

# DRC BRIEF

Yonatan Ben-Shalom and Steve Bruns

## DI Applicants' Characteristics and the Implications for Efforts to Help Them Remain in the Labor Force

Each year, millions of Americans experience long-lasting or permanent medical conditions and lose their jobs, at least temporarily. Many of them apply to Social Security Disability Insurance (DI) to replace their lost wages. Providing timely, evidence-based services and supports is a promising strategy to help these workers stay in the labor force and, consequently, to stem the growth in DI applications and awards. To develop effective early intervention policies and programs, stakeholders must understand the characteristics of potential DI applicants and their health and employment patterns. Moreover, careful analysis of relevant administrative data can provide insight into options to effectively use such data to target promising interventions to the people that can most benefit from them. This brief summarizes findings from recent Disability Research Consortium (DRC) studies that examine the characteristics of DI applicants and assess potential approaches for targeting early interventions, and discusses the policy implications of these findings.

The DI program has more than tripled in size over the last 30 years. More than 8.8 million disabled workers received DI benefits in December 2016, compared with 2.7 million in 1986.

A growing body of rigorous research indicates that well-targeted interventions made during the first few weeks after the onset of a work-threatening health condition can substantially improve workers' odds of job retention.

### BACKGROUND

The DI program has more than tripled in size over the last 30 years. More than 8.8 million disabled workers received DI benefits in December 2016, compared with 2.7 million in 1986 (Social Security Administration [SSA] 2017). This growth, and the resulting pressure on the DI Trust Fund, generated considerable interest at SSA and among researchers about the factors contributing to this growth as well as the policy and programmatic changes that might help stem the flow of workers into DI.

There are two reasons to focus on DI entry and options for early intervention before

workers apply for DI and lose their attachment to the labor force. First, both denied and allowed DI applicants experience significant, long-lasting reductions in their earnings and financial well-being (Schimmel and Stapleton 2012; Autor et al. 2015). Second, a growing body of rigorous research indicates that well-targeted interventions made during the first few weeks after the onset of a work-threatening health condition can substantially improve workers' odds of job retention (Ben-Shalom et al. 2018). Too often, however, workers with new health problems do not receive the prompt support they need, leading to suboptimal medical outcomes and potentially

The research reported herein was performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Disability Research Consortium. The opinions and conclusions expressed are solely those of the author(s) and do not represent the opinions or policy of SSA or any agency of the Federal Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of the contents of this report. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply endorsement, recommendation or favoring by the United States Government or any agency thereof.

preventable withdrawal from the labor force. Thus, stemming the flow of people onto the DI program would help reduce growth in federal expenditures and improve the economic well-being of those who would have otherwise experienced lower income.

This issue brief summarizes findings from several DRC studies that can help inform potential early intervention efforts. These studies addressed two primary issues: the characteristics and outcomes of DI applicants and the options for identifying workers at risk of applying for DI (or their employers).

### WHO APPLIES FOR DI?

Understanding the characteristics and outcomes of DI applicants can help SSA and other stakeholders design policies and programs that help workers stay in the labor force after they experience a new or deteriorating health condition that challenges their ability to work. Three recent DRC studies used national survey data matched with SSA administrative data to shed light on this topic.

Matching three panels of Survey of Income and Program Participation data with SSA administrative data, Thompkins et al. (2014) examined the demographic, employment, and program participation characteristics of DI applicants and people at risk of applying for DI. Compared with all working-age adults, DI applicants were older and less educated, had lower employment

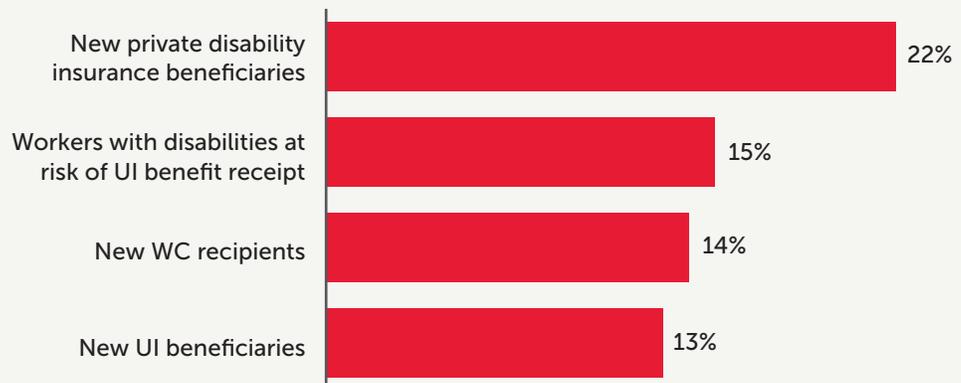
rates and significantly less income, and received poverty-related benefits at higher rates. Figure 1 shows four subgroups containing relatively large portions of members who applied for DI within the six-year observation period: (1) new short- and long-term private disability insurance beneficiaries; (2) workers with disabilities at risk of unemployment insurance (UI) benefit receipt, based on a model predicting unemployment receipt within 36 months; (3) new workers' compensation (WC) recipients; and (4) new UI beneficiaries.

Among the three subgroups that received another benefit first, DI application occurred relatively soon after benefit receipt. Among people with new private disability insurance who applied to DI, 66 percent did so within one year of receiving private benefits; the respective percentages for those who received WC and unemployment benefits are 50 and 38 percent. Among people who received private disability insurance or WC benefits, those who applied for DI did not see their earnings recover after they began receiving those benefits; in contrast, earnings recovered to some extent among those who did not apply for DI.

Using similar data, Contreary et al. (2017) examined the employment patterns of DI applicants up to 24 months before application. Figure 2 shows the two types of applicants the authors identified: those with relatively stable employment who generally worked consistently up to the month of or shortly before application (Type 1) and those who had an intermittent work

Understanding the characteristics and outcomes of DI applicants can help SSA and other stakeholders design policies and programs that help workers stay in the labor force after they experience a new or deteriorating health condition that challenges their ability to work.

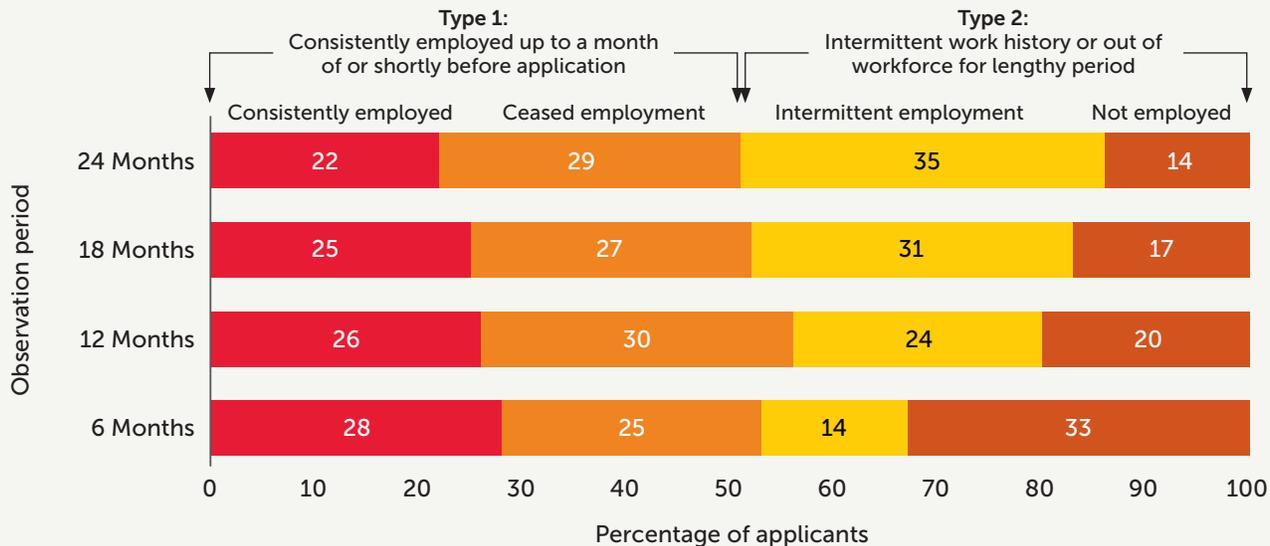
### Four at-risk groups had relatively high rates of members who applied for DI within the six-year observation period



Source: Thompkins et al. (2014)

Figure 1

**About half of DI applicants had lower preapplication labor force attachment (Type 2), no matter the length of the observation period**



Source: Contreary et al. (2017).

**Figure 2**

history or were out of the workforce for a lengthy period before application (Type 2). These two types of applicants also had distinct demographic, program participation, and employment characteristics. Applicants of the first type had higher educational attainment and relatively well-paying jobs, often with benefits such as private health insurance; they also had a higher likelihood than others of receiving a DI award. Applicants of the second type tended to rely more on means-tested and social insurance programs before applying for DI, such as UI benefits and WC.

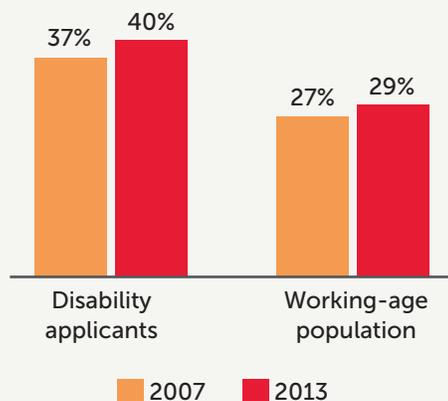
The first two studies point to potential avenues for early intervention, as well as some challenges. The four at-risk groups identified in Thompkins et al. (2014) could benefit from early intervention to help them maintain employment. But these groups make up just a small portion of all DI applicants, limiting the potential impact of an intervention that solely targets them. The findings of Contreary et al. (2017) are useful in considering how different policy approaches might work for different target populations. Early intervention efforts that target Type 1 applicants with recent attachments to the labor force might help that population, but such efforts would miss the Type 2 applicants who are more weakly attached to the labor force. Type 1 applicants might benefit from

efforts to help them while they are still attached to a long-term employer, but Type 2 applicants might require a different, more comprehensive array of supports.

The final study on applicant characteristics focused on obesity prevalence, which increased dramatically in recent decades and has potential implications for SSA's disability programs. For example, because obesity can lead to functional limitations that might qualify someone for disability benefits, it is possible that obesity trends are contributing to growth in disability applications and awards. Schimmel Hyde et al. (2016) examined trends in obesity among disability applicants from 2007 to 2013 using data collected electronically at the time of application. Figure 3 shows the authors' findings: obesity rose faster among disability program applicants than among the overall working-age population over the study period. Furthermore, initial disability applicants were much more likely to be obese than the working-age population (40 versus 29 percent in 2013), with that difference only partly reflecting differences in other characteristics between the two groups. Although these findings do not establish a causal relationship between growth in obesity prevalence and growth in DI applications, they suggest that such a connection could be important. But the mechanisms

The mechanisms linking obesity to disability are not fully understood, and the multiple causes of obesity make it challenging to identify policy changes that would mitigate any effect obesity trends may have on DI application.

### Obesity has increased over time and is relatively high among disability applicants



Source: Schimmel Hyde et al. (2016).

**Figure 3**

linking obesity to disability are not fully understood, and the multiple causes of obesity make it challenging to identify policy changes that would mitigate any effect obesity trends might have on DI applications.

### IDENTIFYING WORKERS AT RISK OF APPLYING FOR DI

An effective mechanism is necessary to identify workers who would benefit from early intervention services and supports soon after they develop medical conditions that interfere with their ability to work (Stapleton et al. 2015). Identifying and engaging workers at risk of job loss and DI entry early is relatively straightforward in WC and short-term disability insurance (STDI) programs in which workers must file claims to obtain benefits (Ben-Shalom 2016). Nonetheless, there are challenges to accurately identifying those for whom early intervention would be most beneficial because of the limited information available in the claims data. Two DRC studies examined options for using information in WC and short-term disability claims to identify workers at risk of a prolonged work disability and DI entry. A third DRC study examined the implications of two policy proposals that incentivize employers to target timely early intervention services to their own workers by holding employers partially responsible for a portion of the DI benefits paid to their recent employees.

Collecting additional information from workers when they begin to receive WC or STDI benefits or soon thereafter could improve the efficiency and the timing of interventions.

Neuhauser et al. (2018) analyzed California’s statewide data on State Disability Insurance (SDI) and WC claimants. Their study represents the first analysis of comprehensive statewide data to identify potential DI entrants. Together, the SDI and WC data cover most workers in California who were eventually awarded DI, although DI application and award information was not available for the analysis. The authors found that 13 percent of SDI claims and 19 percent of WC claims that lasted for at least eight days ultimately lasted 12 months; these percentages rose to 22 and 34 percent among SDI and WC claims that lasted for at least 6 months. The long-term SDI and WC claimants—those that received benefits for at least 12 months—were similar in their demographic and diagnostic characteristics to DI awardees nationwide but were somewhat younger.

Contreary et al. (2018) used data on STDI claims from a large database of employer-sponsored benefit programs to identify factors that predict which claimants ultimately exhaust their short-term disability benefits and transition to long-term disability insurance, putting them at risk of DI application. The authors also explored how waiting for some claims to resolve without intervention improved the precision of identifying those who ultimately apply for DI. They found that age, primary diagnosis, and industry were predictive of exhausting short-term disability benefits and transitioning to long-term disability insurance. Further, rapid attrition of short-duration claims from the sample means that waiting can substantially increase the efficiency of efforts to identify those who ultimately apply for DI before they do so.

The findings of Neuhauser et al. (2018) and Contreary et al. (2018) suggest that information available in initial short-term disability claims can help target early intervention to workers who are at risk of prolonged work disability and therefore are at risk of DI entry. Both papers also highlight the potential advantages of waiting for some claims to resolve without further intervention as well as the importance of considering potential trade-offs involved in delaying the start of any intervention. They also suggest that collecting additional information from workers when they begin to receive benefits or soon thereafter could improve the efficiency and the timing of interventions.

.....  
Holding firms partially responsible for a portion of the DI benefits paid to their recent employees would place a comparatively large burden on the labor costs of many relatively small (fewer than 500 workers) low-wage firms and on the labor costs of many low-wage workers with presumably relatively low skills.  
.....

Another approach to encouraging early intervention efforts is to hold firms partially responsible for a portion of the DI benefits paid to their recent employees, either through a government-mandated STDI program (Autor and Duggan 2010) or by applying an experience rating to the DI portion of the Federal Insurance Contributions Act (FICA) tax (Burkhauser and Daly 2011). The rationale behind the mandated STDI proposal is that the insurer would help claimants return to work to reduce any losses; furthermore, experience rating the STDI premium for employers with 50 or more workers creates an incentive for such employers to minimize the number of their workers who apply for DI—similar to the intended incentive of experience rating the DI portion of FICA taxes. Stapleton et al. (2017) used SSA administrative data to analyze the implications of these policy proposals. They found that such policies would place a comparatively large burden on the labor costs of many relatively small (fewer than 500 workers) low-wage firms and on the labor costs of many low-wage workers with presumably relatively low skill levels. These findings suggest that the proposed policies are likely to reduce demand for low-skill workers, especially in physically demanding occupations and particularly for workers with increased risk of DI entry, such as smokers, those with obesity, and older workers. Although firms with potentially large liabilities might react as originally intended (that is, seeking to accommodate and retain workers with challenging medical conditions), they might also reduce hiring or retaining workers at high risk of medical problems.

## IMPLICATIONS FOR POLICY

.....

The recent studies point to potential avenues for and challenges associated with implementing efforts to help workers who experience the onset of a potentially disabling health condition with the goal of preserving their labor force attachment, thereby avoiding DI entry. Some of the studies identified certain characteristics of DI applicants that could be used in the design of early intervention programs. For example, different programs could target new WC or UI claimants, focusing on the particular circumstances of each group, and paying attention to the individual worker's historical level of connection to the labor force. The obesity study suggests that collecting information about obesity and obesity-related

health conditions from workers who experience lost work time for medical reasons could be helpful for identifying those most likely to benefit from an early intervention and for tailoring early interventions to their needs.

Claims data from WC, STDI, and even UI programs are promising starting points for identifying workers who would benefit from early intervention. But findings of the studies that examined the first two options suggest that more information than is available in the claims data would be necessary to more accurately identify those who ultimately apply for DI. As mentioned in Neuhauser et al. (2018), one potential way to improve accuracy is to collect additional data from claimants through psychosocial screener questionnaires designed specifically for the purpose of predicting long-term outcomes (for example, Linton et al. 2016). Another approach is to provide the intervention services in a staged manner: start with minimal services for a relatively broad target group and then ramp up services only when evidence indicates that more intensive services are necessary.

Many more research questions related to early intervention need to be addressed. First, what entity or entities are best positioned to fund, design, and implement such interventions? Second, which interventions are the most promising and worthy of broader implementation? SSA's past efforts to improve work outcomes for disabled workers have focused on DI beneficiaries. The ongoing Supported Employment Demonstration, which targets initially denied applicants with psychiatric conditions, is a departure from that history. SSA has neither the authority nor the capacity to deliver services to workers before they apply for DI. Hence, truly early intervention initiatives must be collaborative efforts between SSA and other federal agencies that have such authority and capacity. The new Retaining Employment and Talent After Injury/Illness (RETAIN) demonstration—a joint effort of SSA and the U.S. Department of Labor—exemplifies this collaborative approach. RETAIN grantees (state workforce agencies) will develop and test various early interventions, such as a care coordination and quality improvement model that was successfully piloted in Washington State's public WC system and then implemented statewide within WC. The objective of RETAIN is to find out whether such a system, or other interven-

.....  
Different early intervention programs could target new WC or UI claimants, focusing on the particular circumstances of each group, and paying attention to the individual worker's historical level of connection to the labor force.  
.....

---

tions that states might test, will be successful in other settings. The findings of the DRC studies described in this brief offer insights that might help inform future efforts designed to help workers stay in the labor force and avoid dependence on DI, including those that states will pursue under RETAIN.

## REFERENCES

- Autor, David H., and Mark Duggan. "Supporting Work: A Proposal for Modernizing the U.S. Disability Insurance System." Washington, DC: Center for American Progress, Hamilton Project, 2010.
- Autor, David H., Nicole Maestas, Kathleen J. Mullen, and Alexander Strand. "Does Delay Cause Decay? The Effect of Administrative Decision Time on the Labor Force Participation and Earnings of Disability Applicants." NBER Working paper No. w20840. Cambridge, MA: National Bureau of Economic Research, 2015.
- Ben-Shalom, Yonatan. "Steps States Can Take to Help Workers Keep Their Jobs After Injury, Illness, or Disability." Washington, DC: Mathematica Policy Research, September 2016.
- Ben-Shalom, Yonatan, Jennifer Christian, and David Stapleton. "Reducing Job Loss Among Workers with New Health Problems." In *Investing in America's Workforce: Improving Outcomes for Workers and Employers*, edited by Carl Van Horn, Heath Prince, Stuart Andreason, and Todd Greene. Kalamazoo, MI: The Upjohn Press, 2018.
- Burkhauser, Richard. V., and Mary C. Daly. "The Declining Work and Welfare of People with Disabilities: What Went Wrong and a Strategy for Change." Washington, DC: American Enterprise Institute Press, 2011.
- Contreary, Kara, Todd Honeycutt, Shelly Bailey, and Joseph Mastrianni. "Employment Patterns Before Applying for Disability Insurance." *Social Security Bulletin*, vol. 77, no. 4, 2017.
- Contreary, Kara, Yonatan Ben-Shalom, and Brian Gifford. "Using Predictive Analytics for Early Identification of Short-Term Disability Claimants Who Exhaust Their Benefits." *Journal of Occupational Rehabilitation*, vol. 28, no.4, 2018, pp. 584–596.
- Linton, Steven J., Katja Boersma, Michal Traczyk, William Shaw, and Michael Nicholas. "Early Workplace Communication and Problem Solving to Prevent Back Disability: Results of a Randomized Controlled Trial among High-Risk Workers and Their Supervisors." *Journal of Occupational Rehabilitation*, vol. 26, no. 2, 2016, pp. 150–159.
- Neuhauser, Frank, Yonatan Ben-Shalom, and David Stapleton. "Early Identification of Potential SSDI Entrants in California: The Predictive Value of State Disability Insurance and Workers' Compensation Claims." *Journal of Occupational Rehabilitation*, 2018. vol. 28, no.4, 2018, pp. 574–583.
- Schimmel, Jody, and David C. Stapleton. "The Financial Repercussions of New Work Limiting Health Conditions for Older Workers." *Inquiry*, vol. 49, no. 2, Summer 2012, pp. 141–163.
- Schimmel Hyde, Jody, Joseph Mastrianni, Yong Choi, and Jae Song. "Trends in Obesity Among Social Security Disability Applicants, 2007–2013." Washington, DC: Mathematica Policy Research, January 2016.
- Social Security Administration. "Annual Statistical Report of the Social Security Disability Insurance Program, 2016." Baltimore, MD: Social Security Administration, 2017.
- Stapleton, David, Robert Anfield, Robert Burns, Winthrop Cashdollar, Benjamin Doornink, Brian Gifford, Mary Harris, and Kevin Ufier. "Targeting Early Intervention to Workers who Need Help to Stay in the Labor Force." Washington, DC: Mathematica Policy Research, 2015.
- Stapleton, David C., David R. Mann, Pragya Singh, and Jae Song. "Firm-Level Early Intervention Incentives: Which Recent Employers of Disability Program Entrants Would Pay More?" *Journal of Disability Policy Studies*, vol. 28, no. 3, 2017, pp. 162–173.
- Thompkins, Allison, Todd Honeycutt, Claire Gill, Joseph Mastrianni, and Michelle Bailey. "To Apply or Not to Apply: The Employment and Program Participation of Social Security Disability Insurance Applicants and Non-Applicants." Disability Research Consortium working paper WP14-05. Princeton, NJ: Mathematica Policy Research, June 2014.

