

# Unmet Need for Workplace Accommodation\*

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## Abstract

We use experimental survey methods in a nationally representative survey to test alternative ways of eliciting the size of the population for whom a workplace accommodation for one's health would increase their ability to work, and the rate at which these individuals receive workplace accommodation. We have five key findings. First, consistent with the high lifetime incidence of disability estimated by SSA, 35 percent of people between the ages of 18-70 report health problems that affect their work performance. Second, a sizable group of people report receiving health-related accommodations from their employers, but do not report work limitations *per se*. Our interpretation of this finding is that these individuals do not experience work limitations precisely because their health problems are fully accommodated. Third, question order in disability surveys matters. We present suggestive evidence of priming effects that lead people to understate accommodation when first asked about very severe disabilities. Our fourth finding follows from these results: when all respondents are asked about health-related workplace accommodations (not just those reporting work limitations), the measured accommodation rate is substantially higher. We estimate that the rate of accommodation among accommodation-sensitive individuals who are employed is 60-61 percent—two to three times higher than existing estimates in the literature. Finally, we find that 54-59 percent of accommodation-sensitive individuals (both employed and not employed) would benefit from some kind of employer accommodation to either sustain or commence work. This estimate of unmet need for accommodation is substantially lower than previous estimates, though still economically large.

Keywords: disability, workplace accommodation, labor supply

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## I. Introduction

One in four Americans will become disabled before reaching age 67, according to the Social Security Administration (2015). Some will find ways to maintain engagement in the workforce, but many others will leave the labor force and enter the Social Security Disability Insurance (SSDI) program. What determines which path someone takes? It is not merely a matter of health. Disability arises from the dynamic *interaction* of an individual's health and their personal, social, economic, and institutional environment (WHO, 2001). Whether or not someone has a work disability thus depends on how their health affects their ability to function effectively in a particular job setting at a given point in time. This implies that someone who has a work disability in one job setting would not necessarily have a work disability in all job settings. Evidence that one in five people who apply for SSDI benefits has significant work capacity (Maestas, Mullen and Strand, 2013) underscores the importance of understanding why people who *could work*, in at least some job settings instead pursue disability benefits.

Figure 1 illustrates how workplace accommodation could in principle extend employment. Suppose we can represent job demands as a single index on the vertical axis and individual work ability as a single index on the horizontal axis. For all job-ability combinations lying on or below the 45-degree line, ability is sufficient to meet job demands; job-ability combinations falling above the line are infeasible and result in non-work. Suppose a worker experiences a health shock that reduces his or her ability from  $A_0$  (below the 45-degree line) to  $A_1$  (above the 45-degree line). The individual will no longer work, unless accommodations can be provided that restore some amount of ability (e.g., assistive technologies) and/or adjust job demands (e.g., changes in work tasks). The figure shows how a combination of accommodations that partially restore ability (from  $A_1$  to  $A_2$ ) and alter job demands (from  $J_0$  to  $J_1$ ) could in this

instance be sufficient to shift the individual back to the 45-degree line, where their accommodated ability just meets revised job demands.

A surprising finding in the literature is that relatively few disabled workers—just 20-30 percent across a range of studies and time periods (Burkhauser, Butler, and Kim, 1995; Burkhauser et al., 1999; Yelin, Sonneborn, and Trupin, 2000; Hill, Maestas, Mullen, 2014)—report receiving an accommodation from their employer.<sup>1</sup> This statistic is puzzling given that since 1992, the Americans with Disabilities Act has mandated that employers provide reasonable accommodation to disabled workers. Furthermore, nearly all of these studies find that workplace accommodation is only modestly effective in prolonging employment (Burkhauser, Butler, and Kim, 1995; Yelin, Sonneborn, and Trupin, 2000; Campioletti, 2005; Hill, Maestas, Mullen, 2014; Neumark et al., 2015).<sup>2</sup>

In this paper we argue that the ways in which workplace accommodation is measured in national surveys can understate the prevalence of work disability and overstate the unmet need for workplace accommodation. The central issue is who should be in the set of those “at risk” for accommodation. In the Health and Retirement Study (HRS), for example, questions about accommodation are asked only of people who first self-identify as having a work-related health limitation—a relatively severe standard that excludes people who are not (yet) willing to call themselves “limited” but who are receiving or who would benefit from accommodation. The Current Population Survey (CPS) identifies people with disabilities based on a standard six-question sequence—whether a respondent reports “serious difficulty” with any of six activities including hearing, seeing, etc. This too is a relatively severe standard, and is known to miss

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<sup>1</sup> An exception is Neumark et al. (2015) who report a high rate of accommodation among employed women undergoing treatment for breast cancer.

<sup>2</sup> Burkhauser et al. (1999) examined the effect of accommodation on SSDI application (as opposed to employment *per se*) using retrospective information reported in 1992 and found accommodation reduced the percentage of men applying for SSDI benefits within 5 years of onset by 20.7 percent.

important subpopulations of the disabled (Burkhauser, Houtenville, Tenant, 2015). Although the 2012 CPS Disability Supplement asks both the disabled *and non-disabled* if they have ever requested an accommodation from an employer, the CPS question does not specifically reference *health-related accommodations*, and is asked only of the employed. It thus misses people who are not employed but who could work if accommodated, and includes people who request accommodation for other reasons, such as family caregiving.<sup>3</sup>

Resolving these issues is critical for understanding the magnitude of unmet need for workplace accommodation and how accommodation affects subsequent labor supply outcomes. In this paper, we use experimental survey methods in a nationally representative survey to test alternative ways of eliciting the size of the population for whom accommodation would increase their ability to work (the “accommodation-sensitive”), and the rate at which these individuals receive workplace accommodation. We have five key findings. Our first finding is that, consistent with the high lifetime incidence of disability estimated by SSA, 35 percent of people between the ages of 18-70 report health problems that affect their work performance. This in itself suggests that overly strict definitions of disability limit the scope for evaluating whether early interventions help people sustain employment as their health problems progress from less severe to more severe. Second, a sizable group of people report receiving health-related accommodations from their employers, but do not report work limitations *per se*. Our interpretation of this finding is that these individuals do not experience work limitations precisely because their health problems are fully accommodated. Third, question order in disability surveys matters. We present suggestive evidence of priming effects that lead people to understate accommodation when first asked about very severe disabilities. Our fourth finding

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<sup>3</sup> In addition, the CPS only asks if people have *asked* their employer for an accommodation (and whether the request was granted). This excludes people whose employers volunteer to accommodate them without the individual having to ask.

follows from these results: when all respondents are asked about health-related workplace accommodations (not just those reporting work limitations), the measured accommodation rate is substantially higher. We estimate that the rate of accommodation among accommodation-sensitive individuals who are employed is 60-61 percent—two to three times higher than existing estimates in the literature. Finally, we find that 54-59 percent of accommodation-sensitive individuals (both employed and not employed) would benefit from some kind of employer accommodation to either sustain or commence work. This estimate of unmet need for accommodation is substantially lower than previous estimates, though still economically large.

Our findings have repercussions for future research in this area and are particularly timely given the fiscal situation of the SSDI program. In 2016, the SSDI Trust Fund will begin running a 20 percent deficit relative to promised benefit payments, necessitating reforms of a magnitude sufficient to deal with a large shortfall. Survey research will form much of the evidence base used to guide reforms that will surely seek to boost employment among people with disabilities.

## **II. Data and Methods**

We use data from the RAND American Life Panel (ALP) to answer these questions. The RAND ALP is a nationally representative panel (when weighted) of approximately 5,700 respondents (as of May 2014) ages 18 and older who are regularly interviewed over the Internet. About 3 percent of panel members are provided a laptop and/or Internet access in order to participate. In May 2014, we fielded a survey in the ALP containing questions on (1) whether individuals' health limits the kind or amount of paid work they can do, as well as questions on (2) whether individuals received any special accommodation from their employer for health reasons (if working) and (3) whether a special accommodation for their health would make it

easier for them to work (if not working or if working but not receiving accommodation). For (1) we used the same question in the Disability Section of the HRS.

Our survey is innovative for at least three reasons. First, unlike the HRS, we ask *all* respondents about employer accommodation rather than limit these questions to those who report a work-limiting health problem. Our hypothesis was that employees who are accommodated for a health problem may not report that their health limits their ability to work *because* it is being accommodated. Second, we ask those who do not report an employer accommodation (including those who are not employed)—regardless of whether they report their health limits their ability to work—if a special accommodation for their health would make it easier for them to work. This allows us to identify individuals whose health problems are “accommodation-sensitive” in the sense that a workplace accommodation would enable them to work. Third, we investigate the role of question order and priming effects by randomizing half of the sample to receive the questions about workplace accommodations *before* they were asked whether their health limits their work. We did this to test the hypothesis that asking about work-limiting health problems primes respondents to focus on only the most severe health problems and neglect workplace accommodations for less severe health problems that may also affect their ability to work (and that may develop later into more severe health problems if not treated/accommodated). Table 1 provides an overview of the survey for those who randomly received the standard or alternative question sequences, respectively.

The response rate of the survey was 78 percent. We restrict our sample to respondents aged 18-70 who were randomly recruited to the panel with nonmissing observations on key variables.<sup>4</sup> Our final sample includes 2,484 respondents; 1,237 respondents received the standard question sequence and 1,247 respondents received the alternative question sequence. All

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<sup>4</sup> We exclude approximately 1,100 respondents who were recruited using nonrandom methods (e.g., snowball).

analyses are weighted to match the 2013 CPS distributions of age, race/ethnicity, nativity, education, gender, marital status, household size, family income and geographic region.

### **III. Prevalence of Work Disability**

Table 2 presents estimates of the cumulative proportion of the population reporting a work-limiting health problem, a workplace accommodation for health reasons, and/or that an accommodation for their health would make it easier for them to work, overall and by current work status, for the random half of the sample who were asked the standard vs. alternative question sequence. We find that question order does not statistically affect the fraction reporting a work-limiting health problem ( $p=0.174$ ). In either case, 18-20 percent of the working-age population reports a health problem that limits the kind or amount of paid work they can do.<sup>5</sup>

On the other hand, question order does matter for the fraction of the population reporting a workplace accommodation for their health or that such an accommodation would help, especially among those who report that their health does *not* limit their ability to work. (See Table 3 for the marginal distribution of responses.) Consistent with the hypothesis that the work-limiting health question primes respondents to focus on more severe health problems, respondents asked the work-limiting health question first are less likely to say they are accommodated for a health problem at work or to report that an accommodation would help.

In either case, a sizeable fraction of respondents who say their health does *not* limit their work report receiving an accommodation for health reasons or say such an accommodation would help. Expanding the definition of work disability to include those with workplace accommodations increases the measured prevalence of work disability by 4.3 percentage points

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<sup>5</sup> Limiting the sample to those ages 51-70, we find that 29 percent report a work-limiting health problem. This is the same percentage reporting a work-limiting health problem by same-age respondents in the 2010 HRS.

or 24 percent (from 17.6 to 21.8 percent) using the standard question sequence, and increases the prevalence of work disability even more—by 8.8 percentage points or 45 percent (from 19.7 to 28.5 percent)—using the alternative sequence. Further including those who are not accommodated but who say an accommodation would help increases the prevalence of work disability to 26.3 percent or 35.4 percent of the population, using the standard vs. alternative sequence, respectively. Virtually all of the increase is from respondents who are currently working for an employer; these are also the respondents who are most affected by the sequence of questions (see Panel B of Table 2).<sup>6</sup>

#### **IV. Unmet Need for Workplace Accommodation**

Not surprisingly, measures of unmet need for employer accommodation are quite sensitive to the definition of the “at risk” population. Table 4 presents estimates of employer accommodation rates for different combinations of those with work-limiting and/or accommodation-sensitive health conditions, for respondents presented with the standard (Panel A) or alternative (Panel B) question sequence. The first column reports the fraction of the total population defined by each subpopulation. The second column reports the fraction working within each subpopulation. The third and fourth columns report employer accommodation rates conditional on working and overall, respectively. Even though only the employed are eligible to receive employer accommodation, we report the accommodation rate for the entire subpopulation since the converse of the unconditional accommodation rate more accurately captures the concept of unmet need—those whose ability to work, both on the extensive and intensive margin, could be improved by receiving employer accommodation.

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<sup>6</sup> We test and fail to reject the hypothesis that work status is reported differently by question sequence ( $p=0.410$ ).

The first row of Table 4 presents estimates for respondents who report that their health limits their ability to work when presented with the standard question sequence. Among the 17.6 percent of the population reporting a work-limiting health condition in this scenario, less than a third (29.8 percent) are currently working and, of those, fewer than half (44.6 percent) report receiving an employer accommodation for their health. This implies that only 13.3 percent of those reporting a work-limiting health problem are receiving an accommodation, or, conversely, 86.7 percent could be helped if an employer offered an accommodation.

Expanding the “at risk” group to also include those who are accommodation-sensitive (regardless of whether they say their health limits their work) nearly doubles the unconditional accommodation rate—from 13.3 to 25.1 percent—although the measure of unmet need in this subpopulation is still quite high at 74.9 percent. Among those asked the alternative question sequence, the unconditional accommodation rate rises to 31.7 percent, implying the measure of unmet need for those with work-limiting and/or accommodation-sensitive health problems is 68.9 percent.

However, unmet need may be overstated if the “at risk” population includes those for whom accommodation would not actually be effective. Indeed, nearly 60 percent of those who report a work-limiting health problem say that a workplace accommodation would *not* make it easier for them to work (see Table 3). In the third row of Table 4 we condition on the accommodation-sensitive only, excluding those who say an accommodation would not help. This reduces the size of the “at risk” group by about a third, to 16 percent of the population measured using the standard question sequence, or 23.5 percent using the alternative sequence. Employment rates among this group are much higher—between 68 and 77 percent—and accommodation rates among the employed are also higher at 60-61 percent. This number is two to three times current estimates in the literature that include people who say an accommodation

would not help them work and that exclude people whose health problems are fully accommodated, resulting in no work limitations. Combining these estimates, we find that 54-59 percent of accommodation-sensitive individuals are *not* accommodated and could therefore benefit from some kind of employer accommodation.

## **V. Discussion and Conclusion**

We find that 35 percent of people aged 18-70 in the U.S. have health problems that affect their work performance. While prior estimates indicated only 20-30 percent of people with work disabilities received accommodations from their employers, we present new evidence that the rate of workplace accommodation in the U.S. is closer to 60 percent. Our estimate accounts for three factors that biased previous estimates downward. First, we include cases in which people are fully accommodated, such that they no longer experience (or at least report) work limitations. Second, we exclude people who say that workplace accommodation would not help. Finally, our estimate is purged of question order effects that encourage people to understate the degree to which they are receiving accommodations from their employers.

An implication of a higher accommodation rate is that estimates of the unmet need for accommodation are lower than previously thought. Nevertheless, we find that 54-59 percent of accommodation-sensitive individuals could benefit from some kind of employer accommodation to continue or re-enter employment. One hypothesis for the persistence of unmet need is that people who would benefit do not ask their employers for accommodations (Hill, Maestas, and Mullen, 2014; Von Schrader, Xu, and Bruyère, 2014). Consistent with this explanation, Table 5 shows only a quarter of accommodation-sensitive individuals ever asked for accommodation, and asking increases accommodation by 25 percent.

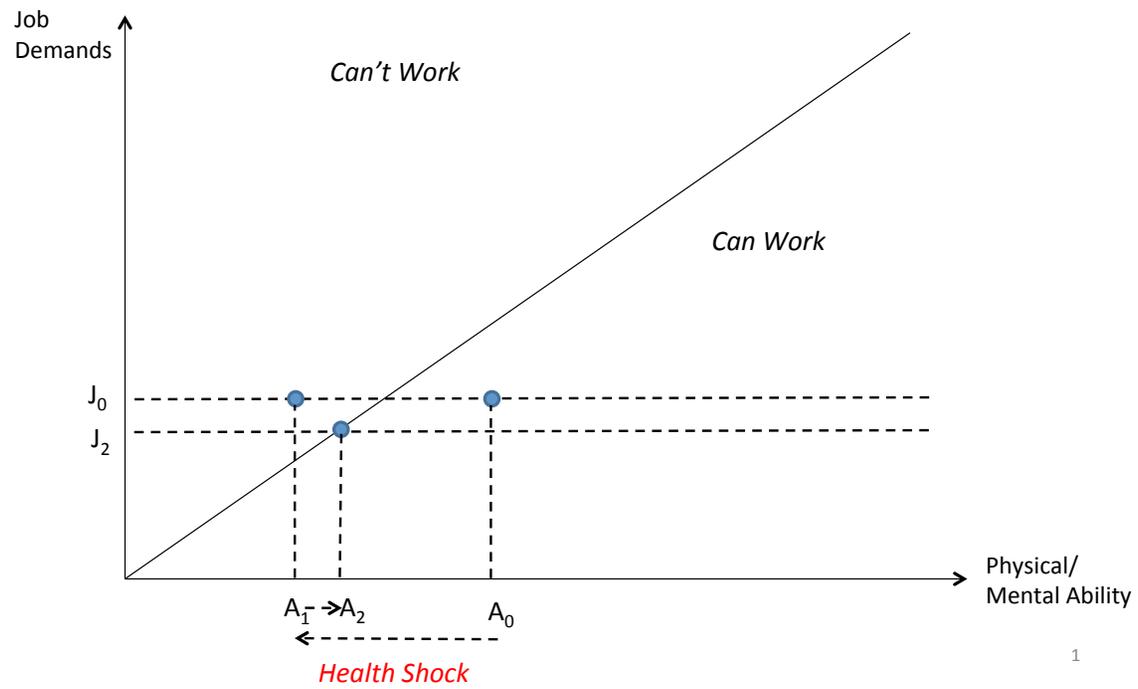
Our findings suggest that the effectiveness of accommodation—that is, does it prolong employment and defer SSDI application—needs to be re-evaluated. As described earlier, the prior literature has concluded that accommodation prolongs employment by at most two-three years, and has mixed effects on subsequent SSDI application. But missing in these analyses is a group of people whose disabilities are being fully accommodated such that they no longer experience work limitations. Table 5 suggests the story may be even more complicated. We find that—despite the higher rate of accommodation—asking for accommodation is *not* associated with better work outcomes. On the other hand, among those who asked, those granted accommodation are twice as likely to work as those not accommodated. Further follow-up is needed to assess these effects.

In order to solve SSDI's financial shortfall, several SSDI reform proposals incorporate ways to incentivize employers to hire and retain workers with disabilities. Underlying the hoped-for success of such strategies is a belief that accommodation is an effective means of prolonging employment. Although the literature to date has not lent much support for that belief, the evidence suggests the question is worth a second look.

## References

- Burkhauser, R. V., Butler, J. S., & Kim, Y. W. (1995). The importance of employer accommodation on the job duration of workers with disabilities: A hazard model approach. *Labour Economics*, 2(2), 109-130.
- Burkhauser, R. V., Butler, J. S., Kim, Y. W., & Weathers, R. R. (1999). The importance of accommodation on the timing of disability insurance applications: results from the survey of disability and work and the health and retirement study. *Journal of Human Resources*, 589-611.
- Burkhauser, R. V., Houtenville, A. J., & Tennant, J. R. (2014). Capturing the Elusive Working-Age Population With Disabilities Reconciling Conflicting Social Success Estimates From the Current Population Survey and American Community Survey. *Journal of Disability Policy Studies*, 24(4), 195-205.
- Campolieti, M. (2005). How accommodations affect the duration of post-injury employment spells. *Journal of Labor Research*, 26(3), 485-499.
- Hill, M., Maestas, N., & Mullen, K. J. (2014). Employer accommodation and labor supply of disabled workers. RAND Working Paper #WR-1047.
- Maestas, N., Mullen, K. J., & Strand, A. (2013). Does disability insurance receipt discourage work? Using examiner assignment to estimate causal effects of SSDI receipt. *The American Economic Review*, 103(5), 1797-1829.
- Neumark, D., Bradley, C. J., Henry-Osorio, M., & Dahman, B. (2015). Work continuation while treated for breast cancer: The role of workplace accommodations. *ILR Review*, 68(4), 916-954.
- Social Security Administration. 2015. Social Security Basic Facts. April 2, 2014. Accessed September 3,-2015: <http://www.ssa.gov/news/press/basicfact.html>.
- Von Schrader, S., Xu, X., & Bruyère, S. M. (2014). Accommodation Requests: Who Is Asking for What? *Rehabilitation Research, Policy, and Education*, 28(4), 329-344.
- World Health Organization. (2001). International classification of disability, health and functioning. Geneva, Switzerland: Author.
- Yelin, E., Sonneborn, D., & Trupin, L. (2000). The prevalence and impact of accommodations on the employment of persons 51–61 years of age with musculoskeletal conditions. *Arthritis Care & Research*, 13(3), 168-176.

Figure 1. Conceptual Model of Workplace Accommodation Following a Health Shock



**Table 1. Overview of ALP Survey**

Standard Question Sequence	Alternative Question Sequence
Do you have any impairment or health problem that limits the kind or amount of paid work you can do?	Are you currently working for pay? [If yes] On your current (main) job, do you work for someone else, or are you self-employed?
Are you currently working for pay? [If yes] On your current (main) job, do you work for someone else, or are you self-employed?	[If working] Many people need special accommodations for health problems to make it easier for them to work. This could include things like getting special equipment, getting someone to help them, varying their work hours, taking more breaks and rest periods, or learning new job skills. Does your employer currently do anything special to make it easier for you to work?
[If working] Many people need special accommodations for health problems to make it easier for them to work. This could include things like getting special equipment, getting someone to help them, varying their work hours, taking more breaks and rest periods, or learning new job skills. Does your employer currently do anything special to make it easier for you to work?	[If not working or not accommodated at work] Would a special accommodation for your health make it easier for you to work?
[If not working or not accommodated at work] Would a special accommodation for your health make it easier for you to work?	[Questions about type of accommodation, requests for accommodation.]
[Questions about type of accommodation, requests for accommodation.]	Do you have any impairment or health problem that limits the kind or amount of paid work you can do?

Note: Self-employed were asked "Do **you** do anything special when you work to accommodate a health problem?" and were not asked if an accommodation would help.

**Table 2. Cumulative Distribution of Work-Limiting and Accommodation-Sensitive Health Problems**

	<b>Standard Sequence</b>	<b>Alternative Sequence</b>	<b>Diff.</b>	<b>p-val.</b>
<b>A. Overall</b>				
Health limits work	17.6%	19.7%	2.1%	0.174
+ Accommodated at workplace	21.8%	28.5%	6.7%	<0.001
+ Accommodation would help	26.3%	35.4%	9.1%	<0.001
<b>B. Working for Someone Else</b>				
Health limits work	6.6%	8.8%	2.2%	0.113
+ Accommodated at workplace	12.9%	22.7%	9.8%	<0.001
+ Accommodation would help	18.4%	32.2%	13.8%	<0.001
<b>C. Self-Employed</b>				
Health limits work	16.9%	13.8%	-3.2%	0.543
+ Accommodated at workplace	22.1%	16.7%	-5.4%	0.344
<b>D. Not Working</b>				
Health limits work	39.1%	43.8%	4.7%	0.163
+ Accommodation would help	42.6%	46.8%	4.2%	0.213

Notes: Estimates are weighted. See Table 1 for standard and alternative question sequences, respectively.

**Table 3. Marginal Distribution of Work-Limiting and Accommodation-Sensitive Health Problems**

	<b>Standard Sequence</b>	<b>Alternative Sequence</b>
Health limits work		
Accommodated at workplace	2.3%	2.2%
Accommodation would help	4.9%	5.8%
Accommodation would not help	10.3%	11.8%
Health does not limit work		
Accommodated at workplace	4.3%	8.8%
Accommodation would help	4.5%	6.8%
Accommodation would not help	73.7%	64.6%

Notes: Estimates are weighted. See Table 1 for standard and alternative question sequences, respectively.

**Table 4. Estimates of Employer Accommodation Rates for Health Problems**

<b>Subpopulation</b>	<b>% of Total</b>		<b>% Accom.</b>	<b>% Accom.</b>
	<b>Population</b>	<b>% Working</b>	<b>  Working</b>	<b>(Uncond.)</b>
<b>A. Standard Question Sequence</b>				
Health limits work	17.6%	29.8%	44.6%	13.3%
Health limits work and/or accommodation-sensitive	26.3%	48.9%	51.3%	25.1%
Accommodation-sensitive only	16.0%	67.7%	61.2%	41.4%
<b>B. Alternative Question Sequence</b>				
Health limits work	19.7%	33.3%	32.7%	10.9%
Health limits work and/or accommodation-sensitive	35.4%	60.3%	51.6%	31.1%
Accommodation-sensitive only	23.5%	77.3%	60.2%	46.5%

Notes: Estimates are weighted. See Table 1 for standard and alternative question sequences, respectively.

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**Table 5. Requests for Accommodation**

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	<b>% of Sample (Subsample)</b>	<b>% Accomm.</b>	<b>% Working</b>
Did not ask for accommodation	73.5%	38.9%	72.4%
Asked for accommodation	26.6%	49.9%	71.5%
Conditional on asking for accommodation			
Employer provided accommodation requested	58.5%	78.7%	85.0%
Employer provided a different accommodation	10.5%	36.9%	81.0%
Employer did not provide any accommodation	31.0%	0.0%	42.8%

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Notes: Estimates are weighted. Sample = accommodation-sensitive excluding self-employed.