



**Dartmouth**  
GEISEL SCHOOL OF MEDICINE

**Evaluation of the Balancing Incentive Project for Individual Placement and Support  
Programs in the State of Illinois**

**Program Evaluation Report**

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In 2014, the federal Centers for Medicare and Medicaid awarded Illinois \$90 million by for the Balancing Incentives Program (BIP) to increase access to non-institutional long-term services and supports. The Division of Rehabilitation Services (DRS) received \$4.2 million dollars of those funds and allocated \$3.7 million of that amount to develop 20 community BIP teams to develop pilot programs during the period from July 1, 2014 to February 29, 2016. The BIP project aimed at assessing the viability of Individual Placement and Support (IPS) and/or customized employment services for several target groups: youth with mental illness, youth and adults with developmental disabilities, youth with mental illness and developmental disabilities, adults with mental illness who were deaf/hard of hearing, and to underserved ethnic, racial, and immigrant minorities with disabilities. Under the coordination of Dr. Gene Oulvey, DRS Coordinator of Psychiatric Rehabilitation Services, DRS selected sites for the BIP program based upon recommendations from Regional and local DRS field staff, Regional offices of the Division of Mental Health, and the Illinois Council on Developmental Disabilities. DRS developed the Illinois BIP project in response to the 2015 Workforce Innovation and Opportunity Act (WIOA), which identified students and transition age youth with disabilities as a priority for supported employment services. The Act also emphasizes skills development to help youth with disabilities gain competitive integrated employment

Individual Placement and Support (IPS) is an evidenced-based supported

employment model that provides a standardized approach for vocational services for people with severe mental illness to gain competitive employment. Key components of IPS include zero-exclusion, rapid job search, competitive employment, preference-based employment, integration with mental health services, and follow along supports. Based on eight empirically derived principles, IPS has consistently demonstrated better competitive employment outcomes compared to any other employment model (Marshall et al. 2014). IPS programs have been implemented across the U.S. and internationally in North America, Europe, Asia, and Australia. Illinois currently has 72 fully operational IPS programs serving people with mental illness.

Customized Employment (CE) is an employment model defined by a series of strategies to help people with disabilities gain employment. It has been used mostly to help people with developmental/intellectual disabilities. CE emphasizes relationship building between employers and the employee to ensure both needs are being met. One strategy offered by CE is *Discovery*, which is an assessment process to identify the person's strengths, range of abilities, and interests. A second strategy, the *Portfolio*, uses information gained through Discovery to create a visual resumé, which presents as a personal story outlining the person's strengths and interests. A third strategy, *job carving*, is the process of creating a job that meets the needs of the person and the needs of the employer. Although the CE model does not have a strong evidence base documenting its efficacy, federal policies, such as WIOA, endorse its use for integrating people with developmental/intellectual disabilities into the workforce (Riesen, Morgan, & Griffin, 2015).

To promote the implementation of these employment models, the BIP sites received training through the Dartmouth Psychiatric Research Center online course in IPS, cross-training in CE by state and national CE experts, and training from statewide webinar sessions in topics related to IPS and CE. Sites were given the option of implementing IPS only, CE only, or combining IPS principles and practices with practices from CE. The provider's selection of a vocational model was guided by their determination as to which of the different approaches best suited the needs of the population(s) they served as part of the BIP initiative.

DRS supported the implementation of services in several ways. First, DRS held monthly coordination calls with each BIP team. Second, the state IPS Trainers and DRS funded trainers from active community IPS teams provided ongoing onsite and phone technical assistance. Third, DRS organized semi-annual regional meetings for the BIP sites where DRS presented details of the BIP initiative and IPS model, and the local teams spoke about their services, innovations, successes, and areas of continuing struggle in implementing services. Fourth, the BIP projects all received an IPS fidelity review. The BIP site using CE with added elements of the IPS model received a one-day consultation review.

### **Purpose**

Researchers from Dartmouth evaluated the implementation of the BIP-funded supported employment programs assessing the applicability and outcomes of IPS in these new target populations of youth with mental illness and people with developmental/intellectual disabilities. The evaluation assessed (1) adherence to the principles of IPS, (2) challenges and facilitators to implementation, (3) employment

outcomes, (4) customer barriers to gaining and maintaining employment, (5) quality assurance plans, and (6) use of electronic data collection to inform practice.

## **Methods**

### **Overview**

Between June 2015 and November 2015, researchers from Dartmouth conducted a program evaluation of 15 agencies, which were enrolled in the BIP project, throughout the state of Illinois. Across the 15 agencies, the inception dates of the BIP programs ranged from July 2014 to November 2014.

### **Procedure**

Two senior researchers and one postdoctoral researcher from Dartmouth developed a proposal to evaluate the implementation of IPS at 15 sites that served two new populations: (1) youth with mental illness and (2) people with developmental/intellectual disabilities. The assessment included both qualitative and quantitative measurements. Experienced fidelity assessors conducted IPS fidelity reviews at 14 of 15 BIP sites, following assessment procedures outlined in the fidelity manual ([www.dartmouthips.org](http://www.dartmouthips.org)). One site, which used the CE model for supported employment, did not undergo a standard IPS fidelity review. This site received a one-day site visit during which the fidelity scale was used to guide the review of the program but the items were not scored. The postdoctoral researcher joined 7 of the 15 on-site fidelity reviews as an observer of the fidelity review.

**Interview procedures.** Between June 2015 and October 2015, we collected qualitative and demographic data through phone interviews with the IPS staff (i.e., supervisor and employment specialists) and in-person interviews during the site visits.

The semi-structured interview consisted of questions related to the challenges and facilitators to implementation of IPS in the new populations, customers' barriers to employment, the use of CE for supported employment, quality assurance plans, and the use of electronic data to inform practice. For sites that indicated that they used components of the CE model, additional interview questions explored the extent and method of use of customized employment and employment outcomes.

**Coding of qualitative data.** The interviewer manually recorded the responses from the interview questions assessing barriers and facilitators to implementation, customers' barriers to employment, quality assurance plans, and collection and use of electronic data. Responses were parsed into discreet categories and entered into an electronic spreadsheet. The BIP site leaders identified between 2-7 discreet challenges and 2-7 discreet facilitators to implementation. Five researchers independently reviewed these responses to generate themes that represent common challenges and facilitators to implementation expressed by the BIP sites. The research team discussed their themes to reach consensus and identify the core challenges the sites faced to implementation.

## **Measures**

**Fidelity.** Two Illinois state agencies, the Office of Mental Health and DRS, monitor the 72 IPS fidelity programs statewide, conducting annual fidelity reviews at the sites using a group of trained fidelity reviewers who are state IPS trainers or DRS senior staff. The same fidelity reviewers who conduct reviews of existing IPS programs served as fidelity reviewers for the BIP project.

The fidelity measure used to assess adherence to the IPS model is called the IPS-25. The IPS-25 consists of 25 items, each rated on a behaviorally-anchored 5-point scale.

Scale points range from 1 indicating lack of adherence to 5 indicating close adherence to the IPS model. Total scores range from 25 to 125. Scores between 115 – 125 are considered exemplary fidelity, scores between 100 – 114 are considered good fidelity, scores between 74 – 99 are considered fair fidelity, and scores of 73 and below indicate the program is not implementing IPS (Becker, Swanson, Bond, & Merrens, 2011).

**Competitive employment rate.** Competitive employment is employment in an integrated community setting that is available to any person qualified to perform the duties associated with the employment position regardless if the person has a disability, paying at least minimum wage where the person earns the same wage as their co-workers who are doing the same work, and providing supervision by personnel employed by the business. (An integrated work setting is one in which employees are not exclusive or mostly people with disabilities.) The competitive employment *rate* is calculated as the number of customers who have been employed for at least 1 day during a specified 3-month period (i.e., a calendar quarter) divided by the total number of customers on the active caseload during that time.

**Customer barriers to employment.** The IPS team at each agency rated up to three barriers to employment (primary, secondary, and tertiary) for each customer selected from a checklist of 21 barriers to employment. The list is an expansion of an earlier list of 14 common barriers to employment among Social Security Disability Insurance beneficiaries (Milfort, Bond, McGurk, & Drake, 2015). We generated 7 additional items based on discussion within the Dartmouth team. We also solicited suggestions from the leaders from two IPS teams to capture barriers unique to youth and people with developmental/intellectual disabilities.

## Results

### Site Characteristics

The evaluation included seven rural, four suburban, and four urban agencies (See Table 1 for site characteristics). Five BIP sites served youth with mental illness and/or developmental disabilities, three served both youth and adults with mental illness and/or developmental disabilities, three served youth with mental illness, three served youth and adults with developmental/intellectual disabilities, and one site served adults with mental illness and/or developmental disabilities. Three sites targeted minority populations, specifically Bobby E. Wright (African American community), El Valor (Hispanic and Latino community), and Midwest Asian Health Association/Chinese American Service League (East Asian community). Seven agencies (47%) selected for the BIP project did not have a previously established IPS program serving adults with mental illness.

All sites reported serving at least one customer with a primary or secondary diagnosis of an anxiety/mood disorder. The range of diagnostic groups served across the sites included externalizing disorders (13 sites), autism spectrum disorder (11 sites), bipolar disorder (10 sites), intellectual disabilities (10 sites), schizophrenia (9 sites), learning disabilities (8 sites), personality disorders (7 sites), Down syndrome (4 sites), pervasive developmental disorders (4 sites), and substance use disorders (4 sites). Figure 1 depicts the number of sites serving each diagnostic group with lines between diagnostic groups representing comorbidity. Intellectual disabilities, externalizing disorders, bipolar disorder, and anxiety/mood disorders were the most frequent co-occurring disorders across the sites.

### Quarterly Employment Rate



All 15 BIP sites provided 4 quarters of employment data over the course of one year. Date ranges for employment data were dependent on the site's BIP program start date. For 9 sites we used the employment data from July 2014 to June 2015 and for the remaining 6 sites we used the employment data from October 2014 to September 2015 to calculate the quarterly employment rates. Figure 2 presents the highest quarterly employment rate for each site. The highest quarterly employment rate ranged from 20.0% to 81.8% ( $M = 39.0\%$ ,  $SD = 16.9\%$ ). As seen in Table 2, across all sites the employment rate increased over the course of 4 quarters from program start-up until the final follow-up. During the first quarter, 9.5% of customers were competitively employed (rates ranging from 0% to 33.3%). The rate increased to 19.0% in the second quarter (rates ranging from 0% to 50.0%), 30.1% in the third quarter (rates ranging from 9.1% to 81.8%), and reaching the highest average rate of 36.0% in the fourth quarter (rates ranging from 14.3% to 58.3%). Seven of the 15 sites achieved an employment rate of 41% or more in at least one quarter; 41% is the benchmark for a good employment rate based on data from 151 IPS programs (Becker, Drake, & Bond, 2014).

### **Fidelity**

Figure 2 depicts the fidelity scores for 14 sites that received a fidelity review. Fidelity scores ranged from 84 to 120 (Mean = 99.5,  $SD = 10.7$ ); 43% of sites ( $n = 6$ ) showed good adherence to the IPS model (fidelity score  $\geq 100$ ), including 2 achieving exemplary fidelity. Of those not achieving exemplary fidelity, 57% of sites ( $n = 8$ ) achieved fair fidelity and 29% ( $n = 4$ ) achieved good fidelity.

### **Customer Barriers**

The 15 BIP sites provided ratings of barriers to employment for 542 customers. Table 3 displays the frequency of each barrier as the primary, secondary, and tertiary barrier to employment. Combining results from all 15 programs, the three most common primary barrier was failure to engage in vocational services (13.8%, n = 75), cognitive problems (11.4%, n = 62), and lack of work experience (10.3%, n = 56). Transportation was a common secondary (10.1%, n = 55) and tertiary barrier (10.9%, n = 59). Overall, the most commonly rated barriers to employment (i.e., primary, secondary or tertiary) were lack of work experience (32.8%, n = 178), transportation (28.0%, n = 152), and cognitive problems (22.9%, n = 124).

We also examined the barrier differences across the five major disability subgroups, as shown in Table 4. In this analysis, we collapsed the primary, secondary, and tertiary ratings into any barrier mention. The five disability groupings were youth with mental illness (n = 83), youth with mental illness and/or developmental/intellectual disabilities (n = 148), youth and adults with mental illness and/or developmental/intellectual disabilities (n = 162), youth and adults with developmental/intellectual disabilities (n = 84), and adults with mental illness and/or developmental/intellectual disabilities (n = 65).

Extracting the key themes from Table 4, we summarize barriers reported for at least 20% of customers across the five subgroups in Table 5. Lack of work experience, cognitive problems, and transportation were the most frequent barriers among sites serving youth. Lack of work experience was the most frequent barrier among sites serving people with developmental/intellectual disabilities. Among sites serving only people with developmental/intellectual disabilities lack of social skills (42.9%), cognitive

problems (41.7%), family interference (31.0%), behavioral problems (28.6%), and transportation (23.8%) were additional barriers to employment (See Table 6). Lack of work experience, cognitive problems, transportation, and failure to engage in the program were the most frequent barriers among sites serving youth with mental illness. Among sites serving only youth with mental illness, poor control of mental illness symptoms (21.7%) and trauma/abuse background (20.5%) were additional barriers to employment (See Table 7).

The qualitative interviews revealed several unique challenges in serving youth. According to the BIP teams, youth frequently changed interests, resulting in frequent changes in employment. Their school schedules limited their availability for employment, job development, case managers, and mental health treatment. Many youth relied exclusively on texting and ignored phone calls, which led to missed employer voice mails and other opportunities. Youth also showed limited life skills including money and time management skills, and appropriate workplace conduct (e.g., arriving on time, dress code, how and when to notify employer when changing schedules). Youth and adults with developmental/intellectual disabilities often required greater time from the employment specialists for job coaching.

### **Challenges to Implementing IPS**

Interviews with the IPS teams revealed three core challenges to implementation: (1) Competing priorities, (2) Collaboration across a fragmented system, and (3) Stigma.

**Competing Priorities.** Parents sometimes undermined the employment efforts of the IPS teams. Some youth from lower socioeconomic status came from generations of unemployment and families that had children at a young age. Employment was not seen

as a priority by parents. The lack of family engagement led youth, who may have initially expressed interest in employment, to disengage from the employment process. Parents made excuses for youth who missed appointments and did not encourage responsibility in the employment process.

The balance between education and employment was another challenge. For example, one team reported an instance where parents would not allow their children to pursue employment if the youth's grades were not maintained at a certain level. In these instances, the teams did not know the best course of action, whether to support the parents by encouraging education, act as an advocate for the youth to explore their employment interests, or act as a mediator to develop a resolution. The teams themselves struggled with prioritizing employment and education. DRS encouraged inclusion of supported education in the BIP project even though DRS was not paying for these services. Because DRS was not paying for supported education services, the DRS counselors did not define education outcomes. As a result, sites could not qualify or quantify a successful supported education outcome.

Historically, community rehabilitation programs have mostly placed youth and adults with developmental/intellectual disabilities in sheltered workshops and rarely in integrated competitive employment. The stakeholder community (i.e., providers and family members) has accepted that the work in sheltered workshops met the needs and capabilities of people with developmental/intellectual disabilities. Historically, they did not view competitive employment as a realistic possibility. WIOA and the BIP program challenged these ideologies, but the BIP teams encountered resistance from both parents and some VR counselors when they began placing people with developmental/intellectual

disabilities in competitive employment. Among parents, one common fear was that their child would be bullied at work. Some VR counselors viewed people with developmental/intellectual disabilities as incapable of meeting the demands of competitive employment. Some of the customers themselves were reluctant to leave the workshops entirely for fear of losing the social community that they provide.

**Collaboration across a fragmented system.** Several BIP sites noted challenges in entering the school system to access youth who would benefit from the BIP program. Through DRS, the high schools in Illinois offer a Secondary Transitional Experience Program (STEP), which provides skills training, career counseling, career exploration, and work experience to youth with disabilities. The goal of STEP is to prepare youth with disabilities for the transition to employment and community integration post high school. The BIP teams were unable to access high schools due to the school administration's belief that youth enrolled in STEP could not simultaneously engage in IPS. School administrators were concerned about losing credit for the employment outcome if the youth enrolled in STEP gained employment while simultaneously enrolled in IPS. The BIP teams felt the schools viewed IPS as competition.

Second, the BIP sites within agencies that did not provide mental health services were challenged in integrating mental health services with the IPS program. Finding mental health providers (e.g., bilingual providers) and establishing collaboration was a lengthy process. In several instances, youth who were recruited from schools to the IPS program did not have a therapist. One site, which served people with developmental/intellectual disabilities, reported that the structure of the agency did not

allow for mental health services for their customers, 40% of whom had co-occurring mental illness.

Some families discouraged their youth from gaining employment for fear of losing the benefits that support the family financially. This barrier represented a clear disconnect between families, benefits planners, and DRS.

**Stigma.** Stigma was evident among some staff, within the community, and within the customers. The IPS teams noted a resistance to zero exclusion for people with developmental/intellectual disabilities from VR counselors and for youth/adults with mental illness from referring clinical teams (in sites that were new to the IPS model) and VR counselors. Within the community, some employment specialists were reluctant to tell employers the agency for which they worked because the agency experienced stigma as a mental health center. Some teams noted that the customers themselves were embarrassed by their disabilities and were very concerned about disclosure to employers.

### **Fidelity Model**

The IPS model showed generally good fit for programs serving youth with mental illness and people with developmental/intellectual disabilities. The poorest fitting items were those referencing integration with mental health, specifically, integration of rehabilitation with mental health treatment through team assignment, integration of rehabilitation with mental health treatment through frequent team member contact, and assertive engagement and outreach by the integrated treatment team. Half of the 14 sites with a fidelity review received a score of 1 or 2 on both integration items. Six of the eight sites, which served only youth with mental illness and/or developmental/intellectual disabilities, received low scores on integration. One of the three sites serving only people

with developmental/intellectual disabilities received low scores on integration. On the other hand, all sites serving only youth with mental illness received scores between 3 and 5 on the integration items.

### **Quality Assurance Plan**

A formal quality assurance plan included a biannual review of the program guided by the items from the IPS-25 fidelity scale. Of the 15 sites, 47% (7 sites) had a formal quality assurance plan and conducted reviews every six months. These quality assurance reviews were in the form of mock fidelity reviews, review of fidelity items during weekly supervision, and development and use of a fidelity checklist comprised of the 25 items from the IPS-25. The other eight sites reported either no quality assurance plan or broad agency-wide reviews not specific to IPS.

### **Collection and use of data**

Of the 15 BIP sites, 13 (87%) reported organizing at least some customer and/or employer contact data using electronic spreadsheets. Five sites used an internet-based tool that was accessible in the community. All 15 sites collected customer-data to track progress and set individual goals. No site aggregated data for weekly supervision.

Fourteen of the 15 BIP teams (93%) expressed interest in improving their data collection and electronic data management. The BIP teams identified a need to learn how to identify the type of data that would be useful to inform practice. The BIP teams expressed interest in an electronic tool that facilitated aggregation of data and preparation of charts, tables, and graphs. This information would be helpful for grant applications. A tool that streamlined the transfer of required information to DRS would reduce the current paper and data entry workload. One site did not see the utility in organizing the

data electronically due to their small customer caseload. They believed that incorporating electronic data entry would increase their workload and would not improve the efficiency of customer data organization and management.

### **Serving minority populations**

Three sites served largely minority populations. Each site served a different minority population. Given that a minority population was represented by only one site, and only one of the three sites was directly observed, the evaluation could not draw any satisfactory conclusions.

### **Limitations**

BIP programs did not systematically collect information about referral rates or reasons for nonreferral across the different referring organizations (e.g., schools, local VR, and clinical teams). Therefore, the study did not determine the extent to which referral sources excluded customers for reasons ranging from limited discussion, limiting referrals to customers who were not currently engaged in a vocational program, or referring those who were considered most likely to succeed in the BIP program. We also do not know from those referred to the BIP program how many received BIP services; however, the wide range of diagnoses of the people served suggested that the people served may encompass the target populations of youth with mental illness and people with developmental disabilities. We anticipate that in sites where staff are excluding people due to skepticism that people with mental illness or developmental/intellectual disabilities can work, we may see a movement to fewer exclusions when they start seeing good outcomes.



The evaluation was limited in that no information was collected regarding education. The program evaluation did not track supported education outcomes nor did the interviews collect information related to supported education. As youth transition from high school to adulthood, they decide whether to pursue employment, education, or both, whereas older adults more commonly prioritize employment and only infrequently mention education as a goal. The employment statistics could be misleading if a significant proportion of customers are not pursuing employment but prioritizing education. In evaluating sites serving youth, employment outcomes should be assessed specifically for the group of youth who wish to pursue employment rather than all youth served by the program. This same rule should also apply to measuring education outcomes. This approach may provide a more accurate reflection of the success of an IPS program serving youth.

One limitation of the fidelity scale is that it does not directly assess quality of job matching. Youth often do not meet the skills requirement to attain jobs that directly meet their interests, but quality of job matching could be measured by whether the job provides relevant skills and experiences that are needed for the youth to pursue their ideal employment. Because of their inexperience in the world of work, many youth are in the process of exploring the job market and might benefit from diverse experiences. Quality of job matching could be assessed by whether the job utilizes the youth's talents. Quality of job matching could also be measured in terms of job satisfaction. Quality of job matching could be quantified using the Job Match Survey, which assesses interest/enjoyment, perceived competence, and meaningfulness (Huff, 2005). Interest and enjoyment are positively correlated with job tenure (Kukla & Bond, 2012); however,

among youth job tenure is often brief, which is not necessarily a reflection of low interest but a reflection of career exploration.

The project did not include any independent check on data quality (e.g., independent audits of data records). The BIP sites collected the data used to calculate the quarterly employment rate and frequency of customer barriers. Consequently, the accuracy of the data is uncertain. One specific type of data error known from other studies is that the teams may have had different interpretations of what sample to include in the aggregation of data and how to aggregate the data for the program evaluation. Additionally, the program evaluation did not collect data on the rate of cases closed during the evaluation period to examine its effect on the quarterly employment rate. Despite these limitations, we believe that errors were minimal because the quarterly employment rate was similar to employment rates observed from IPS programs serving adults with mental illness and the top customer barriers were reiterated in the qualitative interviews.

### **Recommendations**

To address the collaboration challenges experienced by all the BIP sites, we recommend establishing state-level and local steering committees. The state-level steering committee might include DRS leadership, leadership from the school system, IPS team leadership, and family members. This steering committee could clarify policy, funding, benefits, and other system-level issues. The local steering committee could consist of DRS leadership, local VR counselors, school system representatives, family members, IPS staff, agency leadership, and benefits planners. The DRS leadership may

act as a liaison between the local steering committee and the state-level steering committee.

An IPS learning community among BIP sites could facilitate sharing of strategies to improve access, employment outcomes, and education outcomes. The learning community could track outcomes and develop benchmarks for good employment and education outcomes. A learning community could contribute to improvements in the quality of services and the sustainability of an IPS program (Bond, Drake, Becker, & Noel, in press; Van Duin, et al., 2013). The IPS teams could meet and establish relationships at a kick-off event. DRS could then establish an annual meeting for the IPS teams to share experiences, learn approaches to overcome challenges, and receive updates on research, funding, and future directions. In addition, technical assistance may be more effective onsite rather than through conference calls. Onsite technical support could provide context and allow for interactions between the technical support team and other staff and customers who would not normally be available during a conference call. Recommendations made by the technical support team could be useful and feasible.

In working with youth, we recommend having the expectation that a primary purpose for gaining employment is to identify and explore interests rather than gain long-term employment. Youth will be changing interests and thus changing jobs more frequently than adults.

IPS teams should involve a family member or adult mentor in the job development process along with the youth. The evaluation revealed that youth frequently change their engagement with the IPS program. An adult mentor could increase and help maintain youth's engagement. Youth and people with developmental/intellectual

disabilities are dependent on their families (e.g., housing, transportation, access to official documents). Attaining permissions can slow the job development process leading youth to disengage. Keeping families engaged in the program could overcome this challenge. Promoting the program's outcomes may help overprotective parents see the benefit of competitive employment and encourage the youth to explore more options.

People with developmental/intellectual disabilities typically do not receive mental health treatment services. The absence of mental health treatment results in a low score for integration with mental health on the IPS-25 fidelity scale. We recommend expanding the definition of mental health treatment team to include care managers and other professionals within the special education system who have similar responsibilities as treatment teams in the mental health system. IPS teams can coordinate with care managers to ensure the customer is meeting life goals and to promote competitive employment among case managers for those people not yet enrolled in the program.

Some people with developmental/intellectual disabilities expressed concern about leaving sheltered workshops for fear of losing their social relationships. In place of sheltered workshops, we recommend that program leaders develop drop-in centers to create a community and promote socialization.

Parents and families who are financially dependent on benefits sometimes discourage their youth from gaining employment, possibly resulting in disengagement from the program. We recommend targeting benefits counseling to both youth and parents to overcome this challenge. Benefits counseling for parents may focus on education on the types of benefits, eligibility criteria for receipt of benefits, criteria for retention of benefits, and the influence of employment on benefits.

Youth are a more challenging population to access compared to adults, partly due to limited independence and school schedules. Several sites noted that diversifying referral sources increased their access to youth, but also required collaborations with multiple mental health teams.

Lastly, we recommend that IPS teams design their services to accommodate more time for job coaching when serving customers with developmental/intellectual disabilities and more time for job development when serving youth. Youth have limited life skills, including time management and money management skills, and people with developmental/intellectual disabilities may have cognitive or physical disabilities that make learning new skills more challenging. One implication of this recommendation is reduced caseloads for IPS specialists serving this population.

### **Summary**

To our knowledge, this is the first IPS evaluation to include programs serving people with developmental/intellectual disabilities. IPS appears to be a promising model for both this population as well as youth with mental illness. The average fidelity score approached good fidelity, with 43% of sites achieving good fidelity. Average highest quarterly employment rate approached the benchmark for a good employment outcome in an IPS program ( $\geq 41\%$ ), with nearly 50% of sites exceeding this value. We recommend program leaders give more attention to promoting collaboration across organizations and entities. The development of a learning community would contribute to this effort. When serving youth, vocational services should encourage career exploration. Additionally, IPS teams should consider involving a positive adult mentor in the employment process, which may improve youth's engagement in the program. We encourage DRS to continue

efforts to replace sheltered workshops with social groups and to promote competitive employment for people with developmental/intellectual disabilities. Because information is increasingly digitalized, the teams may benefit from seminars on data management and utility of data collection for improving supervision, practice, and outcomes.

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Table 3

Customers' primary, secondary, and tertiary barriers to employment (N = 542)

	Primary Barrier (N)	Primary Barrier (%)	Secondary Barrier (N)	Secondary Barrier (%)	Tertiary Barrier (N)	Tertiary Barrier (%)	Any Barrier (N)	Any Barrier (%)
Failure to Engage in Vocational Services	75	13.8	18	3.3	9	1.7	102	18.8
Cognitive Problems (including Literacy)	62	11.4	31	5.7	31	5.7	124	22.9
Lack of Work Experience	56	10.3	70	12.9	52	9.6	178	32.8
Disengagement from Vocational Services	45	8.3	35	6.5	19	3.5	99	18.3
Transportation	38	7.0	55	10.1	59	10.9	152	28.0
Symptoms of Mental Illness Not Well Controlled	36	6.6	15	2.8	27	5.0	78	14.4
Lack of Social Skills	28	5.2	45	8.3	27	5.0	100	18.5
Behavior Problems	27	5.0	21	3.9	16	3.0	64	11.8
Family Interference in Program	25	4.6	27	5.0	15	2.8	67	12.4
Family Pressure on Customer	25	4.6	26	4.8	16	3.0	67	12.4
Trauma/Abuse Background	20	3.7	18	3.3	24	4.4	62	11.4
Criminal Justice System Problems	17	3.1	18	3.3	7	1.3	42	7.7
Substance Abuse/Dependence Not Well Controlled	16	3.0	15	2.8	7	1.3	38	7.0
Physical Health Problems Not Well Controlled	14	2.6	5	0.9	6	1.1	25	4.6
Lack of Pre-requisites for Work	12	2.2	24	4.4	24	4.4	60	11.1
Failure to Engage in Clinical Services	11	2.0	11	2.0	15	2.8	37	6.8
Housing Problems	8	1.5	11	2.0	13	2.4	32	5.9
Medication Compliance	8	1.5	6	1.1	7	1.3	21	3.9
Benefits	6	1.1	6	1.1	9	1.7	21	3.9
Fear of Losing Social Network at Agency	3	0.6	2	0.4	3	0.6	8	1.5
Gap in Services (e.g., Case Management)	1	0.2	3	0.6	1	0.2	5	0.9

Table 4

Percentage of customers with a common barrier as one of their top three barriers to employment

	Youth with MI	Youth with MI and DD/ID	Youth and Adult with MI and DD/ID	Youth and Adult with DD/ID	Adults with MI and DD/ID
Behavior Problems	7.2	5.4	13.0	28.6	7.7
Benefits	0.0	1.4	3.7	2.4	16.9
Cognitive Problems (including Literacy)	21.7	11.5	27.2	41.7	15.4
Criminal Justice System Problems	8.4	4.1	6.2	0.0	29.2
Disengagement from Vocational Services	12.0	27.0	14.2	8.3	29.2
Failure to Engage in Clinical Services	14.5	7.4	2.5	2.4	12.3
Failure to Engage in Vocational Services	18.1	20.9	25.9	6.0	13.8
Family Interference in Program	19.3	10.1	5.6	31.0	1.5
Family Pressure on Customer	13.3	12.8	14.2	6.0	13.8
Fear of Losing Social Network at Agency	1.2	1.4	0.6	2.4	3.1
Gap in Services (e.g., Case Management)	0.0	1.4	0.6	1.2	1.5
Housing Problems	8.4	6.8	0.0	1.2	21.5
Lack of Pre-requisites for Work	2.4	9.5	14.2	10.7	18.5
Lack of Social Skills	15.7	18.2	10.5	42.9	10.8
Lack of Work Experience	18.1	49.3	31.5	28.6	23.1
Medication Compliance	8.4	2.7	2.5	4.8	3.1
Physical Health Problems Not Well Controlled	6.0	4.7	4.9	6.0	0.0
Substance Abuse/Dependence Not Well Controlled	15.7	5.4	3.1	0	18.5
Symptoms of Mental Illness Not Well Controlled	21.7	12.2	12.3	9.5	21.5
Transportation	20.5	51.4	19.1	23.8	12.3
Trauma/Abuse Background	20.5	10.8	5.6	3.6	26.2
Number of agencies	3	5	3	3	1
Number of customers	83	148	162	84	65

Note. DD/ID –Developmental/Intellectual disabilities; MI – Mental illness

Table 5

Common customer barriers for at least 20% of customers in each group

	Youth & Adults with DD/ID	Youth with MI	Youth with MI & DD/ID	Youth & Adults with MI & DD/ID	Adults with MI & DD/ID
Lack of work experience	28.6	-	49.3	31.5	23.1
Cognitive problems	41.7	21.7	-	27.2	-
Transportation	23.8	20.5	51.4	-	-
Behavioral problems	28.6	-	-	-	-
Family interference	31.0	-	-	-	-
Lack of social skills	42.9	-	-	-	-
Failure to engage in program	-	-	20.9	25.9	-
Disengage from program	-	-	27.0	-	29.2
Poor control of MI symptoms	-	21.7	-	-	21.5
Trauma/Abuse background	-	20.5	-	-	26.2
Criminal justice problems	-	-	-	-	29.2
Housing problems	-	-	-	-	21.5
Total number of customers	84	83	148	162	65

Note. DD/ID – Developmental/Intellectual disabilities; MI – Mental illness

Table 6

The primary, secondary, and tertiary barriers to employment for youth and adults with developmental/intellectual disabilities (n = 84)

	Primary Barrier (N)	Primary Barrier (%)	Secondary Barrier (N)	Secondary Barrier (%)	Tertiary Barrier (N)	Tertiary Barrier (%)	Any Barrier (N)	Any Barrier (%)
Cognitive Problems (including Literacy)	18	21.4	8	9.5	9	10.7	35	41.7
Lack of Social Skills	12	14.3	19	22.6	5	6.0	36	42.9
Behavior Problems	8	9.5	8	9.5	8	9.5	24	28.6
Family Interference in Program	7	8.3	11	13.1	8	9.5	26	31.0
Lack of Work Experience	7	8.3	6	7.1	11	13.1	24	28.6
Symptoms of Mental Illness Not Well Controlled	5	6.0	1	1.2	2	2.4	8	9.5
Failure to Engage in Vocational Services	4	4.8	1	1.2	0	0.0	5	6.0
Lack of Pre-requisites for Work	3	3.6	5	6.0	1	1.2	9	10.7
Physical Health Problems Not Well Controlled	3	3.6	1	1.2	1	1.2	5	6.0
Family Pressure on Customer	2	2.4	2	2.4	1	1.2	5	6.0
Medication Compliance	2	2.4	0	0.0	2	2.4	4	4.8
Transportation	2	2.4	6	7.1	12	14.3	20	23.8
Benefits	1	1.2	0	0.0	1	1.2	2	2.4
Disengagement from Vocational Services	1	1.2	5	6.0	1	1.2	7	8.3
Failure to Engage in Clinical Services	1	0.0	0	0.0	1	1.2	2	2.4
Fear of Losing Social Network at Agency	1	1.2	0	0.0	1	1.2	2	2.4
Trauma/Abuse Background	1	1.2	0	0.0	2	2.4	3	3.6
Criminal Justice System Problems	0	0.0	0	0.0	0	0.0	0	0.0
Gap in Services (e.g., Case Management)	0	0.0	1	1.2	0	0.0	1	1.2
Housing Problems	0	0.0	0	0.0	1	1.2	1	1.2
Substance Abuse/Dependence Not Well Controlled	0	0.0	0	0.0	0	0.0	0	0.0

Table 7

The primary, secondary, and tertiary barriers to employment for youth with mental illness (n = 83)

	Primary Barrier (N)	Primary Barrier (%)	Secondary Barrier (N)	Secondary Barrier (%)	Tertiary Barrier (N)	Tertiary Barrier (%)	Any Barrier (N)	Any Barrier (%)
Failure to Engage in Vocational Services	8	9.6	5	6.0	2	2.4	15	18.1
Symptoms of Mental Illness Not Well Controlled	11	13.3	2	2.4	5	6.0	18	21.7
Disengagement from Vocational Services	6	7.2	2	2.4	2	2.4	10	12.0
Family Interference in Program	9	10.8	3	3.6	4	4.8	16	19.3
Trauma/Abuse Background	8	9.6	5	6.0	4	4.8	17	20.5
Cognitive Problems (including Literacy)	6	7.2	7	8.4	5	6.0	18	21.7
Physical Health Problems Not Well Controlled	3	3.6	1	1.2	1	1.2	5	6.0
Substance Abuse/Dependence Not Well Controlled	4	4.8	9	10.8	0	0.0	13	15.7
Failure to engage in clinical services	4	4.8	4	4.8	4	4.8	12	14.5
Family pressure on customer	5	6.0	4	4.8	2	2.4	11	13.3
Lack of work experience	3	3.6	9	10.8	3	3.6	15	18.1
Behavior problems	4	4.8	2	2.4	0	0.0	6	7.2
Medication compliance	2	2.4	3	3.6	2	2.4	7	8.4
Criminal justice system problems	2	2.4	3	3.6	2	2.4	7	8.4
Transportation	2	2.4	3	3.6	12	14.5	17	20.5
Lack of social skills	2	2.4	5	6.0	6	7.2	13	15.7
Housing problems	1	1.2	2	2.4	4	4.8	7	8.4
Fear of losing social network at agency	1	1.2	0	0.0	0	0.0	1	1.2
Gap in Services (e.g., case management)	0	0.0	0	0.0	0	0.0	0	0.0
Lack of Pre-requisites for work	1	1.2	0	0.0	1	1.2	2	2.4
Benefits	0	0.0	0	0.0	0	0.0	0	0.0

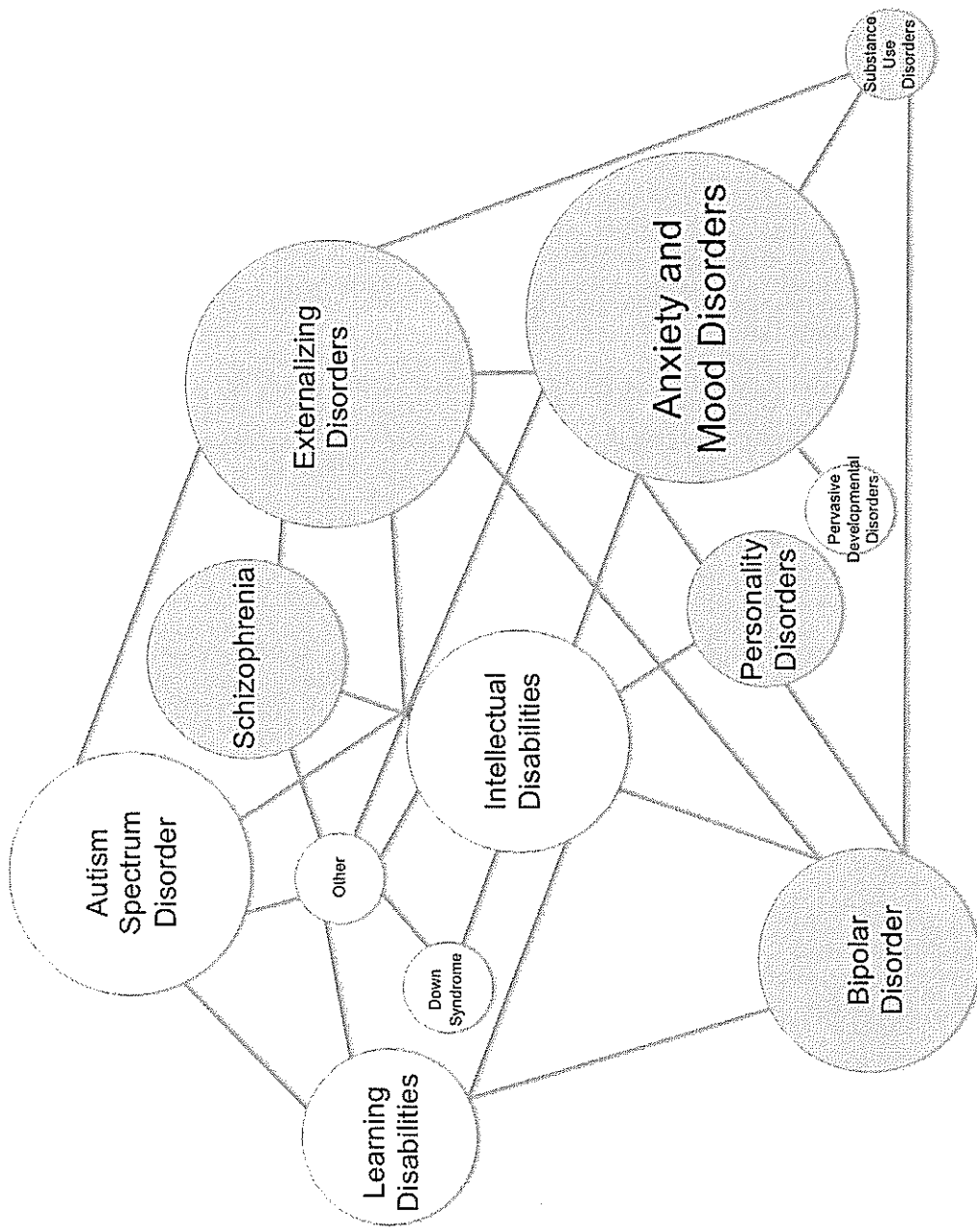


Figure 1. Representation of the number of sites serving people within a given diagnostic group

Note. Size of circle reflects the number of sites serving people within a diagnostic group. Lines represent presence of comorbidity