sector data.

The need to understand how adolescents' needs are met and how the special education services and processes support successful transition into adulthood is essential for the K-12, higher education, and workforce sectors as well as to community members. The proposed study meets this need in the most

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<p>efficient manner. ADDM is unique in its population-level assessment of autism and Maryland is one of few ADDM sites that collect data about 16-year-olds and is unique in its availability of the robust, cross-sector data infrastructure of MLDS.</p>
<p><b>Proposed Center Output</b>  <b>(Typical products for the MLDS Center include a research series presentation to stakeholders and a research brief in the MLDS Center template).</b></p>
<p>As noted above, we will provide brief reports to MSDE on all findings and county-specific reports to each county. Further, we will schedule and present as part of the MLDS Center research series and create a research brief using the MLDS template.</p>
<p><b>Timeline for the proposed project (identify major deliverables and approximate dates)</b></p>
<p>We anticipate the timeline below:</p> <ol style="list-style-type: none"> <li>1- Fall/Early Winter 2025: final approval for project; co-PI, co-I, and student investigator* to complete access training and background checks</li> <li>2- Spring 2026: Data access complete</li> <li>3- Summer 2026: Analyses of data complete</li> <li>4- Fall 2026: All briefs and presentations made</li> <li>5- Winter 2026/Spring 2027: Publication developed and submitted (timelines for final acceptance vary, but we anticipate by summer 2027)</li> </ol> <p>*PI Dr. Elise Pas and our team's data manager, Qing Zheng, are involved with an IES-funded study led by Dr. Angela Henneberger that links MLDS data and both have undergone all required training and background checks.</p>
<p><b>Plans for further development (i.e. journal submission, etc.)</b></p>
<p>In addition to the reports outlined above, we anticipate one peer-reviewed publication based on this project and anticipate targeting a journal focused on autism research (e.g., <i>Journal of Autism and Developmental Disabilities</i>).</p>

### Section 3. MLDS Center [Research Agenda](#)

Does your project relate to one of the following areas which the General Assembly has specifically directed the MLDSC to study:	Yes	No
The impact of a State or federal education program? <sup>1</sup>	X	
The performance of educator preparation programs?		X
Best practices regarding classroom instruction?		X
The impact of child welfare programs on the educational and economic outcomes of students?		X
An analysis of social determinants, provided by State agencies <sup>2</sup> and appropriate local agencies, that impact education performance of students and indicate the need for wraparound services for students.		X

<sup>1</sup> All projects must relate to a state or federal education program. If you are not sure, please contact [ross.goldstein@maryland.gov](mailto:ross.goldstein@maryland.gov).

<sup>2</sup> State agencies include: Maryland Department of Health, Department of Human Services, and Department of Juvenile Services

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Does your project use State or Federal financial aid <sup>3</sup> data?		X
<b>If you are requesting to use FAFSA data please explain how this research will benefit the administration of Title IV federal financial aid.</b>		
N/A		
<b>Research Agenda Category (page 2 of the <a href="#">Research Agenda</a>) – Which category does the project address? Please explain.</b>		
<p>This project is most directly related to 3 of the main categories, and directly relevant to policymakers and education agency leadership, as well as to families and community members:</p> <ul style="list-style-type: none"> <li>(1) Program &amp; Policies: Comparing stated transition plan goals to actual outcomes in MLDS data can provide important insights into whether mandated transitional plan policies and goals are linked to successfully achieving those goals.</li> <li>(2) Educational, Service &amp; Workforce Outcomes: The results of our analysis will provide data on the proportion of youth with autism that complete high school, continue their education in higher education and adult education opportunities, and the proportion that are employed. This can identify possible areas of support needed.</li> <li>(3) Pathways and Pipelines: Our results can also identify patterns for autistic youth moving through school entry, transition, and exit as well as patterns of which labor sectors are more/less likely to have autistic youth/young adults employed than other sectors.</li> </ul>		
<b>Research Agenda Themes (page 2-3 of the <a href="#">Research Agenda</a>) - Which cross cutting theme is incorporated in the project? Please explain.</b>		
<p>This study aligns with the theme of Equity &amp; Inclusion. Autistic youth have historically had less access and opportunities available to them throughout their education and careers and this study will examine these cross-sector outcomes for youth with autism.</p>		

### Section 4. Data and Cross Sector Analysis

Please review the MLDS Center [Data Inventory](#) and the MLDS Center [Data Gap Analysis](#) prior to completing this section.

Sectors*	
<b>*The data falling within each sector is outlined below. The purpose of this section is to ensure the project is cross sector. Projects will not necessarily use all data elements within the sector (see methods section for definitions of measures).</b>	<b>X</b>
Early Childhood Education Sector	
K-12 Education Sector	X
Adult Education Sector	X
Justice Involved Youth Sector	
Child Welfare Sector	
Postsecondary Education Sector	X
Other Completions and Credentials Sector	
Workforce Sector	X

*Put an 'x' next to each data sector your project will include. You must have at least 2 sectors.*

<sup>3</sup> Financial aid data derived from the FAFSA may only be used in research to improve the administration of federal financial aid programs.

**Do you plan to request to include [external data](#) as part of your project?**

Yes, the information on students with autism will be provided in accordance with the external data procedures of the MLDS Center.

**\*Sectors**

**Early Childhood Education Sector**

- PreK Academic Engagement

**K-12 Public School Education Sector**

- Enrollment and attendance
- Assessments
- Courses and grades
- Completions
- Discipline
- Public School Characteristics

**Adult Education Sector**

- GED/NEDP Exam Results
- Apprenticeship
- Adult Education
- Correction Education

**Juvenile Justice Sector**

- Juvenile Justice Records
- Juvenile Education Records

**Child Welfare Sector**

- Out-of-Home Placements

**Postsecondary Education Sector**

- College and University Enrollment
- College and University Courses, Credits and Grades
- College and University Degrees
- College and University Workforce Training
- Financial Aid

**Other Completions and Credentials Sector**

- Industry Certifications
- Licenses

**Workforce Sector**

- Public School Teachers
- Public School Staff
- Workforce visibility/participation
- Workforce Earnings
- Workforce Industry

**Section 5. Financial Information**

<b>The MLDS Center incurs costs for every project related to: (a) IT support and infrastructure; (b) assistance from subject matter experts, (c) criminal history background checks; and (d) creation of an analytic data set. Average project costs are between \$1,000 and \$3,000. A detailed, customized estimate will be provided prior to project initiation. (Please indicate your answer with an "X")</b>							
<table border="1"> <tr> <td><input checked="" type="checkbox"/></td> <td>I will reimburse MLDS for all applicable fees.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>I will only be able to provide partial reimbursement.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>I will need a waiver.</td> </tr> </table>	<input checked="" type="checkbox"/>	I will reimburse MLDS for all applicable fees.	<input type="checkbox"/>	I will only be able to provide partial reimbursement.	<input type="checkbox"/>	I will need a waiver.	
<input checked="" type="checkbox"/>	I will reimburse MLDS for all applicable fees.						
<input type="checkbox"/>	I will only be able to provide partial reimbursement.						
<input type="checkbox"/>	I will need a waiver.						
<b>Grant Funding (indicate with an 'X')</b>							
<table border="1"> <tr> <td><input checked="" type="checkbox"/></td> <td>This project has already received funding</td> </tr> <tr> <td><input type="checkbox"/></td> <td>I plan to apply or am in the process of applying for grant funding</td> </tr> <tr> <td><input type="checkbox"/></td> <td>No grant funding is planned</td> </tr> </table>	<input checked="" type="checkbox"/>	This project has already received funding	<input type="checkbox"/>	I plan to apply or am in the process of applying for grant funding	<input type="checkbox"/>	No grant funding is planned	
<input checked="" type="checkbox"/>	This project has already received funding						
<input type="checkbox"/>	I plan to apply or am in the process of applying for grant funding						
<input type="checkbox"/>	No grant funding is planned						
<b>Name of Grantor</b>							
Centers for Disease Control and Prevention							
<b>RFP or Grant Program Information (you may provide a link to the grantor's website)</b>							
CDC-RFA-DD23-2301 <a href="https://www.federalgrants.com/Enhancing-Public-Health-Surveillance-of-Autism-Spectrum-Disorder-through-the-Autism-and-Developmental-Disabilities-Monitoring-ADDM-Network-89898.html">https://www.federalgrants.com/Enhancing-Public-Health-Surveillance-of-Autism-Spectrum-Disorder-through-the-Autism-and-Developmental-Disabilities-Monitoring-ADDM-Network-89898.html</a> For information on CDC's ADDM Network, see <a href="https://www.cdc.gov/autism/addm-network/index.html">https://www.cdc.gov/autism/addm-network/index.html</a>							
<b>Amount of grant funds sought or awarded.</b>							
The proposed scope of work in this application is covered by the CDC grant we received to conduct all ADDM activities (see details below). Within this grant, we have money allocated for data requests and can reimburse the range of \$1,000-\$3,000 for MLDS costs.  Title: <b><i>Maryland-Autism and Developmental Disabilities Monitoring (Maryland-ADDM)</i></b> Status of Support: Active Project Number: NUR3DD000104-01 Name of PD/PI: Elise Pas and Christine Ladd-Acosta Source of Support: Centers for Disease Control and Prevention Primary Place of Performance: Johns Hopkins University, Baltimore, MD, USA Project/Proposal Start and End Date: 01/01/2023-12/31/2026 Total Award Amount (including Indirect Costs): \$1,193,362							
<b>Grant Application Date</b>							
September 2023							
<b>Do you intend to proceed without grant funding?</b>							
N/A							
<b>Are you receiving other funding for this proposed project? If yes, how much?</b>							
No							





## Section 6. Special Considerations

<p><b>Principal Investigators NOT affiliated with a Maryland College or University – please provide information on:</b></p> <ul style="list-style-type: none"><li>a. Your familiarity with Maryland policies affecting your research topic; and</li><li>b. How your project meets a specific Maryland research need?</li></ul> <p><b>Please also upload (with this form) any letters of reference or endorsement from a Maryland researcher or a State or local agency that vouches for your qualifications and expertise.</b></p>
N/A
<p><b>For projects that involve a small population, please confirm that you are aware of the MLDS Center's <a href="#">data suppression policy</a> and explain how you will report your findings while conforming to the suppression requirements.</b></p>
<p>Though this study includes a large population, we still anticipate we could encounter small subgroups (e.g., when we get into county-level analyses and data summaries) and will be compliant with the data suppression policy. No output from the analyses will be removed from the MLDS data system until any findings for 10 or fewer students are de-identified, and reports will only summarize results that are available for more than 10 students.</p>
<p><b>For projects that involve a single school system, university, or program, please explain the statewide implications of the project.</b></p> <p><b>Please also upload (with this form) any letters of support from the subject (i.e. school system or university) of the study.</b></p>
N/A

## Section 7. Project Team

<b>Project Team</b> <ul style="list-style-type: none"> <li>- Please list all members of the research team and indicate roles and responsibilities.</li> <li>- If the Principal Investigator listed in Section 1 above is NOT the primary point of contact for the project (including research, data access, and presentations to stakeholders), please indicate which team member is the primary point of contact and provide that individual's contact information.</li> </ul>		
Name and Organization	Role	Is system access needed? (Yes/No)
Dr. Elise Pas, JHU	PI	Yes, but already has it.
Dr. Christine Ladd-Acosta, JHU	Co-PI	Yes
Dr. Ellen Howerton, JHU	Co-I	Yes
Qing Zheng, JHU	Data Analyst	Yes, but already has it.
Katherine Almendinger, JHU	Student Investigator	Yes

## Section 8. Submission

Once this form is completed, please complete the online application ([here](#)) and upload this form, CVs for all members of the research team, and any other supporting materials.

## Project Approval - Detailed Application

### References

1. Cavagnaro AT. Autistic Spectrum Disorders - Changes in the California Caseload: An Update from June 1987 to June 2007. In: Services DoD, ed. California Health and Human Services Agency 2007.
2. Autism, Developmental Disabilities Monitoring Network Surveillance Year Principal I, Centers for Disease C, Prevention. Prevalence of autism spectrum disorders--autism and developmental disabilities monitoring network, six sites, United States, 2000. Morbidity and mortality weekly report Surveillance summaries (Washington, DC : 2002) 2007;56:1-11.
3. Autism, Developmental Disabilities Monitoring Network Surveillance Year Principal I, Centers for Disease C, Prevention. Prevalence of autism spectrum disorders - Autism and Developmental Disabilities Monitoring Network, United States, 2006. Morbidity and mortality weekly report Surveillance summaries (Washington, DC : 2002) 2009;58:1-20.
4. Autism, Developmental Disabilities Monitoring Network Surveillance Year Principal I, Centers for Disease C, Prevention. Prevalence of autism spectrum disorders--Autism and Developmental Disabilities Monitoring Network, 14 sites, United States, 2008. Morbidity and mortality weekly report Surveillance summaries (Washington, DC : 2002) 2012;61:1-19.
5. Hertz-Picciotto I, Delwiche L. The rise in autism and the role of age at diagnosis. Epidemiology (Cambridge, Mass) 2009;20:84-90.
6. Wingate M, Kirby RS, Pettygrove S, et al. Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years - Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2010. Mmwr Surveillance Summaries 2014;63:1-21.
7. Yeargin-Allsopp M, Rice C, Karapurkar T, Doernberg N, Boyle C, Murphy C. Prevalence of autism in a US metropolitan area. Jama 2003;289:49-55.
8. Maenner, M. J., Warren, Z., Williams, A. R., Robinson Williams, A., Amoakohene, E., Bakian, A. V., Bilder, D. A., Durkin, M. S., Fitzgerald, R. T., Furnier, S. M., Hughes, M. M., Ladd-Acosta, C., McArthur, D., Pas, E. T., Salinas, A., Vehorn, A., Williams, S., Esler, A., Grzybowski, A.,... Shaw, K. A. (2023). Prevalence and characteristics of autism spectrum disorder among children aged 8 years- Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2020. *MMWR Serial Publications*, 72(2), 1-14.
9. Shaw KA, Williams S, Patrick ME, et al. Prevalence and Early Identification of Autism Spectrum Disorder Among Children Aged 4 and 8 Years — Autism and Developmental Disabilities Monitoring Network, 16 Sites, United States, 2022. MMWR Surveill Summ 2025;74(No. SS-2):1–22. DOI: <http://dx.doi.org/10.15585/mmwr.ss7402a1>
10. Dietz PM, Rose CE, McArthur D, Maenner M. [National and State Estimates of Adults with Autism Spectrum Disorder](#). J Autism Dev Disord. 2020;50(12):4258-4266.