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Targeting Early Intervention to Workers Who Need Help to Stay in the Labor Force

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ABSTRACT

This is one of three policy action papers prepared as part of the Stay-at-Work/Return-to-Work Policy Collaborative, an initiative funded by the Office of Disability Employment Policy in the U.S. Department of Labor.

Each year, millions of workers in the United States lose their jobs or leave the workforce because of a medical condition. Keeping these workers in the labor force could help them stay productive, maintain their standard of living, and avoid dependency on government programs. In this paper, we present actionable policy recommendations for expanding evidence-based early intervention services to those workers who may be the most likely to return successfully to work if they get help early on. Recommendations for both state and federal government are included.

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I. INTRODUCTION

When a significant medical condition threatens a worker's ability to stay on the job, evidence-based early intervention (EBEI) could help that worker stay in the labor force and avoid applying for public disability benefits. It follows that making EBEI available to more workers could be in the public interest. To ensure that expanding EBEI is in the public interest, it is important to identify the pool of workers who may be most likely to return successfully to work if they get this help early on. In this paper, we identify a target population of workers who may be most likely to benefit from an expansion of EBEI.[1]

Expanding EBEI services is in the public interest, broadly, if it improves economic and other outcomes for the worker, reduces the net public expenditures on the worker's support, and increases, or at least does not reduce, employers' willingness to hire or retain workers who have a medical condition that puts them at risk for leaving the labor force. Publicly-supported expansion of services to workers who will not benefit from them, or who would have received privately financed services anyway, will only increase costs to the public, but not benefits.

In this paper, *early* means soon after workers first recognize that a new or existing condition might cause them to leave the labor force for a long time—perhaps permanently—if they do not get the timely assistance they need to keep working.[2] For most workers, immediate, evidence-based medical treatment will be warranted; the optimal timing of other services and supports is likely to depend on the medical condition, the pace and extent of recovery, and other circumstances.

Evidence-based services and supports are those that have been shown to be effective in getting people back to work after an absence that is minimal given the nature of the condition. Usually the services and supports are integrated; that is, they complement each other, they are well-coordinated, and they are all intended to support the continuation of work. Examples from the literature often include case management or coordination and counseling services, medical care that enables work instead of contributing to work disability, rehabilitation therapy, vocational rehabilitation (VR), job modifications, assistive technologies, accommodations, and temporary cash assistance. The effectiveness of a support or service may depend on the worker's characteristics and environment. Evidence mostly comes from initiatives in private disability insurance (PDI), workers' compensation (WC), and public VR programs, as well as from foreign countries that have already expanded workers' access to early intervention.

[1] In this paper, we focus on individuals who develop a condition that threatens their ability to keep working after they have already entered the labor force. EBEI for individuals whose conditions are congenital or began in childhood is addressed only to the extent that these individuals have successfully entered the labor force. There is a large literature on transition supports that target youth and young adults with disabilities who are attempting to enter the labor force for the first time, which we do not discuss in this paper.

[2] In some cases, early intervention may take place even before the worker recognizes the threat to working, such as when a physician treats a condition in a manner that supports continuation of work or an employer provides an ergonomic device that prevents a musculoskeletal problem from worsening.

Identifying people who would benefit from EBEI and matching them to the right intervention is a complex and inexact process, and medical conditions can evolve in ways that are hard to predict. Therefore, we also consider an ancillary issue: how to monitor the worker's progress and identify the need to change or terminate the EBEI services once they are under way.

The paper proceeds as follows. In Chapter II, we synthesize available information on groups that should be included or excluded from the target population for policies or programs seeking to expand access to EBEI services. In Chapter III, we consider the data, tools, and organizational capabilities that are needed to identify members of the target population, match EBEI services to their needs, and identify any need for change in the EBEI services that are offered. We conclude with recommendations for incorporating this information in efforts by the federal government and states to increase access to EBEI.

II. DEFINING THE TARGET POPULATION

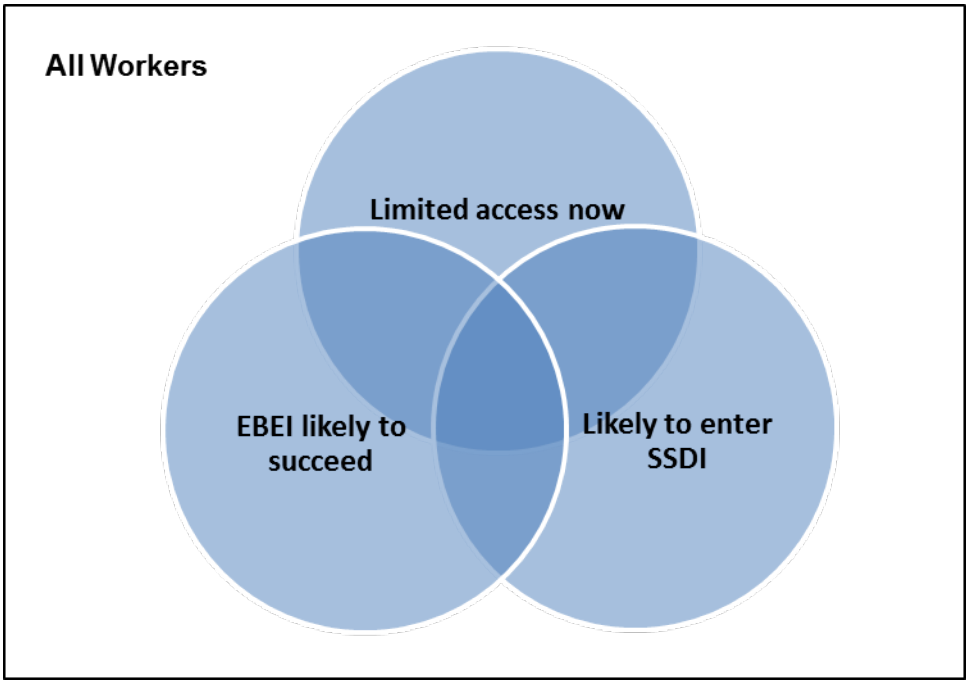
In this chapter, we give the reader an illustration of the target population for expansion of EBEI services, identify the characteristics of workers that should be included in the target population (using existing research), and consider which workers should be excluded from the target population.

A. A definition of the target population

The target population, illustrated in Figure II.1, shares three characteristics: (1) limited access to EBEI at present; (2) are likely to exit the labor force and enter Social Security Disability Insurance (SSDI) rolls without EBEI; and (3) are likely to stay in the labor force if given EBEI.[3] Success in this context is staying in the labor force and not entering SSDI, but there is substantial evidence that such success also improves the worker's health and general well-being (Waddell and Burton 2006).

Regardless of their current access to EBEI, only a minority of those at risk of entering the SSDI rolls are likely to be helped by EBEI. Even so, the implications are substantial from multiple perspectives (the worker's, the economy's, the SSDI trustees', and more). Next, we consider the implications of existing research in a definition of the target population.

Figure II.1. An illustration of the target population for EBEI expansion



[3] The likelihood of success may be pre-conditioned on the success of medical treatment (for example, chemotherapy).

B. Characteristics of the target population: implications of research

Table II.1 summarizes the evidence on worker and employer characteristics that can predict (1) labor force exit because of a medical condition; (2) SSDI application or entry; and (3) whether a worker is likely to benefit from EBEI. The citations are not exhaustive of the prolific research in this area. The target population for expansion of EBEI supports consists of workers in this intersection with limited or no access to EBEI supports now.

1. Predictors of labor force exit, SSDI entry, and potential EBEI success

There is substantial agreement between the literature on labor force exit and the literature on SSDI entry. Workers who exit the labor force and enter SSDI are likely to be older and have chronic conditions—often musculoskeletal (MSK) conditions, especially lower back pain (LBP), or mental health disorders. In addition, the prevalence of obesity is higher for such workers than for the general population. Many of those who exit the labor force because of medical conditions receive suboptimal or delayed medical care, or have anxiety or low expectations about medical care and its outcomes. We also know that disproportionately large numbers of SSDI entrants were working in medium or small companies; have low levels of education, wages, and household incomes; and receive benefits from other programs before they enter SSDI.

The clearest and most notable finding from the EBEI research is that considerable success can be achieved by providing supports to workers with MSK conditions (particularly LBP), mental health conditions, or other chronic conditions for which adherence to treatment is critical.[4] This finding, along with the high prevalence of such conditions among workers who exit the labor force and enter SSDI, suggests that the most promising target population for expansion of EBEI services is workers with these conditions who do not have access to EBEI services now.

We found little evidence that the success of EBEI services varies by age or gender of the worker, but there is one intriguing finding from the Netherlands: that country's early intervention system appears to have had greater success among male workers between the ages of 40 and 58 who experienced unexpected hospitalizations than for other workers who experienced unexpected hospitalizations—males ages 25-39 or females in either age group. The reason for this is unknown.

Many EBEI studies reveal that the worker's motivation is an important determinant of success. We did not list motivation in Table II.1 because efforts to improve motivation are already an important component of many of the tested interventions. It is possible that younger and older workers have different levels of motivation, which may explain why older workers who confront medical problems are more likely to leave the labor force and enter SSDI.

[4] We focus on EBEI research that provides methodologically rigorous estimates of the impacts of EBEI services on important outcomes; that is, the research provides estimates of the outcomes when EBEI services are delivered relative to reliable estimates of what outcomes would be in the absence of such services (the counterfactual) for the same workers. Much of the evidence consists of findings from the systematic reviews of other authors.

Table II.1. Predictors of SSDI application or entry, labor force exit, and positive outcomes from EBEI

Labor force exit	SSDI application or entry	Positive outcomes from EBEI
Chronic disease (van Rijn et al. 2013)	**Demographics**	Age 40–58, especially males (Hullegie et al. 2014)
Self-perceived poor physical or mental health (van Rijn et al. 2013)	Age 45+ (Stapleton et al. 2015)	MSK (especially LBP) and other low mortality conditions (Williams et al 2007, Waddell et al. 2008, Von Oostrom et al. 2009, Wickizer et al. 2011, Dibben et al. 2012, Hoefsmit et al. 2012, Bevan 2015, Linton et al. 2015, Richmond et al. 2015)
Obesity and lack of physical activity (Robroek et al. 2013)	**Physical or mental conditions, health care**	Mental health conditions (Killackey et al. 2008, Dibben et al. 2012, Hoefsmit et al. 2012, Rost et al 2004)
Suboptimal or delayed medical care (Franklin et al. 2014, Stover et al. 2007)	MSK conditions, especially LBP (Stapleton et al. 2015, Autor and Duggan 2014a)	Chronic conditions requiring adherence to treatment[b]
Anxiety and depression pre-surgery (Trief et al. 2000)	Mental health conditions (Stapleton et al. 2015)	Attached to employer[c]
Low recovery expectations and fear avoidance (such as fear of pain) (Iles et al. 2008)	Obese or overweight (Schimmel Hyde et al., forthcoming)	
Request for or use of FMLA leave (Gifford et al. 2013)	**Socioeconomic conditions**	
	Low education or wages (Stapleton et al. 2015)	
	Work for small/medium firms (Stapleton et al. 2015)	
	Large reduction in household income; use of unemployment insurance, temporary disability, workers' compensation, welfare benefits (Bound et al. 2003, Lindner and Nichols 2012, Honeycutt et al. 2014)	

[a] The comparison in Autor and Duggan is to long-term PDI claimants.

[b] Birnbaum et al. (2010) and Burton et al. (2007) on adherence with antidepressant use; Carls et al. (2012) on adherence for diabetes, hypertension, dyslipidemia, asthma/ chronic obstructive pulmonary disease and congestive heart failure; Gifford et al. (2014) review on adherence for diabetes, cardiovascular, depression; Hagen et al. (2014) on oral hypoglycemic agents; Jinnett et al. (2012) on medication adherence and filing short-term disability claims; Loeppke et al. (2011) on adherence to statins in CAD and absenteeism; and Wagner et al. (2012) on adherence to antihypertensive medication regime.

[c] Numerous studies point to employer cooperation as a key component of success in staying at work or returning to work.

Because financing is a critical issue in the expansion of EBEI services, it is particularly important to examine any cost-benefit analyses in the literature, taking into consideration the extent to which the findings would or would not apply when expanding services to people in the target population. Although many studies do not include cost-benefit analyses or otherwise estimate impacts on costs or the value of benefits, some do. Bevan (2015) reviews findings from cost-benefit analyses in seven European studies of EBEI services for MSK conditions, with several focused on LBP. He finds evidence that the monetary value of the benefits to workers, employers, the government, and society as a whole are often much greater than the costs of the EBEI services themselves. Similarly, Wickizer et al. (2011) found that the EBEI services provided to all WC claimants in Washington State on a voluntary basis via the Centers of Occupational Health and Education (COHE) more than paid for themselves in a 12-month period by saving money on medical and benefit costs; net savings for those with MSK conditions were

especially high. Hence, there are good reasons to think EBEI services will pay for themselves if well targeted, and especially for workers with MSK conditions. We have not found comparable analyses of workers with mental health disorders or other specific conditions.[5]

In summary, available research indicates the target population for expansion of EBEI services should include workers with MSK or mental health disorders, and possibly those with other chronic conditions that can be successfully managed with EBEI services, especially workers at small or medium-sized companies who have low levels of education or wages, low household incomes, and limited access to quality health care; or who have other problems using the health care system. Older workers should be included as well as younger workers, and EBEI services are likely to be most successful if the worker still has not severed all attachments to an employer.

2. Limitations of the EBEI evidence

Although the EBEI research is rigorous and extensive, it cannot predict what the impacts of EBEI services would be in the target population, or what the costs and benefits would be, for multiple reasons. Perhaps most importantly, much of the evidence on EBEI services comes from studies of PDI or WC claimants. To the extent that workers with such coverage already have timely access to EBEI services, they are not in the target population of concern for this paper, and the evidence may not apply to workers without such coverage. That is perhaps especially true for evidence from studies involving workers with PDI, as they tend to have more human capital and work for larger employers than the bulk of SSDI entrants do. Evidence based on workers covered by WC may be especially useful, because such workers are more likely to have characteristics and jobs like those of workers in the target population. Even in the case of WC-covered workers, however, two features of the context may be different than for workers with conditions that are not job-related, but are otherwise comparable: (1) WC claimants receive cash benefits for lost work time, and (2) their employers and WC carriers have financial incentives to minimize lost work time. A substantial amount of the evidence comes from other countries, where the social support system, economy, and culture are likely to be quite different than in the United States. Compared to the United States government, the national governments of many other countries have a greater financial stake in minimizing lost work time because they are the payers of health, disability, and other benefits as well as the collectors of tax revenues.

Several other features of the EBEI research also limit its value in predicting what the target population's outcomes would be. The outcome measures vary substantially. Employment is always an outcome, but different studies have different definitions of what constitutes employment. There is less information available about EBEI's impact on earnings. Many studies also address the impacts of EBEI on medical or functional outcomes. Relatively few examine its impacts on costs or the value of benefits relative to costs (cost-benefit analysis), and for those that do, the perspective taken on costs and benefits varies; for example, studies may take the perspective of the worker, insurer, employer, government, or society at large. The length of time over which outcomes are measured also varies, and notably, we have not found research that provides estimates of impacts on outcomes for a period of more than three years after the

[5] Wang et al. (2008) report evidence on the cost-effectiveness of depression treatment for workers in large corporations, but do not mention the value of the benefits.

intervention. Finally, the incentives faced by workers in the studies vary; many of the studies use volunteers, and impacts for volunteer workers may differ from those for workers in other studies, who are required to use EBEI services as a condition of their eligibility for long-term benefits and supports.

Although the evidence on the success of early intervention for workers with MSK, mental health disorders, and other chronic conditions for which adherence to treatment is critical is much stronger than for other specific conditions, that does not necessarily mean that early intervention is ineffective for those with other conditions. The absence of more evidence for other conditions might reflect the fact that they occur much less frequently than the conditions for which there is abundant evidence, or because medical advances in the treatment of some conditions have only recently made delivery of employment supports to such workers practical. For example, advances in the treatment of cancer have increased the chances of recovery, or at least long periods of remission during which working is feasible. Diabetes is another example; improvements in managing diabetes have made it possible for individuals to keep working successfully. Hence, it would be a mistake to systematically exclude workers with other conditions from access to employment supports, especially when they want to use them.

C. Workers excluded from the target population

Although the research literature suggests characteristics of workers that should be included in the target population, it provides little explicit guidance about those who should be excluded, most likely because published studies focus on worker populations for which EBEI services are expected to be effective, and evidence of ineffective services for any worker population is less likely to be published. In the context of expansion of access to EBEI supports, several exclusion criteria are theoretically obvious. Workers should be excluded from the target population if, given available medical care and knowledge:

- The medical condition is likely to result in near-term death, cause continuous deterioration in the worker's condition, or have untreatable symptoms or unavoidable side effects from treatment that make working a medical hardship (for example, inability to concentrate, impaired thinking, and fatigue).
- EBEI services or work would do more harm to the worker's health.
- The worker has a condition for which there is no evidence of effective stay-at-work/return-to-work services.
- Effective EBEI services are already being provided to the worker.

The last criterion is solely an issue of economics, because our focus is on expanding access to EBEI services. For people who already get EBEI services, the main effect of having the government provide access to them would be to reallocate the costs and benefits; most likely, some share of the public funds available to support expansion will displace funds currently provided by other public or private entities. Likely sources of funding today include employers, private disability and WC carriers, health plans, existing public programs (for example, VR or workforce investment programs), and the worker. Transferring some of the cost may have merit, but that issue is outside the scope of this paper.

One exclusion criterion is notably absent from the list: workers who meet all the criteria but are identified well past a time that would be considered early. The literature consistently favors early rather than late intervention (for example, Franche et al. 2005, Tompa et al. 2008, and OECD 2015), but the rationale and evidence for this are often unclear. Many studies reveal that the likelihood of returning to work diminishes with the length of absence from work, but this empirical regularity could be explained by many other factors, such as the severity of the condition, the individual's willingness to work, and employer incentives.

The findings of one study imply that the economic rationale for early intervention is much stronger than the clinical or technical rationale. Theodore et al. (2015) found that delaying entry into the functional restoration services provided in their study for up to 18 months *did not* have an impact on ensuing return to work, work retention, and health care utilization, but that it *did* have a large impact on costs—rehabilitation costs, disability benefit payments, and lost productivity. Thus, even if evidence-based services produce identical clinical and work outcomes when delivered late rather than early, there is a simple economic case to delivering timely services: lost work time is very costly to the employer, the worker, and the benefit provider. These findings will not necessarily apply to workers with medical conditions other than MSK; that seems particularly likely to be true if early, suboptimal treatment results in irreversible functional deterioration.[6] Further, industry experts routinely say that, regardless of the condition, it is important to establish early on in the process that the worker is expected to have a goal of returning to work.

[6] The finding should also not be extrapolated to those who already rely on SSDI benefits for two reasons. First, recent research shows that the duration of the SSDI disability determination process has a substantial negative effect on later return to work (Autor et al. 2015). The exact explanation for this is unknown, but whatever the cause, the finding suggests every reasonable effort should be made to deliver EBEI services before the worker applies for SSDI. Possible explanations include the psychological investment made by workers in demonstrating their inability to work to SSA, prolonged detachment from the labor force (perhaps especially from their former employer), deterioration in their skills or medical condition, and becoming accustomed to new social circumstances. The second reason is that once they are on the rolls, SSDI beneficiaries who return to work face the prospect of a complete loss of cash benefits. This last reason, along with any deleterious effects of the disability determination process, may explain why past efforts to move workers off the SSDI program and return them to work have had little success. These factors do not affect the behavior of all SSDI entrants; for workers with some conditions, a long absence from the labor force might be necessary to achieve maximal medical or functional recovery.

III. IDENTIFYING INDIVIDUALS IN THE TARGET POPULATION

Although the evidence described above is helpful in describing the characteristics of workers who are most likely to benefit from an expansion of EBEI, it does not provide guidance on how to first engage with workers who might be in the target population or how to use information that the worker and perhaps others can provide to guide individualized decisions about whether to deliver EBEI services and, if so, what services to deliver. We consider these issues here. Specifically, we consider (1) outreach to workers who are potentially in the target population, (2) screening tools to determine their EBEI services, and (3) identification of the need to modify EBEI services after delivery of them begins.

A. Engaging workers in the target population

Because the economic value of EBEI services delivered early is likely higher than it would be if the same services were delivered later, any effort to expand access to EBEI services will need to start with aggressive outreach that successfully leads to early engagement between two parties: (1) workers in the target population and (2) professionals who can collect information and make initial decisions about the delivery of EBEI services. That will likely require communicating with workers and the general public through the media as well as doing more specific outreach to worker organizations, employers and employer organizations, health care providers and provider organizations, and other public and private organizations. The outreach would have at least three goals: to make workers aware early on that EBEI services are available, to help workers self-assess whether they are eligible, and to encourage them to contact the service system early. Self-assessment is important because it can substantially reduce the burden of inquiries from workers who are not in the target population, but care must be taken to ensure that some who are in the target population do not mistakenly infer they are not.

Outreach through health care providers is a particularly attractive strategy, because they are likely to treat workers who are beginning to realize that their medical condition is threatening their ability to keep working, and the providers are also likely to become at least minimally engaged in the delivery of any EBEI services. Because many physicians have little training in occupational medicine or in how to deliver health care in a way that minimizes lost work time, the outreach effort should include educating physicians on how to identify workers at risk for leaving the labor force and on approaches to health care that will improve employment outcomes. An example is the approach taken by Washington State in its effort to improve EBEI service delivery to WC claimants (Wickizer et al. 2011).[7]

It is also especially important to engage health service providers because workers may be willing to disclose some conditions—most notably mental health disorders—to trusted providers when they are unwilling to disclose them to employers, co-workers, or others. Further, health service providers may recognize the existence of a significant condition that the worker is unable to recognize or chooses to ignore. Finally, as they gain experience, health care providers will become adept at assessing whether or not workers are in the target population. For these reasons,

[7]In addition to providing case management services, COHE provides financial incentives for physicians to implement best practices for getting employees back to work.

private disability insurers that also offer health plans typically use information from the health plans to facilitate early engagement with workers who are at high risk of work disability.

Outreach could also target workers who are receiving short-term disability benefits or sick leave, but do not have access to EBEI services. This strategy might be particularly effective in the five states with mandatory short-term disability benefits (California, New York, New Jersey, Rhode Island and Hawaii).

Efforts to inform workers through the media could use the same media outlets as those offering to represent workers claiming disability benefits or other compensation. They could also take advantage of the Internet and social media. Use of the Internet could be particularly helpful in providing information that helps workers self-assess whether they are good candidates for available EBEI services.

B. Screening

When a worker first contacts an EBEI service provider, the provider must quickly assess whether the worker is in the target population. For those who are, the provider must collect information that will guide the delivery of EBEI services and supports. PDI and WC carriers, disability management vendors, and a variety of specialists have developed data tools for this purpose, many of which are proprietary.

To illustrate, we have listed a number of promising tools for identifying the target population in Table III.1. The first of these, Genex (2014), is an automated tool that uses data analytic models to support first-level sorting of workers into those who need no services, those who require case management services, or those who need further (non-automated) assessment. Such a tool, which can be based on experience, can be valuable because it prompts some quick, definitive decisions, uses fewer resources than fully manual assessments do, and can reduce subjectivity and promote uniform decision-making. Melton et al. (2012) demonstrate that a predictive model based on rich demographic, geographic, occupational, health, pharmacy, and disability information from administrative records can be used to effectively target prevention services. The Social Security Administration (SSA) developed the third tool for a similar purpose: to identify SSDI applicants who are in the target population—those who have gone without EBEI services and are likely to enter SSDI unless they receive them—in support of an early intervention demonstration (Berkowitz 2002). EBEI experts and researchers would consider intervention after the SSDI application to be late in most cases, and ultimately SSA did not conduct the demonstration. Nonetheless, much of the information captured in this screener might be helpful in identifying workers in the target population well before they apply for SSDI. Tools 4 through 6 in the list identify workers with specific conditions (MSK for the first two and psychosocial for the third) who would likely benefit from early intervention. Tools 7 and 8 are designed to help EBEI providers match clients with services, and predict outcomes.

C. Monitoring and adjustment of EBEI service delivery

Once EBEI service delivery is under way, case managers need to monitor progress, make adjustments as new information emerges, and be prepared to terminate services if it becomes apparent that more services are unlikely to result in success.

Table III.1. Examples of tools that assess the need for EBEI services

1. Genex (2014): Automated targeting of services (no case management, case management, further assessment) based on data analytic models.
2. Melton et al. (2012): Data analytics used by Cigna to predict short-term disability absence and thus make decisions on when to deliver prevention services.
3. Berkowitz (2002): Two-level screener for identifying applicants who are (1) likely to qualify for SSDI and (2) likely to benefit from EBEI.[a]
4. Franklin et al. (2014). Back pain: risk factors for chronic disability (six-item screener) and assessment of the contribution of inappropriate medical care to negative outcomes.
5. Linton et al. (2003). Orebro Musculoskeletal Pain Questionnaire for prediction of persistent back problems, intended to identify patients in need of early intervention.[b]
6. Duijts et al. (2007). Screener to predict risk of absence due to psychosocial complaints.[c]
7. Reed Group informatics: (1) predictor of how long it will take for patient to return to work; (2) duration timetables, including incorporation of modified work; and (3) recommended timelines for visits to condition-specific specialists.
8. Work Loss Data Institute (2015): Occupational Disability Guidelines benchmark data on return to work for every reportable condition, integrated with treatment guidelines to support case management.

[a] Characteristics used to predict EBEI benefit: age, education, work experience, motivation, disability type, medical stability, family circumstances

[b] 89% sensitivity and 65% specificity for absenteeism; these are 74% and 79%, respectively, for functional ability.

[c] For women, complaints include depression, burnout, fatigue, disinterest in work, obligatory change in work days, living alone (sensitivity 41.7%, specificity 91.3%); for men, they include history of absence, compulsive thinking, mental fatigue, hard to relax, lack of supervisor support, no hobbies (sensitivity 38.9%, specificity 90.6%).

It is common to "stage" EBEI services—to start with low-cost treatments that have a modest chance of success, then intensify the treatments if needed. This routine approach to medical care is extended to such EBEI services as care coordination, coaching, vocational therapy, problem-solving with employers, technology, and workplace supports. Our experts also indicated that progress is regularly monitored and compared to benchmarks for similar cases. Eventually, case managers or reviewers will decide to terminate EBEI services if it becomes apparent that the expected return on investment in more services is too low. We did not find a substantial literature on this topic in peer-reviewed journals. Disability management vendors, private disability insurers, and WC carriers use various tools to manage and/or decide to terminate EBEI services, but in general these tools are proprietary (for example, the benchmarks in items 6 and 7 of Table III.1).

Researchers in the Netherlands have pointed to the need for more systematic research in this area. The recommended research includes examining the delivery of EBEI services in OECD countries that have implemented policies to increase access to such services. The interest in such a study reflects the fact that the eligibility determination processes for the equivalent of SSDI in a number of OECD countries now incorporate employment service assessments. Muijzer et al. (2010) found that seven countries include such assessments (Denmark, Finland, Germany, Netherlands, Norway, Slovakia, and Slovenia), but only one (the Netherlands) provides standards, and those do not have a strong evidence base. The Dutch researchers also found that adjudicators in at least four countries will deny the long-term benefit claim and require the claimant to pursue additional employment supports if the adjudicator finds that the effort to return to work has been inadequate. These supports are paid for by the employer (Denmark and the Netherlands) or the government (Finland and Germany). Focus groups of Dutch examiners

specializing in LBP (Muijzer et al. 2012a) and chronic depression (Muijzer et al. 2012b) identified functional, personal, and environmental factors they consider in making these decisions. Among many others, these include age, education, skills, the strength of the job market, and the cooperation of the employer (when relevant) and worker. Muijzer et al. (2012c) show that fairly simple analytic models can promote more agreement among examiners about the need for more effort.

IV. RECOMMENDED ACTION STEPS

Here, we describe action steps that can expand timely use of EBEI services with the goal of keeping more workers in the labor force after their ability to work is challenged by significant, long-term medical conditions. Recommending specific types of interventions is beyond the scope of this paper. In some instances, considerations including the nature of the target population may point toward a particular type of intervention.

We focus on steps that can be taken by state and federal governments, but some of these steps could be pursued by the private sector. Some action steps for state governments may also apply to local governments. Action steps can be taken under current law, or they can be directed toward changing current law, possibly by conducting pilot programs or other research that might ultimately lead to policy change.

Most of the action steps would expand EBEI access to workers in a specific group, such as residents of a given state, state employees, federal employees, or employees of federal contractors. The intent is to increase timely EBEI access to workers who are not likely to receive EBEI services now and who are likely to benefit from such services. Our findings about the population of workers that we have identified for the expansion of access to EBEI services can be a starting place for identifying workers that are the subject of the action steps.

Given limited resources, and recognizing that the information available to identify workers in the target population is limited, we recommend that EBEI expansion efforts begin by focusing only on those workers in the target population who are the easiest to engage and the most likely to benefit. If expanding access to such workers is successful, EBEI can later be expanded to more broadly defined groups.

A. State governments

State governments can take steps to expand EBEI to state employees and take other steps to expand EBEI for all workers in the state that have limited access to it, especially for non-occupational conditions.

The 2014 Work Innovation and Opportunities Act (WIOA), the federal law that authorizes states to provide a wide range of federally supported employment and training programs, requires states to develop a unified strategic plan across multiple agencies, one that will better align multiple federal investments in the support for workers and employers. Our first recommendation is:

Recommendation 1: *State governments should consider developing a strategic plan to expand EBEI services to workers in the state's target population as part of their WIOA strategic plan, drawing on already available resources and programs.*

Expanding EBEI services to workers in the state's target population may be one of the most cost-effective ways a state's government can expand the state labor force (via reduced exits), support state employers, and increase state revenues. Although employers benefit when they retain experienced workers, those benefits may not be enough to convince employers to invest in EBEI services—particularly if they are small and medium-sized employers. Assistance from the state can make a critical difference.

The first step in developing a strategic plan would be to identify the workers in the state who already have access to EBEI services and those who do not. Other parts of the plan could include an examination of the extent to which EBEI is already available to workers with job-related injuries and illnesses under WC, as strengthening EBEI services within WC is one approach to expanding access. The plan could also include an examination of the health insurance coverage available in the state and whether it supports the delivery of EBEI services.

To develop the strategic plan, the state would have to identify the extent to which EBEI services are already available to the target population or whether they could be made available under current programs. WIOA specifically authorizes VR agencies to provide services to employed workers who have conditions that might otherwise lead to termination of their employment, but dollar limits on funding for state VR agencies might make it difficult to expand access to such workers. States currently have opportunities to expand VR funding under a federal funding formula that provides about $4 in federal funds for every dollar of state funds. Some states do not use all of their allotted funds, and a "reallotment" process allows other states to apply for the unused federal funds, under the $1-for-$4 matching formula. Alabama already uses VR funds to provide support to some workers in the target population.[8] Further, federal regulations require state VR agencies to use a portion of their federal allotments to develop and implement innovative approaches to expand and improve their provision of VR services (34 CRF 361.35). Hence, states could potentially satisfy this requirement by developing and implementing the delivery of EBEI services to the target population.

States should also consider opportunities for their American Job Centers (AJCs) to identify and serve the target population. AJCs (formerly called One-Stop Career Centers) are local offices run by state workforce investment boards; they provide an array of employment supports to workers under the authority of WIOA. Historically, AJCs have focused on helping unemployed workers find new jobs; until fairly recently, they provided little in the way of special assistance to those with disabilities. Many now have taken advantage of the opportunity to expand services to unemployed workers with disabilities under the U.S. Department of Labor (DOL) Disability Employment Initiative program. Although this effort focuses on workers who are attempting to reenter the labor force after an extended absence—including SSDI beneficiaries—consideration could be given to how these efforts can identify and serve workers who have recently stopped working, or are about to stop working, because of a medical condition.

Some workers who file for unemployment compensation may also be in the target population, even though they are asserting they are able to work with the act of filing for unemployment compensation. Routinely screening such workers in a way that supports them and does not threaten their eligibility for compensation might be a valuable tool for identifying strong candidates for EBEI services as soon as they lose their jobs.

If EBEI services in a given state are not available to workers with job-related injuries and illnesses under WC, the state should consider administrative, regulatory, or statutory changes that would expand access by following successful models in other states (for example, in Washington and Ohio). Further, any EBEI services offered to workers with occupational injuries and illnesses under the state's WC system could potentially be offered to workers in the target

[8] Alabama's program is Retain a Valued Employee, or RAVE; see http://www.rehab.alabama.gov/business-partners/products-and-services/employee-retention-disability-management.

population with similar injuries and illnesses that were not occupational, but these services would need to have other funding sources. States could consider developing a "no-fault" system that would make EBEI services available to all workers in the target population, whether or not the cause is job-related.[9] The employer/WC carrier would be responsible for funding those services provided to workers with job-related conditions. An important advantage of a no-fault system is that services could proceed expeditiously even if there is a dispute between the carrier and worker about whether the condition is job-related.

Health services that support a return to work can be an important part of EBEI services, but in most circumstances they are funded by health insurance and not by funding that is specific to EBEI. Hence, as part of the strategic plan the state should consider how state health insurance regulations and the state's implementation of the Affordable Care Act (ACA) are aligned with the goal of delivering EBEI services to workers in the target population. The expansion of health insurance coverage under the ACA might well expand access to the health care services that are needed to support continuation of work, and perhaps even reduce the incentive for workers to claim their medical conditions are job-related or to leave the labor force and apply for SSDI. The effect of the expansion on access to EBEI services might depend on specifics of the state's health insurance exchange, and especially on whether the state opted to expand Medicaid under the ACA's provisions.

The best options for conducting outreach to workers in the target population will vary from state to state, depending on the specifics of the target population and the capabilities of existing state programs. The five states that have mandatory short-term disability benefits could do outreach through the public program or private carriers and potentially use information about claimant conditions and other circumstances to target specific workers. In all states, relationships that VR agencies, AJCs, and WC agencies or insurers have developed with employers could potentially be leveraged to make employers and their employees aware of services available to targeted workers. States could also develop systems to routinely notify claimants applying for benefits under the Family Medical Leave Act, users of employee assistance programs, and applicants for unemployment insurance. The state health agency could do outreach to physicians and other health service providers who are likely to treat workers in the target population, and the state could also launch a public service media campaign.

The second option for states concerns the state's own employees.

Recommendation 2: *States should consider making more EBEI services available to their own employees in the target population, and encourage local government to do the same.*

It is possible that a well-targeted expansion of EBEI services to state employees would more than pay for itself by reducing the amount of lost work time and spending less on sick leave, disability benefits for state employees, and hiring replacement workers. Such an initiative would go beyond current initiatives to improve services to WC claimants, such as the one in

[9] Alabama's RAVE services appear to be no-fault.

Washington State.[10] Findings about the effectiveness of any such initiative could be used to encourage other employers in the state to follow suit.

B. Federal government

Our first recommendation for the federal government is related to our first recommendation for states:

Recommendation 3: *Federal agencies should identify opportunities within existing WIOA programs to support state efforts to expand EBEI services to workers in the target population.*

Federal support for state efforts could begin with guidance and technical assistance in the development of WIOA strategic plans. The Rehabilitation Services Administration could also encourage states to use federal VR matching funds to support EBEI expansion within the framework of WIOA, encourage states to expand EBEI services to the target population in fulfillment of requirements to develop and implement innovative expansions and improvements to the provision of VR services (34 CFR 361.35), and give priority for reallotment of unused grant funds to states that request funds for purposes of EBEI expansion. DOL could also identify opportunities for workforce development agencies in a state to support EBEI expansion through their AJCs. Such efforts could potentially take advantage of innovations that have been implemented under DOL Disability Employment Initiative grants to states, which have supported AJC innovations to serve workers with disabilities.

Another option is to review the information about EBEI services that the government currently makes available to workers, employers, service providers, and others on DOL's website, and perhaps review information on other websites. Some information exists on the DOL website, for instance, but it is difficult to find. Webpages that provide specific information about the conditions that can be successfully addressed by EBEI services, descriptions of the services themselves, and directions on how to obtain those services might have considerable value to the target audience. In collaboration with states, such a site could include state-specific pages, with links to resources in the state.

Another option is to review whether fiduciary requirements for short- and long-term disability benefits in the Employee Retirement Income Security Act—and possibly other federal or state statutes—can be applied to the provision of EBEI services. Current fiduciary requirements may not obligate the insurer to provide EBEI services instead of awarding disability benefits, but perhaps they could be revised to do so. Similarly, fiduciary requirements for health insurance could include requirements to pay for health services that support return to work when it is in the interest of the worker to do so. Excessive fiduciary requirements may, however, deter employers from hiring or retaining workers at high risk for disability.

Our second recommendation to the federal government concerns new rules under Section 503 of the Rehabilitation Act (incorporated in WIOA), published in 2013 (41 CFR Part 60-741). These rules establish a goal for federal contractors of increasing the percentage of their employees with disabilities to 7 percent.

[10] See http://apps.leg.wa.gov/rcw/default.aspx?cite=41.06.490.

Recommendation 4: *In its effort to encourage and support federal contractors in achieving the goal of increasing the percentage of their employees with disabilities to at least 7 percent, the DOL Office of Federal Contracts Compliance Programs (OFCCP) should encourage contractors to expand access to EBEI services.*

The effect of the new rule is to increase the value to federal contractors of retaining workers who have chronic conditions or impairments that qualify them as individuals with disabilities under the rule. Although the goal could be achieved by hiring more qualified workers, contractors may find it much more attractive to achieve it by retaining workers they already have. Among other things, the regulations require contractors to establish specific action-oriented programs to achieve the goal. OFCCP could require contractors to (1) include EBEI services in such programs, (2) report on the number and characteristics of workers that receive EBEI services, and (3) report on the outcomes of service receipt.

Recommendation 5: *The Office of Personnel Management, in collaboration with DOL, should determine how much access federal workers currently have to EBEI services and consider how to expand the services to federal workers in the target population.*

Following this recommendation would effectively extend the current reexamination of return-to-work services and procedures for job-related injuries and illnesses under the Federal Employees' Compensation Act to the same services for other federal workers in the target population.[11] Although the federal government has a special obligation to its employees who have job-related injuries and illnesses, its financial interest in providing EBEI services extends to all workers in the target population, regardless of cause. The reason is that the federal government ultimately pays for all disability benefits available to federal workers under the Federal Employee Retirement System, SSDI, veterans' compensation, and military disability retirement.[12] Hence, "no-fault" EBEI services—services provided without regard to the cause of the condition—seem especially attractive. Expansion of EBEI services to federal employees in the target population would also advance the goal of increasing federal employment of workers with disabilities. Findings from federal efforts to evaluate the effectiveness of expanding federal worker access to EBEI services could be used to encourage states and other employers to follow suit.

C. Expanding the evidence base for early intervention

We conclude with two recommendations for research to expand the evidence to support expansion of EBEI services to the target population, concerning: (1) existing state efforts to expand EBEI services; and (2) federal early intervention demonstrations.

Recommendation 6: *Conduct case studies of existing state efforts to expand EBEI services.*

Some states are undertaking efforts to expand access to EBEI services, notably under WC (either statewide of for state employees), but to other workers as well (for example, the Alabama RAVE program). Information about these programs and their effects would be valuable to other

[11] See http://edworkforce.house.gov/news/documentsingle.aspx?DocumentID=398938.

[12] Disability and retirement benefits for some federal employees are still covered by the Civil Service Retirement System under grandfather provisions.

states as well as the federal government, but it is currently hard to find. Hence, it would be valuable to conduct a study that systematically identifies innovative state efforts, collects information about them from documentation and interviews of those involved, produces detailed program descriptions, provides a synthesis of the findings, considers their implications, and assesses options for more rigorous evaluations. This initial study could potentially lead to more in depth evaluations of the most promising initiatives.

Recommendation 7: *To achieve the greatest success in terms of increased employment and self-sufficiency, federal demonstrations that focus on early intervention should focus on workers in the target population identified in this paper. That would mean enrolling such workers in demonstration services while they are still attached to an employer and before they apply for SSDI.*

The importance and difficulty of targeting are both illustrated in an earlier intervention demonstration, the Demonstration to Maintain Independence through Employment (DMIE), conducted by the Centers for Medicare and Medicaid Services (Whalen et al. 2012). Each DMIE site defined its target population as workers with publicly supported health benefits and conditions that were potentially disabling; all were employed at least part time at enrollment, and none had initiated an SSDI or SSI application. Two sites focused especially on workers with mental health conditions, a third focused on those with diabetes, and the fourth enrolled workers with a wide array of conditions. The early intervention services varied by site and were supplemental to the health coverage. The DMIE evaluation found some statistically significant and positive impacts on health outcomes, no significant impacts on employment, no significant impacts on SSDI entry, and significant reductions in SSI entry.

Although the DMIE findings are encouraging in important respects, they are discouraging in that most impacts on employment and program outcomes were not significant, despite the delivery of services to most of the approximately 3,000 subjects in the treatment group. It might be that employment and program impacts were small because the treatments themselves were poorly designed or implemented, but that is not apparent from the evaluation. Another possible explanation is that most enrollees were either not in the target population identified in this paper, or they were in the target population but did not receive timely services. Most already had chronic conditions and were already working, but this finding suggests that, despite their condition, they had already achieved some measure of employment success before they were enrolled in the demonstration. Hence, although services were provided before SSDI application, they may have primarily been provided to those who had succeeded with services that were already available. Also, only one site enrolled significant numbers of workers with MSK conditions, which are the type of conditions for which research has found the most positive impacts on employment.[13]

In Chapter III, we described how a state could do outreach to the target population, and it would seem best to adopt the same approaches for a demonstration. The broadest approach would involve community-wide outreach to workers, employers, health care providers, and the community at large. Such an effort would in essence mimic an outreach effort for a future program, and might preclude the use of random assignment of volunteers to treatment and

[13] The evaluation does not provide a statistic on the share of the MSK group with LBP.

control groups for an evaluation. That does not necessarily preclude a rigorous evaluation, but a rigorous evaluation design must be built into the demonstration design from the outset to ensure that a rigorous evaluation is feasible.[14]

A somewhat simpler approach, but perhaps less informative about the effects of outreach in a formal program, would be to recruit physicians and other health care providers to participate in the effort. In effect, this is the approach used to provide EBEI services to WC claimants in Washington; physicians are recruited to participate in COHE, and the claimant implicitly chooses to use COHE when choosing a participating physician. Extension of COHE services to workers in the target population with non-occupational conditions who choose COHE-participating physicians would be a relatively simple way to launch an EBEI service demonstration. The only apparent disadvantage relative to a broader outreach effort would be that workers who might not seek timely medical attention would either be excluded or start receiving EBEI services only later.

The final recommendation concerns the use of proprietary tools in EBEI demonstrations.

Recommendation 8: *Designers of federal demonstrations that focus on early intervention should consider incorporating and testing proprietary tools that support EBEI service delivery.*

As described in Chapter III, private insurers and others have developed proprietary tools and services that they sell to employers or incorporate in their own claims management. The tools target the right services to the right workers at the right time and support progress monitoring and service adjustment. That is, they identify which workers are likely to benefit from the services available, which services are best suited for the worker's circumstances, and when they should be delivered. These tools typically provide guidance to caseworkers or specialists, and do not provide definitive answers in every case. Instead, when guidance provided by the tool is ambiguous or perhaps contra-indicated by case information that is not incorporated in the tool, the user must make decisions based on training and experience.

Presumably, such tools could be used successfully in publicly sponsored programs although they might have to be modified. It will be problematic, however, for such tools to be paid for by public funds without evidence of their efficacy, in part because they are mostly developed for workers who have PDI or WC coverage, and many of these individuals are outside the target population. Proprietary tools and services could be incorporated in tests of early intervention services in at least two different ways. One would be for a public entity to purchase the tools from the private vendor and incorporate them in the delivery of demonstration services. The other would be to contract with the private vendors themselves to deliver services to the target population and make use of the tools in the process.[15] Training on use of the tools will need to be an integral part of any such effort.

[14] For instance, the design could involve comparison communities, use data from both before and after the services are made available, and compare changes in outcomes for those in the target population to changes for those just outside the target population (for example, with types of conditions not included in the target population).

[15] The Medicare Senior Risk Reduction Demonstration provides an example of a government-sponsored test of proprietary services—largely data-driven and automated analytic tools (health risk assessments, triage, automated

reports, and phone-based individualized advice, webinars or other online tools, and referrals to community resources)—applied to Medicare beneficiaries age 65 or older (Kahvecioglu et al. 2012).

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