

Transition Linkage Tool: A System Approach to Enhance Post-School Employment Outcomes

April 30, 2021

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The U.S. Department of Labor's Office of Disability Employment Policy funded the SSI Youth Solutions Initiative. The project sought potential solutions to improve employment outcomes for young adults ages 14 to 24 who apply for or receive Supplemental Security Income. This report is one of 12 developed for this project.

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Acknowledgements

This report was prepared for the U.S. Department of Labor (DOL), Office of Disability Employment Policy (ODEP) by Mathematica, under contract number 1605DC-18-A0020. The views expressed are those of the authors and should not be attributed to DOL, nor does mention of trade names, commercial products, or organizations imply endorsement of same by the U.S. Government.

The authors thank Marcella Franczkowski, Assistant State Superintendent, Division of Early Intervention and Special Education Services at the Maryland State Department of Education and Carol Beatty, Secretary, Maryland Department of Disabilities at State of Maryland. We also would like to thank Jeff Hemmeter, U.S. Social Security Administration; Christy Stuart, Maryland State Department of Education; David Emenheiser, U.S. Department of Education; and Damon Terzaghi, Advancing States, for providing invaluable expertise and knowledge as we developed this paper.

Finally, we appreciate the comments and support of staff from ODEP and its federal partners, Mathematica project staff, and two anonymous peer reviewers who reviewed earlier drafts.

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Abstract

Building off lessons learned from the Promoting the Readiness of Minors on Supplemental Security Income model demonstration project, Maryland designed a user-friendly, accessible, secure digital tool to facilitate coordinated and seamless services received by students with disabilities during their enrollment in high school. The tool, called the Maryland Transition Linkage Tool, enables the systemic collection of consent and direct sharing of key employment-related transition service and outcome data between schools and key partnering agencies including vocational rehabilitation, developmental and intellectual disabilities, and labor. The primary objective of the Linkage Tool is to ensure transition-age youth with disabilities are linked to services essential in achieving long-term employment. This tool is replicable and has the potential to identify and link youth who receive Supplemental Security Income benefits to services that lead to employment and financial security.

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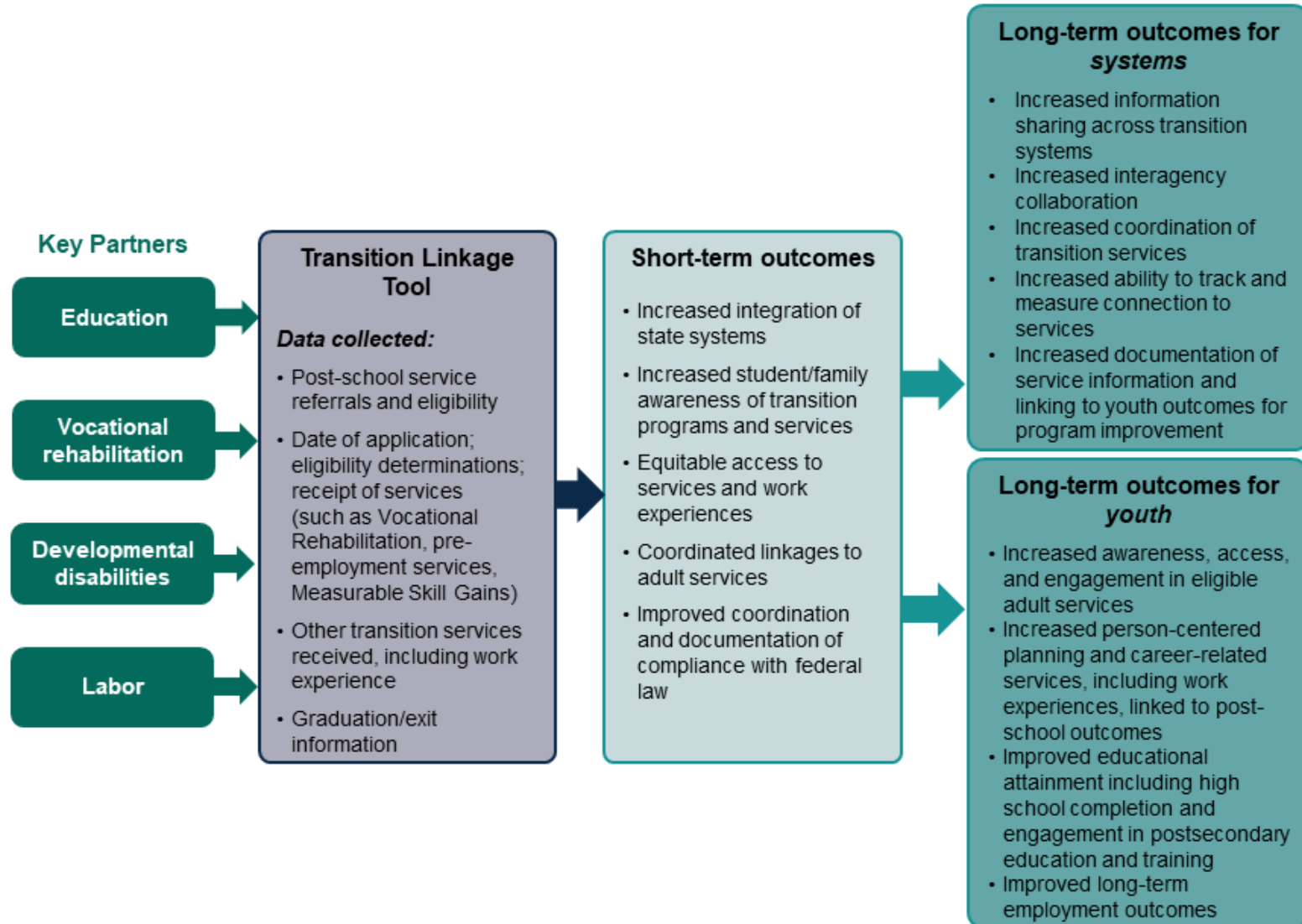
I. Introduction

Despite decades of advances in special education and disability policy, youth with disabilities continue to lag behind their peers in achieving positive post-school outcomes (Mazzotti and others 2016; Newman, Madaus, and Javitz 2016). The gap is even greater for subgroups of students with disabilities from underserved or low socioeconomic communities (Hemmeter and Bailey 2015; Gold, Fabian, and Luecking 2013). Significant gaps in employment services and uncoordinated linkages to adult services are often cited as the source for poorer outcomes for youth receiving Supplemental Security Income (SSI) (Hemmeter and Bailey 2015; Honeycutt and Livermore 2018; Williams and others 2019).

Driven by federal policy, state agency systems are transforming services by increasing their emphasis on preparing youth with disabilities for life after school and connecting them to post-school employment services. For example, the 2014 Workforce Investment and Opportunities Act (WIOA; P.L. 113-128) and Individuals with Disabilities Act (IDEA) of 2004 call for government agencies to intentionally coordinate services and connections for youth with disabilities to facilitate the transition out of the education system and into adult roles. IDEA in particular requires linkages as part of a student's transition plan, however, there are no formal mechanisms available to measure and ensure such linkages are occurring. The state of Maryland is addressing this need by developing and implementing a digital linkage tool, the Maryland Transition Linkage Tool (herein, Linkage Tool). This innovative solution represents a first of its kind interagency transition data sharing system, allowing school and state agency personnel to systemically communicate, coordinate, and track the planning and delivery of transition services (see Figure 1).

The Linkage Tool facilitates the collection, sharing, and analysis of key data points on transition-age students, including work-related services received, connections to post-school services, and the post-school outcomes they attain. The tool is not intended to be a system of case management but rather a tool to facilitate accountability and collaborative coordination. As an accountability tool, it captures student level indicator data so that analysis can be done and transition services can be more effectively applied, especially as they relate to work experiences. The information also can be used to inform and influence policies that support effective transition service. As a collaborative coordination tool, it enables data sharing between schools and transition partners on potentially eligible and commonly served students so that together all partners can more expeditiously and effectively apply their respective resources on these students' behalf. The data reported inform the coordination and linkage to services for transition-age youth with disabilities and improves their post-school outcomes across the partner agencies.

Figure 1. Linkage tool logic model



In this paper, we share how the Linkage Tool evolved and its intended purpose. We describe the key features of the Linkage Tool and how it can be used to track transition-related services and linkages. Additionally, we share how the tool can help address the enduring challenges that youth with disabilities—including youth receiving SSI, whose participation in transition services this proposal aims to increase—face as they prepare for and transition to long-term employment. Next, we make recommendations for testing the impact of the tool on individual youth outcomes as well as system outcomes, such as interagency coordination. Finally, we offer suggestions on how the Linkage Tool can be replicated across local and state systems.

II. What is the Linkage Tool?

During the implementation of the Promoting Readiness of Minors in SSI (PROMISE) intervention in Maryland, staff collaborated with a single local school system and the state vocational rehabilitation (VR) agency to develop a paper tool to track and share information regarding commonly served youth. Using this tool, the PROMISE team could then inform the staff from schools and the VR agency when youth obtained certain project services such as a work experience. Likewise, the school staff informed the PROMISE team of the transition services they offered to students, including any referrals to other agencies, and provided information such as the students' anticipated graduation dates. In addition, VR agency staff could update information including application for services and service eligibility. When pre-employment transition services began under the WIOA, VR staff also provided information on youth receiving these services to the PROMISE team. A Word document housed on a secure Google Drive captured all information, which was shared and updated as youth receiving SSI obtained key transition services from PROMISE, the school, or another agency. Staff from PROMISE and schools also met frequently to review the employment services youth received to ensure appropriate connections to external services were made for eligible youth.

This simple paper tool was quickly implemented in other local school systems throughout the state because it enabled transition professionals across local systems to make informed decisions on the connection to and delivery of transition and post-school services essential to support PROMISE participants' achievement of their desired education and employment goals. This paper tool served as the impetus for the creation of the Linkage Tool. The Maryland Department of Disabilities (MDOD), the lead agency for the Maryland PROMISE program, shared this concept with the Maryland State Department of Education, Division of Early Intervention and Special Education Services (MSDE DEI/SES). The leadership from MSDE quickly realized how such a tool could track employment-related services as well as facilitate linkages and post-school outcomes for students, required indicators that special education agencies struggle nationally to capture (Reder 2007). Together, these two agencies worked with the Center for Transition and Career Innovation (CTCI) at the University of Maryland to create and pilot a digital system to align transition services and supports to promote positive post-school outcomes. Software engineers from the University of Maryland Institute for Advanced Computer Studies collaborated with MSDE, MDOD, and CTCI to develop the digital tool.

MSDE’s vision was to require all of Maryland’s 24 local school systems to use the Linkage Tool. To accomplish this, Maryland’s Assistant State Superintendent for DEI/SES sought approval from the Maryland State School Board to use the Linkage Tool as an additional source of outcome indicators under the Every Student Succeeds Act (ESSA). This Act expands educational opportunities to improve outcomes for students by capturing statewide employment-related service data on a subgroup of youth (that is, students with an individualized education program [IEP]). ESSA offers an option for a fifth or additional indicator to measure school quality and student success. The Linkage Tool allows Maryland a way to ensure students with disabilities are on track to achieve positive post-school outcomes, including long-term competitive employment, by tracking employment services and linking students to post-school services. Additionally, the Linkage Tool facilitates sharing data across state partners, such as VR, Intellectual and Developmental Disability (IDD), and labor agencies, so that they can better collaborate in the delivery of services to transition-age students.¹

A. Key features of the Linkage Tool

The Linkage Tool functions as a targeted data management system—or central hub—to effectively store, share, monitor, and enable the analysis of key data points and outcomes for students with disabilities receiving publicly funded special education services. As a result of collecting this information during the IEP meeting as students enter the 9th grade, transition systems can continually map and align services and outcomes so that students experience a coordinated and seamless transition experience.

Data are captured in four primary areas: (1) demographic information; (2) services, especially those related to work experience and referrals to services offered by other state agencies; (3) points of exit (graduation, employment, postsecondary education enrollment, and linkages to other state agencies); and (4) one-year post-exit data. Information on services received can be entered and updated via data exchanges from other data sources such as VR and IDD agencies. (For more information, see Appendix A Table A.1.)

1. Signed consent form

A key feature of the Linkage Tool is a signed standard consent agreement from a parent or legal guardian. The consent form allows agencies listed in the consent agreement to share information on commonly served students. Maryland has two approaches to obtain consent. The first and easiest approach is through an e-consent (Appendix B contains an example form) stored as part of the Linkage Tool. The e-consent can be obtained during the IEP meeting if the parent or legal guardian is present. If a parent or guardian is not present at the IEP meeting, there is an option to send the consent form via email or postal mail. Returned consent forms are scanned and uploaded to the Linkage Tool. Consent is obtained annually starting in 9th grade, first from parents, and then from students when they reach the age of majority.

¹ In Maryland, the Development Disability Administration administers the Medicaid/Home Community Based waivers for the IDD population.

2. Data reports

Data from agency partners will be uploaded into the Linkage Tool quarterly. For example, VR will upload data on referrals, eligibility, and receipt of services. Using the data collected in the Linkage Tool, staff from local school systems and external partnering agencies can generate customized reports. Various reports can be created and used by the contributing partners to determine where linkages in services need to be made for potentially eligible students and identify areas for more effective collaboration and coordination of services among agencies. These reports also can inform and influence practices and policies that support effective transition service as well as determine training needs or other actions necessary to address gaps or breakdowns in the transition process.

B. Pilot of the Linkage Tool prototype

To maximize the relevance, feasibility, usability, and reach of Linkage Tool for transition-age youth, Maryland sought input directly from the end users (e.g., transition professionals, state and local level policymakers) to determine the key components of the product, its anticipated use, and their role in its implementation. In response, partners in Maryland conducted an initial feasibility pilot of the Linkage Tool in two small public school systems. The primary purpose of this pilot was to test the technical functioning aspects of the Linkage Tool. Although the results of this pilot yielded important information regarding the tool's feasibility and accessibility, further testing will involve modifying, scaling, and implementing the tool in larger school districts with more users, state partners for collaboration, and varied service performance indicators, with federal privacy laws governing data safety and security. Engaging end users in the design of the Linkage Tool is critical to determine acceptability, appropriateness, and feasibility of its use. The pilot was to be expanded to an additional six school districts in fall 2020 but was delayed due to the COVID pandemic and will start in July 2021. An additional intent of this expanded pilot will be to inform standard procedures and protocols needed to implement the tool for adaptation across the country.

Likewise, it is important to seek perspectives of beneficiaries of the Linkage Tool—transition-age youth with disabilities and their families—to identify ways in which the tool can be iteratively redesigned over time to become progressively more effective in promoting service integration and spread of evidence-based programs and practices within and across service arrays. Maryland does plan to seek input from various stakeholders over time through focus groups with youth and families. This action will increase chances that the Linkage Tool can be designed in ways that are scalable for local districts within states and adaptable for use by other states. Agency partners will also receive technical support and assistance to create procedures and protocols to enable data security while ensuring the information is used to engage families and encourage/support applications for services.

III. Potential for expansion of the Linkage Tool

The Linkage Tool is designed to easily accommodate ongoing expansions through the addition of new data elements from additional agency partners, such as training program enrollment data from America's Job Centers (AJCs), or data on youth receiving SSI from health and human service agencies. Other possible options to add to the Linkage Tool include (a) capturing data on

Measurable Skill Gains per the WIOA; (b) text and email reminders to families and youth to complete applications, follow-up for appointments, and other key actions; (c) access to pre-employment transition services and post-school providers; uploading of student resumes; and (d) detailed information on work-based learning experiences such as wages earned.

With additional changes at the federal level, the Linkage Tool could accommodate other target populations, such as youth receiving SSI without IEPs or students with 504 plans who qualify for pre-employment transition services. Not all state and local education agencies serve students with 504 plans and IEPs under the same infrastructure. In fact, arrangements for serving these students vary greatly across the country. In some states, the school personnel responsible for the administration, compliance, and data collection for students receiving services under a 504 plan are completely separate from those responsible for special education services. A mechanism such as the Linkage Tool would facilitate coordination across multiple partners internal and external to schools. Additional federal resources and requirements would be necessary for students being served through a 504 plan to be served by public education per requirements of the IDEA.

A. Ensuring linkages to post-school services for all youth receiving SSI

Expanding the Linkage Tool to cover new agencies and populations would offer a means to systemically identify and support youth receiving SSI who do not require or qualify for an IEP. Fewer than 70 percent of children receiving SSI ever received special education services or had an IEP (Davies and Rupp 2006), whereas 34 percent of youth participating in PROMISE did not have transition services offered by schools as part of IDEA (Livermore and others 2020). The reasons for these differences vary. Some may have 504 plans instead or may not meet the criteria necessary for an IEP. Schools have no legal requirement to provide linkages and transition services to youth receiving SSI not eligible for IEPs under IDEA and no comprehensive means of identifying those youth. Federal changes and support would be needed to replicate and expand this tool to identify and serve all youth receiving SSI. The Linkage Tool could expand in several ways to target the needs of youth receiving SSI not eligible for special education (Box 1).

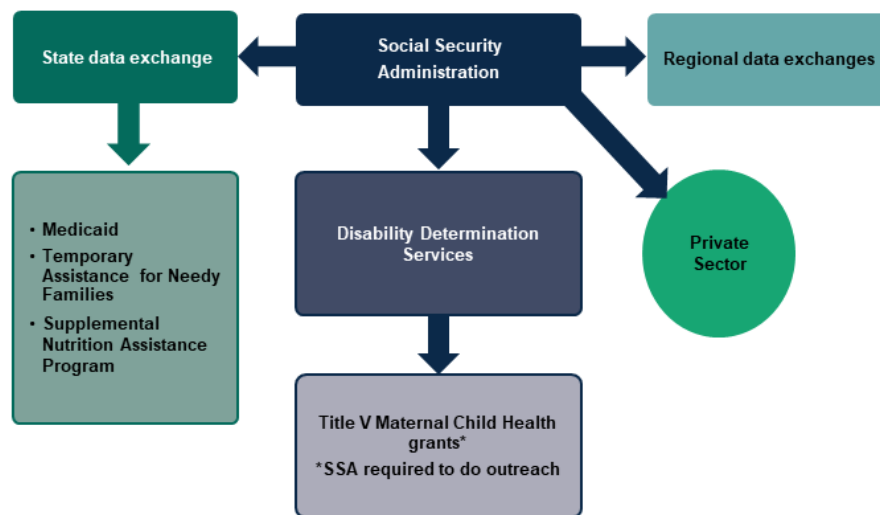
Box 1. Ensuring linkages to post-school services for all youth receiving SSI: Recommendations for change

Several federal policy changes would facilitate the effective expansion of the Linkage Tool platform to include *all* transition-age youth receiving SSI and its replication in other states. Below, we highlight key considerations and potential solutions.

1. Access to information on students receiving SSI

Educators cannot readily identify or verify students receiving SSI. The U.S. Department of Education (ED) could issue an interpretation of Free Appropriate Public Education under IDEA to include all youth receiving SSI, starting at ages 14 or 16, for transition planning and linkages. This recommendation necessitates rulemaking and funding at the federal level to require states to provide access to data on youth receiving SSI. The Linkage Tool could serve as a means for data sharing, if the proper agreements are in place. State and local education agencies, including special education, vocational rehabilitation, and labor/America’s Job Centers, are among the state agencies without access to data indicating which youth receive SSI. Although schools may request it, there is no systemic means of obtaining or verifying the data. It is important to note that VR gets data on adults receiving SSI via the Ticket to Work program but does not receive information on youth receiving SSI, and the Social Security Administration (SSA) is not able to refer to VR. State level barriers include interpretation of the Health Insurance Portability and Accountability Act by state attorneys; data privacy concerns; legacy systems; resource/capacity issues; and lack of federal expectations or requirements of human services, particularly as they relate to youth and connectivity to employment services. Figure 2 indicates which agencies have access to information on youth receiving SSI.

Figure 2. Who has access to data on youth receiving SSI?



2. Require or offer resources to states to improve their transitioning youth infrastructure and provide transition services to youth receiving SSI not otherwise eligible

Although the Linkage Tool could serve as a mechanism to identify youth receiving SSI, federal policy changes are necessary to require schools to provide transition services to youth receiving SSI who are not eligible for services under IDEA. Changes to the IDEA legislation that make students on a 504 plan, or all students receiving SSI, eligible for transition services would be necessary but may face competition for limited resources. Another legislative approach would be to make revisions to the Ticket to Work and Work Incentives Improvement Act (P.L. 106-170) to fund a model similar to the State Medicaid Infrastructure grants that would offer states incentives to build the infrastructure needed to ensure long-term coordination and connection among state agencies for youth receiving SSI.

3. Set youth receiving SSI as a funding priority

Job loss due to the COVID-19 pandemic in 2020 has increased demand for pre-employment transition services and adult services, resulting in a strain on VR funding. The creation of a directive requiring VR to identify, measure, and report the number of pre-employment transition services provided to youth receiving SSI by ED could ensure their access to such services from VR agencies. Alternatively, WIOA places a priority for AJCs to serve out-of-school and disconnected youth, yet local centers struggle to meet their disconnected youth quotas and often ask for waivers from this requirement (U.S. Department of Labor 2019). The U.S. Department of Labor could issue guidance making youth receiving SSI eligible for services as part of the disconnected youth requirement and states could use the Linkage Tool to facilitate identification and access to them. This change would encourage the workforce system to pursue connections with a population of youth likely to disengage, offering the youth, many of them with non-obvious disabilities, a less stigmatizing alternative to VR. This proposed change also could offer an incentive for AJCs to become active partners in sharing and receiving data from the Linkage Tool. The Linkage Tool would serve to identify and verify youth receiving SSI, assuming the implementation of the first recommendation.

4. Obtain data sharing consent at the time of SSI child application

SSA and the Department of Health and Human Services could direct state departments of social services to ask parents and guardians, when an application is made for child SSI, for consent to share contact information with ED via the Linkage Tool. SSA must review and approve the consent form/waiver.

5. Ensure support for engagement

Federally funded human services programs, such as Temporary Assistance for Needy Families (TANF) and Supplemental Nutrition Assistance Program (SNAP), assist families with application to child SSI, yet they do not have a defined role in transition planning for youth to support long-term employment outcomes. Making legislative changes that ensure these programs include a focus on youth receiving SSI before exiting from school would enhance the role of social services beyond application to child SSI. Requiring engagement with external partners such as schools, VR, and AJCs to ensure the youth engage in activities funded under WIOA, such as pre-employment transition services and AJC youth programs, would ensure social services has a role to play in improving their outcomes. Expanding to include access to the Linkage Tool to allow for data sharing and referrals would also further facilitate these partnerships.

Summary

These federal changes across the multiple partners would help identify, track, and connect youth receiving SSI who do not currently receive transition services under IDEA. They would also improve awareness of in-school and post-school employment services; increase participation in individual planning and career-related services; and enhance connections to postsecondary education, training, and employment. System outcomes would include an ongoing mechanism to capture and measure data and a comprehensive approach to more effectively track and improve post-school outcomes for youth receiving SSI.

A digital tool, such as the Linkage Tool being developed in Maryland, can serve as a platform to identify all youth receiving SSI and encourage linkage to necessary services. The federal changes described here would facilitate those functions and create a seamless system for all youth receiving SSI.

IV. The Maryland Transition Linkage Tool: A solution for ongoing challenges

The Linkage Tool can address longstanding barriers that impede youth with disabilities from successfully transitioning from school to competitive employment. Although evolving federal policy recognizes the importance of promoting a seamless pathway from school to college and careers, policy and practice gaps remain. As a result, states are prevented from realizing the full collaboration required to support secondary transition. These gaps include (1) fragmented and uncoordinated transition services and systems; (2) uneven access to and utilization of transition services, including work-based learning experiences; and (3) lack of information sharing across systems (Honeycutt and others 2018; Johnson, Nye-Lengerman, and Gunty 2019; Livermore and others 2020).

Research frequently notes the fragmentation of the youth-serving system (Honeycutt and Livermore 2018; Nye-Lengerman and others 2019; Livermore and others 2020). Families must identify and coordinate multiple systems with different eligibility requirements and funding streams. Families of youth receiving SSI face the added burden of navigating two systems—disability and poverty—that operate separately from other services focused on education and employment. Like families, professionals also find it difficult to work collaboratively across the complexity of various systems (Oertle, Bobroff, and Sax 2020) preventing them from identifying and engaging youth who could most benefit from key employment related services. Yet, research shows that collaborative service coordination between schools and adult partnering agencies such as VR influence employment success when these collaborations focus on achieving individual youth outcomes (e.g., Fabian and others 2016; Oertle, Bobroff, and Sax 2020; Park and Bouck 2018).

Moreover, providing comprehensive support for transition-age youth often requires engaging with various agencies that have clearly defined roles and responsibilities. However, no standard or mechanism exists for these agencies to share information about students they currently serve in common or should have in common to obtain consent for data sharing. These barriers impede the ability for schools and community agencies to effectively coordinate and deliver robust services to youth, although federal policy encourages schools and VR to collaborate in the delivery of transition services.

Youth receiving SSI also face significant gaps in their awareness and use of employment services (Hemmeter, Kauff, and Wittenburg 2009; Wittenburg and Loprest 2007). Federal policies such as ESSA, IDEA, and WIOA assume widespread eligibility and service availability. IDEA and WIOA aim to provide transition services like work-based learning experiences to students as early as possible. However, because these services operate with some independence from one another, access and utilization are uneven among youth receiving SSI who are most likely to benefit from these services (Certo and others 2009; Luecking and Luecking 2015).

These gaps, as outlined in Table 1, persist despite significant increases in communication and collaborative coordination between agencies to provide transition services. To help to bridge the gap between policy and practice, schools and external adult agencies must increase their capacity to collect, monitor, and systemically share data. Without this ability, states will continue to struggle to inform and improve the provision of services offered to students with disabilities, including those who receive SSI.

Table 1. How the Linkage Tool addresses longstanding barriers

Barriers	Solution: Transition Linkage Tool
System	
Fragmented and uncoordinated systems Lack of information sharing across systems	Connects and refers students to the external agencies from which they may be eligible to receive services Tracks and targets individualized services for each student Tracks post-school outcomes and ensures compliance with federal reporting requirements Collects, monitors, and systemically shares data across agencies on students they share or should share
Individual	
Uneven access and utilization of transition services, including work-based learning experiences	Identifies students who need work-based learning experiences and facilitates placement based on individual preferences and needs Focuses on person-centered planning

A. Benefits to sharing data on transition services

Collecting and sharing data on the transition services received across service systems can drive the improvement of post-school outcomes in multiple ways. For example, this approach helps (1) better understand and improve how students experience the transition process and identify areas for technical assistance; (2) measure progress toward specific performance outcomes as required by federal policy; (3) support earlier engagement in important transition services, including work-based learning; and (4) increase collaboration across agencies that ensure students are connected to services that improve their post-school outcomes.

Tracking services promote efficiencies in linking eligible students to transition services and supports while avoiding duplication of services. The Linkage Tool also serves to connect eligible youth to services that support a seamless exit from school to economic independence. Currently, data related to transition services, including work experiences, program applications, and eligibility and post-school outcomes spread across schools and multiple agencies. By collecting, storing, and sharing data in a single place, state and local partners can better understand students’ experiences in the transition process and collaboratively build local capacity in support of transitioning youth. Data from a central data system, such as the Linkage Tool, also provide evidence to drive policy and practice changes centered on improved post-school outcomes for youth with disabilities across partner agencies.

Additionally, using a systems approach to track and monitor transition services improves the ability of the agency partners to access and share data to meet federal reporting requirements under WIOA

and IDEA (Appendix C Table C.1). As an example, the Linkage Tool provides the means for Maryland to report four of these indicators, two of which also fulfill state ESSA reporting requirements (Maryland State Department of Education 2016).² It also facilitates improved transition planning, which could lead to improved outcomes. By knowing if a student is not going to be eligible for VR or will be on a waiting list for services, schools can discuss options with youth and families and provide them with information on alternative services, such as those provided through AJCs.

Under WIOA rules, state VR agencies must reserve at least 15 percent of their federal funds or pre-employment transition services. The data collected in the Linkage Tool identifies students receiving these services and lists, for instance, if they have applied and are receiving specific services or have applied for and been found eligible for full VR services. Similarly, the state IDD agency can use the Linkage Tool to determine the demand for post-school services, which aids in determining state budget requests. Students not found eligible for either VR or IDD services would also be reflected in the data collected by the Linkage Tool, allowing transition professionals to systemically connect them to alternative resources such as the AJCs. Efficiencies in linking students to necessary services before school exit help decrease the number of disconnected youth and, therefore, reduce costs associated with reengagement after youth exit high school (Heinrich and Holzer 2011). Although the tool does not remove the onus from students and families to make applications, it will reduce the burden of reporting back to schools on the outcomes of their applications to post-school partners. It also ensures they benefit from the full array of potential post-school services if they are found not eligible for the first option. In addition, the tool's emphasis on employment services reinforces work as an outcome and encourages discussions during transition to identify and address the potential fears and concerns of youth and families about work as an outcome. Many families assume their information is being shared, not understanding the need for consent.

In Maryland, some students with IEPs have the opportunity to create a Transition Digital Portfolio. This tool, which is student owned, allows them to digitally document and share their transition experiences. It is an organized way to display student's strengths and readiness for college, career, and community. The Digital Portfolio, although not required in Maryland and not adopted by all local school systems, complements the data captured in the Linkage Tool. Taken together, these tools will equip youth and families with information necessary to maximize full access to services that prepare them to obtain long-term competitive employment and economic self-sufficiency. It is important to note that the statewide requirement for Maryland's Linkage Tool aligns with requirements under IDEA. There is no similar federal language that can be used to require local school systems to adopt the digital portfolio. In addition, youth receiving SSI and their families face issues related to technology access and engagement, and adoption of the portfolio would not lead to increased linkages to services, which is the focus of this proposal.

² Indicator 1, percentage of youth who graduated; Indicator 2, percentage of youth who dropped out; Indicator 13, percentage of youth who required a transition component on their IEP; and Indicator 14, percentage of youth who achieve various post-school outcomes.

V. Replicating the Linkage Tool

The Linkage Tool is flexible enough to be replicated and modified based on the needs of the end users. Replicating the tool requires three phases: (1) discovery, (2) computing infrastructure and development, and (3) ongoing operation.

A. Discovery

As a first step, key agency leadership must come to a consensus on the data fields to include in the linkage tool, determine the source to obtain data, and determine how that data will be exchanged. This phase can take a significant amount of time and may involve several thoughtful conversations with key partners. A strategic process to solicit input and arrive at consensus on the data fields will help ensure this phase is efficient and respectful of all partners. For example, a Delphi method could be used to survey key partners on the data elements most important to their agency.

During this phase, the team must make student privacy and data security a priority while valuing the collection of quality data. Communicating the value of data and the strengths of existing privacy protections can be difficult because of the complexity of the technology and legal and regulatory frameworks involved, but it is essential to build and maintain trust in this issue with all users. The Maryland Linkage Tool approaches this problem on several fronts. Databases are encrypted at rest and all communication between the application, its database, and the end user is forced over HTTPS. We employ multifactor authentication to ensure that the potential for account compromise is limited. Aggressive inactivity timeouts log out users to further limit risk. Consent forms explain to parents what information is being shared and between what agency partners. Additionally, it is important to develop a comprehensive Information Security Plan that details security practices at play and how security escalation is handled.

B. Computing infrastructure and development

The second phase involves the build-out of the linkage tool. This requires determining the software application to be used to build the tool and what agency or organization will serve as the host site as well as building or modifying software. If key decisions are agreed to during the discovery phase, the build-out should be quick. Before rolling out the linkage tool, a beta version can identify any additional modifications or customization needed.

C. Ongoing operations

Once the tool is piloted, it is ready for the final replication phase. This phase simply requires the initial end user (in Maryland's case, it was the state education agency, though other partners could include VR or IDD) to migrate data on individual students for whom consent has been obtained. Other partners can then match and upload data using bulk data exchanges.

The cost of replicating the digital tool includes software application, computing infrastructure to build out the tool, and staff time during the discovery phases and ongoing data entry. By having a limited number of targeted data fields and external sources from which to populate many of the fields, the tool can be maintained at a relatively low cost and only requires a limited amount of staff

time to input data. In Maryland, each local school system designates a person or persons responsible for data entry. Pulling existing data from different sources into a central hub greatly reduces the amount of time needed for data entry and replaces manual tasks and spreadsheets currently used by some school systems. Cost to develop and maintain such a tool will vary based on the infrastructure and interoperability of existing state systems. In Maryland, partner agencies are contributing funds to the development of the tool, which is owned by the Maryland State Department of Education; however, any agency could be the lead for such an effort.

Email-based support is provided to users in Maryland through the original developers of the Linkage Tool. The assistance most often requested is for common issues like forgotten passwords, but performance issues also can be supported.

Initial in-person or remote orientation sessions on how to navigate and enter data into the Linkage Tool are supplemented with a user manual. The user manual covers system requirements to access the Linkage Tool, basics of security and confidentiality expectations, the various sections of the Linkage Tool, and other common tasks. This user manual could be adapted to other localities.

As described in Section II, MSDE and its partners have completed a limited pilot of the Linkage Tool with two small local school systems. In July 2021, the pilot will be expanded to six additional school systems. The pilot is intended to further test the usability and also to prepare technical and user-accessible guidance for replication. For instance, the pilot will offer guidance on how to (a) secure and execute the DSAs, (b) achieve buy-in from partners, (c) market/inform key stakeholders including youth and families on the value of the Linkage Tool, and (d) use Linkage Tool data to inform practice. Additionally, Maryland has drafted a user manual that includes information on the specific technical features of the Linkage Tool, how to log in, how to enter data, how to access real-time data, and how to generate just-in-time reports.

VI. Evaluating the effectiveness of the Linkage Tool

The Linkage Tool has the potential to be evaluated using a rigorous evaluation design. Such an evaluation would provide the federal government with information on the impact of systemically tracking and sharing key transition services on long-term employment outcomes. Potential research questions might include (1) does tracking key services result in increased access and utilization of critical transition and employment services for youth with an IEP? (2) Does tracking key transition services improve long-term employment outcomes for students with an IEP? (3) Does tracking and sharing data about transition services received lead to enhanced collaboration across agencies?

One major challenge to evaluating the Linkage Tool would be determining the unit of assignment for experimental treatment and control group designs. For example, implementing the Linkage Tool for some students but not others within a single school would create logistical challenges in places with a limited number of relevant staff and students, and it might violate laws regarding access and equity. However, the impact that the Linkage Tool makes on the long-term employment outcomes for youth with IEPs could be evaluated using an experimental design across local education agencies

within one state or across multiple states. Any evaluation would need to consider the various regulations for implementing randomized controlled trials within different states.

An evaluation of the Linkage Tool should also measure the acceptability of and satisfaction with intervention procedures. This assessment can be achieved by obtaining the perspectives of key partners implementing the Linkage Tool as well as from those using its data to better coordinate services. The mere existence of a mechanism to systematically collect and share data can lead to the development of standardized procedures and protocols for linking students to services that support their post-school outcomes.

If the Linkage Tool were expanded to other youth populations such as youth receiving SSI not on an IEP or students with a 504 plan, additional evaluation research questions could explore the impact the Linkage Tool has on identifying and connecting youth with disabilities (who are not receiving transition services under IDEA) to employment services. More importantly, additional research questions could analyze the impact the Linkage Tool has on post-school outcomes for this population of youth.▲

VII. Conclusion

Over the past several decades, states have implemented several federally mandated changes to improve post-school outcomes for youth with disabilities. Some of these changes include transition planning beginning at age 16 (or age 14 in some states) within the IEP process and, more recently, providing pre-employment transition services. These efforts lacked a means of systemically capturing and sharing data to measure outcomes and ensure students' linkages to post-school services. Without such a mechanism, states will continue to struggle in measuring and achieving these policy goals.

This paper introduces a solution to collect and share information on transition services and outcomes between schools and partner agencies. Replication and expansion of the Linkage Tool in state and local agencies would ensure that students, including those receiving SSI, have access to coordinated and seamless services across schools and adult service entities. Without such an effort, students with disabilities will continue to experience barriers in achieving positive long-term adult outcomes, including competitive employment.

The Linkage Tool addresses the need to improve linkages to post-school services by moving beyond paper tools currently used by many schools to track and coordinate transition services for students receiving publicly supported special education. This proposal shared how a digital system to track data enables the systemic collection and direct sharing of service and outcome information between schools and their partners in transition. Although currently implemented in Maryland for youth with IEPs, including students receiving SSI, with appropriate federal action, the Linkage Tool could readily expand as a means for all youth receiving SSI to better access transition services. Several different levers—including ESSA, changes to Medicaid, or other federal legislation or rulemaking—could accomplish this result.

Maryland's model offers a template to address gaps that youth face in gaining long-term employment. A digital system such as the Linkage Tool is designed to evolve. The Linkage Tool

supports state and local agencies to better serve transition-age students with IEPs by emphasizing linkages to employment transition services and post-school outcomes. If we truly want to improve post-school outcomes for students receiving SSI, then federal, state, and local leaders might explore options that identify, support, and connect them to services. Ultimately, this solution—direct sharing of service and outcome information between schools and their partners—allows students, including those receiving SSI, to receive coordinated and seamless services when jointly connected to schools and external agencies.

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Appendix A

Maryland Transition Linkage Tool: Current data fields

Table A.1. Maryland Transition Linkage Tool: Current data fields

Demographic information

- Student's age, grade level, ethnicity, primary disability
- School attended, date of first enrollment in high school (9th grade), and a projected exit date
- IEP/no IEP
- Signed consent form
- Student's unique identifier

Service information

- Work experiences, both paid and unpaid
- Service referrals to various agencies

Services

- Date of application
- Eligibility determination
- When/if they started receiving pre-employment transition services or VR services

Point of exit information

- Date of exit from high school
- Exit reason (diploma, certificate, drop-out)
- External service linkages: Developmental Disabilities Administration (in process) to potentially include application, eligibility, and coordination of community services provider
- If they are enrolled in postsecondary education, military, or other training, and what type
- Their employment status at the point of exit

Anticipated post-school outcome

- Postsecondary education, military, employment, unknown
-

Appendix B

Information/Data Release Form

The Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. § 1232g; 34 C.F.R. Part 99, is a federal law that protects the privacy of educational records and requires prior written consent to disclose records. In addition, State law requires written consent to disclose personal information from the Division of Rehabilitation Services (DORS). COMAR 13A.11.06.09.

I, the undersigned, hereby authorize the release of specified educational records and information via the Maryland Transition Linkage Tool between my local school system and the specified agencies:

Disclose the following educational records and information:

Name	Gender
County	Ethnicity
School	IEP Status
Grade	Indicator 14 Data
Zip Code	Work Experiences
SSI/SSDI Status	External Service Referrals
Date of Projected School Exit	VR Service Information
Projected Graduation Document	Date of Exit from School
Anticipated Post-School Outcome	Exit Reason
Date of Birth	Service Linkage Referral

To: Local Education Agency
Division of Rehabilitation Services (DORS)
Developmental Disabilities Administration (DDA)
Department of Labor, Licensing, and Regulation (DLLR)
Behavioral Health Administration (BHA)

For the purpose of informing the transition planning process for my student, particularly with regard to the coordination of agency referrals, eligibility determinations, provision of services, and closure when my student’s goals are reached.

This release is valid until [date]. It does not permit the disclosure of these records and information to any other persons or entities without my written consent or as permitted by law.

Parent/Guardian’s Name (Please Print)

Student’s Name (Please Print)

Signature of Parent/Guardian

Date

_____ I choose not to have my student participate in this Transition Linkage Tool at this time.

Appendix C

Federal Data Reporting Requirements

Table C.1. Federal data reporting requirements

	ESSA	IDEA	WIOA
Purpose	Provides equal access to education, high standards, and accountability to support states' college and career readiness efforts by aligning district- and school-level readiness initiatives with curricula, improved conditions for learning, and other educational experiences.	Provides free appropriate public education to students with disabilities by providing special education and related services.	Provides job seekers access to employment, education, training, and support services to succeed in the labor market. Matches employers with the skilled workers they need to compete in the global economy. Pre-employment transition services are provided to high school youth with disabilities.
Reporting requirements	States must include the following measures in their accountability systems: four-year adjusted cohort graduation rate; student growth or another valid and reliable academic indicator; and an indicator of school quality or student success, which may include one or more measures of: <ul style="list-style-type: none"> • Student engagement • Educator engagement • Student access to and completion of advanced coursework • Postsecondary readiness • School climate and safety • Other 	As part of the state performance plan and annual performance report, the state must establish goals for, monitor, and report progress on 17 indicators. Five indicators directly align with state monitoring and assessment of academic, technical, and employability skills of students with disabilities: <ul style="list-style-type: none"> • Graduation (Indicator 1) – Percentage of youth with IEPs graduating from high school with a regular high school diploma • Dropout (Indicator 2) – Percentage of youth with IEPs dropping out of high school. • Secondary Transition (Indicator 13) – Percentage of youth with IEPs age 16 and older with an IEP that includes the requirements of transition services • Post-School Outcomes (Indicators 14A–14C) 	States must report annually on indicators of having obtained or being in the process of obtaining: <ul style="list-style-type: none"> • Postsecondary credential, secondary school diploma, or equivalent during participation or within one year after program exit • Enrollment in education that leads to a recognized postsecondary credential or employment and achievement of measurable skill gains toward those goals • Unsubsidized employment (and/or, in the case of youth, participation in education and training) during the second and fourth quarters after exit from the program • Median earnings during the second quarter after exit from the program • Effectiveness in serving employers