Evidence Synthesis of Workplace Accommodation Policies and Practices for Persons with Visible Disabilities

Final Report

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Executive Summary

Currently, an estimated 795,000 Canadians with disabilities are unemployed despite being able and willing to work. Many different barriers prevent people with disabilities from working, including discrimination and bias, employers' concerns about productivity, and poor matches between the requirements of a job and the worker's abilities. Several workplace accommodations exist to address these barriers, but many employers are unaware of what their options are, or feel that accommodations will be too expensive.

The purpose of this literature review is to identify the workplace accommodations that employers in different workplaces are making for employees with disabilities at the recruitment, hiring and working stage. The review focuses specifically on visible disabilities, including sight, hearing and mobility disabilities, chronic pain, auto immune diseases, as well as multiple sclerosis and acquired brain injury (ABI). However, it is not always easy to distinguish visible disabilities from invisible ones, and many accommodations are useful in both cases.

Methods

To identify workplace accommodation practices implemented for people with disabilities, researchers reviewed 109 scientific articles from scholarly databases, as well as reports, tools and guides published online by government agencies, research centres, not-for-profit community organizations and businesses. In addition, 32 experts in the field were contacted to provide additional suggestions of relevant literature, and 15 individuals (47%) responded.

Findings

The scholarly literature search uncovered a variety of workplace accommodations implemented by employers to support staff members with visible disabilities. The accommodations identified fall into 17 discrete categories:

- Assistive Devices
- Built Environment (Workstation)
- Built Environment (Workplace)
- Scheduling Accommodations
- Work Location
- Job Restructuring
- Natural Supports
- Employer Supports
- Personal Assistance Services
- Transportation Accommodations
- Inclusive Recruitment and Hiring Practices
- Supported Employment and Job Carving
- Partnerships
- Workplace Culture
- Vocational Rehabilitation for Injured Workers
- Communication
- Accommodation Process

The grey literature search identified a number of resources including how-to guides, toolkits and guidelines designed to help employers retain their employees with disabilities. In addition, online resources from the United States and Australia were discovered, and provide comprehensive information on accommodations for use by employers. These websites include JobAccess, the Job Accommodation Network, and the Employer Assistance and Resource Network.

Discussion

According to the literature on workplace accommodations for people with visible disabilities, social barriers including stigma, stereotypes, fear and lack of understanding are more significant barriers than physical limitations for people with visible disabilities and their employers. Organizational culture changes are needed to address these attitudinal obstacles, and all employees have a role to play in bringing about this shift. Employers are encouraged to use training, buddy and mentoring systems and peer support, and to include staff members with disabilities in team projects as ways of addressing these barriers.

To assist employees with disabilities to complete their day-to-day tasks, a variety of assistive technologies are available including mobility devices, adapted computers and software. When assistive technology is provided as an accommodation, employers should arrange for training on the use of the new device or devices.

Changes to work schedules and work location are accommodations frequently mentioned in the literature that can be offered both to employees with disabilities and those without. In fact, extending this flexibility to all staff can reduce the stigma that employees with disabilities may experience when requesting or receiving what may seem like preferential treatment.

No matter what accommodations an employer puts into place for a staff member with a disability, it is crucially important that the employee with a disability play an active role in the decision-making process. Whether it is a specific piece of equipment, or the tasks required in a particular job, workplace accommodations must be customized to the individual and their specific occupation or industry. One size does not fit all, and even two people with the same medical condition may have very different needs. Discussing accommodation with an employee is termed the "interactive process," and ought to be enshrined in the workplace policies of an organization, along with a procedure for monitoring and evaluating an accommodation's effectiveness.

Furthermore, a single accommodation will not always do the trick. Employers and their employees with disabilities may need to consider a mix of workplace accommodations to optimize the health, comfort and productivity of employees. While accommodations may well be effective on their own, employers and employees are encouraged to consider what combination of accommodations will be most effective.

In all situations, employers are encouraged to follow the following four-step process when putting a workplace accommodation into place for an employee with a disability:

1. Recognizing the need for accommodation.
2. Gathering relevant information and assessing needs.
3. Writing a formal accommodation plan.
4. Implementing, monitoring and reviewing the accommodation.

Employers have a variety of accommodations at their disposal, and they are encouraged to implement the right combination of customized solutions for their individual employees.

Introduction

Currently, there are an estimated 795,000 Canadians with disabilities—almost half of whom have a post-secondary education—who are unemployed despite being able and willing to work (Fredeen, Martin, Birch & Wafer, 2013). With growing labour shortages in certain industries and geographic areas, and an aging workforce nearing retirement en masse, there has never been a more important time to engage individuals with disabilities in the labour force.

According to current thinking on the disablement process, disability, and in our case work disability, is associated with biological structure and function, but is more than just the existence of a health condition or impairment itself. While disability is still sometimes referred to as a limitation of ability or function, the extensive theoretical literature on the topic stemming from conceptual frameworks by Nagi and the World Health Organization describes disability as a relational concept that derives from the interaction of an individual's abilities and other personal characteristics with a particular social and built environment (Nagi, 1965; Nagi, 1991; World Health Organization, 2001). Similarly, the human rights perspective on disability, developed by the United Nations, views people with disabilities as holders of rights, and aims to make it apparent that the problems originate outside the person; rather, it begins with various economic and social processes that fail to accommodate differences in ability that are part of the human population (Quinn & Degener, 2002). Following these models, we assume that whether or not a health condition or impairment will lead to a disability at a workplace is to a high degree influenced by the presence of occupational barriers to employment participation of an individual with this health condition. Removing or neutralizing these barriers by providing workplace accommodations and support to persons with health conditions or impairments will enable them to find meaningful employment, to stay at work, or return to work, if absent due to an illness or injury.

A number of barriers to employment for people with disabilities have been identified in the literature that helps to explain the current underrepresentation of this demographic in Canadian workplaces. These barriers include employer discrimination and bias (Hernandez et al., 2008; Jakobsen, 2009), concerns about the productivity of workers with disabilities (Houtenville & Kalargyrou, 2012), poor matches between employee capacity and work requirements (Jakobsen, 2009), and concerns about legal liability (Kaye, Jans, & Jones, 2011). In addition, employers tend to have limited awareness of workplace supports and accommodations that can be put in place to address these issues (Kaye et al., 2011; Unger & Kregel, 2003), or have misconceptions about the actual costs of accommodations (Houtenville & Kalargyrou, 2012). As a result, a job applicant with a disability who requests a workplace accommodation has a lower chance of getting a job than a prospective employee who does not request accommodation (Hazer & Bedell, 2000).

When implemented effectively, workplace accommodations have tremendous benefits for people with disabilities and their employers, and these benefits consistently outweigh their costs (Tatnall, 2005). Unfortunately, workplace accommodations are often unsuccessful, as employers tend to take a narrow view of accommodation—focusing on technical changes to a job rather than overall workplace culture—and because there is a lack of evidence-based practice guidelines for employers to draw on (Gates, 2000; Sanford & Milchus, 2006).

The purpose of this literature review is to identify the kinds of accommodations being made for persons with disabilities by employers in different workplace contexts, as well as accommodations in recruitment, hiring and retention practices that have been effective in attracting and retaining people with disabilities. This literature review aims at providing both a comprehensive collection of successful workplace accommodations put into practice by employers in Canada and other developed nations, as well as illustrations of the most common obstacles that prevent their implementation.

Our review focuses specifically on work accommodations for persons with *visible disabilities*. The definition of visible disabilities as opposed to *invisible disabilities* is an on-going topic of discussion. There's no "clear-cut" distinction between the two categories that is universally accepted. Some people have defined visible disabilities as synonymous with physical disabilities that are noticeable during a face-to-face meeting or a job interview (Tagalakis, Amsel, & Fichten, 1988; Arvonio, Cull, & Marini, 1997). In other words, visible disabilities can be described as impairments of structure or function that can be noticeable or readily apparent to other people. We note, however, that some disabilities may be described as visible or invisible depending on the context, and that there are disabilities that can only be visible sometimes (e.g., episodic disabilities), or become more or less visible as the disease progresses or goes into remission. There is a continuum of possibilities between the visibility and invisibility of a disability. As Sherry Peters (1993) puts it: "in terms of appearance, some disabilities fluctuate between these two extremes – from visible to invisible, from highly visible to less visible or the reverse" (p. 26).

In the context of this study, where the focus is employability in terms of securing, maintaining, and in some cases returning to work, the notion of visibility versus invisibility is relevant for reasons such as discrimination (in the case of visible disabilities) and need for disclosure (in the case of invisible disabilities). Research has indicated that persons with visible and invisible disabilities may have different labour market and on-the-job experiences. Visibility of disability may hinder persons' success in finding a job, because they are more susceptible to stigma and discrimination. A 2003 study of persons with disabilities attending a community college found that those who had invisible disabilities were sixteen times more likely to be employed than those who had visible disabilities (Martz, 2003). Persons with visible disabilities may find themselves in a situation where potential employers focus on their disability rather than their skills and work experience (Stone, 1995). At the same time, persons with less visible disabilities may experience difficulties with disclosing their disability for fear of negative attitudes from colleagues, supervisors and managers. In particular, if a worker with an invisible disability receives accommodations, colleagues may perceive them as not disabled and, thus, question their need for accommodations (Barnard, Stevens, Siwatu, & Lan, 2008). In contrast when the disability is visible, co-workers may be more likely to acknowledge persons' accommodation needs (Stone, 2005).

The distinction between visible and invisible may also serve to identify broad categories of accommodations based on type of disability. For example, people with physical disabilities, in particular with mobility and dexterity limitations, might require more accommodations to the physical work environment than persons with less visible disabilities. They may also experience

more difficulties related to transportation, access to the workplace and their workstation. In contrast, invisible disabilities (often associated with cognitive and learning impairments) may be seen as requiring job content accommodations.

At the same time, we expect that our findings will include a number of policies and practices that are broadly applicable in terms of accommodating employees regardless of the type of disability. For example, formal decision making process for accommodation requests and considerations, ongoing training requirement to raise managers' and coworkers' awareness and sensitivity to disability issues are essential to recruitment and retention of skilled persons with both visible and invisible disabilities.

For the purposes of our study, we draw on the definition provided to us by Employment and Social Development Canada's Office of Disability Issues as a starting point. Based on that definition, we include disabilities that are more apparent or have more visible manifestations, and include in our review sight, hearing and mobility disabilities, as well as chronic pain and auto immune diseases. Our review also includes multiple sclerosis and acquired brain injury (ABI) in its focus, as these disabilities also have visible manifestations. This definition helped us to identify the types of disabilities, work-related experiences and accommodation needs to focus on in our best practices review, as well as set the parameters for our evidence synthesis and discussion.

To make the report as wide-ranging as possible, the research team consulted scholarly literature published in academic journals, as well as grey literature including reports and guides produced by government agencies, research centres, not-for-profit and community organizations, and business and industry networks. In addition, an environmental scan was conducted whereby the team contacted researchers, academics and organizational representatives with expertise in workplace accommodation to obtain recommendations for additional resources not collected during the scholarly and grey literature searches.

Conceptual Framework

To help organize the evidence gathered through this literature review, we draw on several conceptual frameworks. The five factor rehabilitation framework for applying theory to practice developed by Szymanski et al. (1996a) is a good starting point. The five broad categories of factors in this framework are:

- **Contextual factors** – These are external to the person (e.g., socioeconomic status, family, education, language, legislation, labour-market conditions, health care). These factors are noted as important considerations for interpreting rehabilitation research.
- **Individual factors** – These are physical and psychological attributes of the person (e.g., gender, ethnicity, work competencies, predispositions and limitations, interests, needs, values). These factors have been traditionally assessed in vocational rehabilitation through standardized testing.
- **Mediating factors** – These affect the relationship between the person and the environment. They could be individual, social or environmental. Individual mediating factors could include beliefs and attitudes held by the individual with a disability or by others about the individual. Social mediating factors could include culture, religious beliefs, discrimination, accessibility, opportunity structures. Environmental mediators include outcome expectations and world-view generalizations
- **Work Environmental factors** – These are characteristics of past, present and potential work environments that could influence individual career decisions or hiring practices (e.g., organizational culture, accessibility, accommodations, work task requirements, salary and benefits). They are important considerations for level of congruence between an individual and his or her job, as well as preventing physical and mental health problems.
- **Outcome factors** – These are indicators of success or signals for intervention (e.g. level of congruence between the person and work environment, job satisfaction, individual and organizational productivity, individual physical and mental health).

The above factors provide a basis by which to identify barriers to recruitment and engagement of people with disabilities, as well as opportunities for accommodation.

It is also useful to categorize accommodations themselves into broad categories. This provides insights into the qualities of supports provided. The following list is compiled from Scroggins (2007) and Deloitte Canada (2010):

- **Organizational processes** – e.g., processes or policies such as hiring practices;
- **Attitudinal changes**– e.g., eliminating stigma, discrimination, and social/cultural barriers through sensitivity training;
- **Emotional support** – e.g., giving praise, encouragement, allowing communication with natural supports, providing organizational advocate;
- **Information and communications support** – e.g., providing information in accessible formats such as large print text;
- **Physical work environment changes** – e.g., controlling temperature, building room dividers, individual work areas, providing natural light;

- o **Technological supports** – e.g., computers and assistive technologies such as screen reader software, work station peripherals;
- o **Flexibility in working conditions** – e.g., flexible work hours, work from home options, allowing exchange of work duties with other employees;
- o **Supervision** – e.g., assisting in development of daily/weekly goals, providing structured time schedule, routine time for one-to-one interactions; and
- o **Compensation** – e.g., health insurance coverage, sick leave, child care compensation, transportation compensation.

Implementing workplace accommodations is a process, requiring several steps that organizations must take to ensure that workers are accommodated appropriately and effectively. Langton et al. (2001) suggest the following ordered procedure:

- o Needs identification;
- o Technological assessment;
- o Job/task analysis;
- o Problem solving;
- o Cost analysis;
- o Solution development;
- o Implementation;
- o Training and;
- o Follow-up.

In addition to the simple mechanics of workplace accommodation, there are also some qualities that employers need to have for successful recruitment and retention of people with disabilities. These include awareness of disability issues and openness and willingness to accommodate.

According to the Conference Board of Canada (2012), "employees bring with them societal stereotypes and beliefs that can be amplified in the workplace, potentially causing misunderstandings or miscommunications" (p.6). Increased awareness and education about disability will help to change attitudes and promote accommodation and inclusion in the workplace. The Conference Board of Canada suggests that as employees with disabilities take a more prominent role in the workplace, their colleagues will begin to confront the stereotypes and assumptions they may hold. Moreover, attitude change within the workplace can also spread outward and effect change in the wider community.

Employers should be wary that their opinions or attitudes may influence the performance assessment and subsequent accommodation of employees and candidates with disabilities (Conference Board of Canada, 2012; US Business Leadership Network, 2013). Employers and managers may make assumptions about a person's ability to perform a task. For example, if a manager believes that individuals with disabilities are not suited to employment in their organization, the manager may not make an effort to provide the employee with a disability with the same level of guidance and training provided to other employees (Conference Board of Canada, 2012). The result may be that the employee with a disability is unsuccessful in the job, not due to their inability to perform the job but because they were inadequately trained.

To address preconceived notions about the expense and effort of accommodating people with disabilities in the workplace, several organizations have established awareness training initiatives. Some of these organizations include Ontario Public Service (cited in Conference Board of Canada, 2012), University of British Columbia (2010), Royal Bank of Canada through their Persons with Disability Employee Resource Group (http://www.rbc.com/careers/pwd.html), as well as Rockwell Collins (cited in US Business Leadership Network, 2013).

When successfully undertaken, the accommodation procedure outlined above can be applied to a variety of workplace accommodations, many of which will be described in the findings section of this report.

Methodology

The research team used a three-pronged approach to identify workplace accommodations for people with disabilities, as well as barriers to their implementation. A scholarly literature search, grey literature search and environmental scan have been undertaken to ensure that a wide variety of conditions, industries and specific accommodation practices are represented in the final report.

    i.   **Scholarly Literature Search**

A scholarly literature search was undertaken in several electronic journal databases covering literature from a variety of subjects related to our topic, such as medicine, psychology, social sciences, and business. The databases searched included Medline, EMBASE, PsycINFO, Social Science Abstracts, Sociological Abstracts and ABI Inform.

Search terms were selected at the beginning of the review process, and later refined and expanded to ensure their collective effectiveness in returning the most relevant articles. To refine the list of terms, research team members conducted independent searches in the scholarly literature to identify "must-have" articles with great relevance to disability accommodation in the workplace. These articles were used as key indicators of the comprehensiveness of the drafted search strategy. The search was considered robust when the majority of indexed "must have" articles were captured in a given database. In total, 73% of the "must have" articles were captured across all databases. A final list of search terms is provided in Appendix A. The search terms were adapted to each database to best utilize the search functionality and controlled vocabularies unique to each.

A final search was carried out using the refined search terms in the databases mentioned above. In total, 2,051 results were returned. These references were downloaded into Reference Manager© citation software and duplicate references were removed.

Members of the research team then proceeded with a two-stage screening process of titles and abstracts to identify the most relevant articles. The first screening employed five key inclusion and exclusion criteria, provided in Appendix B. After the first screening, 1,704 irrelevant articles were excluded, leaving 347 potentially relevant citations. A second screening was undertaken using two additional inclusion and exclusion criteria (Appendix C), further excluding 200 studies and leaving 147 studies for full-text review.

An additional 16 scholarly articles were obtained from key contacts during the environmental scan portion of the review, and these were added to the 147 studies identified from the scholarly database search. The full text of these 163 articles was reviewed by four research team members, and during this process an additional 54 articles were found to be irrelevant, and were excluded from the study. Therefore, the findings of the scholarly literature portion of this review are synthesized from a total of 109 articles on employer accommodations of people with visible disabilities in the workplace.

Each of the 109 articles consulted for this review was categorized by study type, and the frequency of each study type is captured in the table below:

Study Type	Number of Articles
Qualitative	33
Discussion Piece	19
Observational Study (Case Study Design)	16
Observational Study (Cross-Sectional Design)	16
Literature Review	14
Observational Study (Cohort Design)	4
Quantitative Study (Experimental/Randomized Design)	3
Quantitative Study (Experimental/Non-randomized Design)	2
Observational Study (Before/After Design)	2
TOTAL	**109**

The data extracted from each of these 109 articles is provided in Appendix J.

ii. Grey Literature Search

A grey literature search was conducted to identify accommodation policies and practices that have been either actively implemented, or recommended for implementation in workplaces. The search focused on reports, tools, guides and other resources produced by government agencies, research centres, not-for-profit and community organizations, and business and industry networks. These types of documents are generally not published in scientific peer-reviewed journals, so the internet and search engines provide an opportunity for discovering them.

Relevant grey literature was identified using an iterative process that utilized several sources. These sources included:
- Personal communication (i.e. telephone, email, etc.) with contacts from the environmental scan
- Mining reference lists and bibliographies ('snowballing')
- Search Engines (e.g. Google, Google Scholar, Yahoo, Bing), blogs and videos on the web (to identify experts and see what types of recommendations and discussions are currently happening in the blogosphere)

A major element of the grey literature component of the review involved searching organizational websites for publications, research, guides, tools and technical reports. In addition, simplified search terms and strings identified for the scholarly literature component of the review were entered into Google and other search engines to obtain relevant documents.

The research team used a spreadsheet to maintain a record of the grey literature search, and maintain direction and focus throughout the process. The spreadsheet was used as an audit trail to document the search strategy, and includes the date each website was accessed, as well as website URLs, descriptions of the sites visited, links to relevant documents, and how the

research team was referred to each site (i.e. where the website was cited, who recommended the website, or what search string was used to locate it).

Inclusion and Exclusion Criteria for Grey Literature Screening

The present study of the grey literature on reasonable accommodations included websites and resources that addressed the needs and issues of people with visible disabilities, and which may also be relevant for people with invisible disabilities. Only those sites and resources that included either both visible and invisible disabilities or visible disabilities were included in the present study. Similar to the methodology used for the scholarly literature review, the present study of the grey literature included websites and resources that addressed one or more of the following criteria:

- The site/resource offers concrete suggestions and recommendations for workplace accommodations
- The site/resource focuses on inclusion of people with disabilities in the labour market
- The site/resource addresses the needs and interests of persons with disabilities who are employed, trying to find employment or return to work, or are encountering barriers related to work accommodation issues
- The site/resource describes or evaluates policies or practices of accommodation of workers with disabilities at work, or describes the issues/gaps/barriers/needs related to workers' accommodation
- The site/resource describes or evaluates how specific supports provided by different entities within the disability policy system influence the possibility of getting and keeping a job by injured workers
- The site/resource identifies accommodations made for people with visible disabilities at the workplace level
- The site/resource is of interest for this project by addressing one of more of the overarching questions guiding this review. These questions include:
  - What types of accommodation practices have been shown to be effective for different types of visible disabilities and in what kinds of contexts (e.g., occupation, industry and size of employer)?
  - What are the promising recruiting, hiring, and retention practices that have been adopted by employers in Canada and in other countries for accommodating persons with different types of visible disabilities?
  - What are the gaps, barriers and needs of employers in relation to accommodating persons with different types of visible disabilities in the workplace?
  - What types of accommodation practices and resources might better support labour-force attachment in Canada for persons with different types of visible disabilities based on the evidence?

Once a volume of grey literature had been identified through the search strategy outlined above, a data extraction tool was developed to identify and synthesize the most relevant information obtained from the search. This data extraction tool is included in Appendix D. It is important to note that section four of this data extraction tool will also be used to guide the full-text review of scholarly literature.

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iii.   Environmental Scan

During the environmental scan component of the literature review, the research team contacted 17 researchers and academics, as well as 15 staff members in varying roles with different businesses and organizations, for a total of 32 individuals. Contact was initiated via e-mail using a template message to ensure consistency, regardless of which research team member was the sender. Responses were received in 15 cases, constituting a response rate of 47%.

The purpose of the environmental scan was to obtain recommendations for resources, documents or additional contacts that may not arise in the research team's searches of scholarly or grey literature, or networks of professional contacts. Individuals were contacted in order of geographic proximity, starting with those based in Toronto, and followed by those in Quebec. Finally, researchers and academics in the United States were contacted to supplement the information gained from the Canadian sources. New contacts identified by respondents were inserted into the list using the same geographic approach.

A table summarizing the results of the environmental scan is provided in Appendix E.

Findings

i.   Scholarly Literature Search

The 109 scholarly articles consulted for the scholarly literature search provided a rich array of workplace accommodations that employers have been found to provide to their employees with visible disabilities, including sight, hearing and mobility disabilities, chronic pain, auto immune diseases, as well as multiple sclerosis and acquired brain injury (ABI). Though our literature search strategy attempted to limit the search to these disabilities, some of the articles identified describe or evaluate accommodation policies and practices, but do not specify the types of disabilities under study, while others consider accommodations for people with both visible and invisible disabilities. We have included the results from these studies as well, and indicated the types of disabilities for which they are relevant, where specified.

The accommodations identified over the course of the full-text review phase of the scholarly literature search fit into 17 discrete categories. These categories, and the number of articles mentioning accommodations in each, are summarized in the table below, and will be used to structure the remainder of this section.

Workplace Accommodation Practice	Number of Articles
Assistive Devices	40
Built Environment (Workstation)	20
Built Environment (Workplace)	14
Scheduling Accommodations	30
Work Location	13
Job Restructuring	23
Natural Supports	16
Employer Supports	23
Personal Assistance Services	11
Transportation Accommodations	7
Inclusive Recruitment and Hiring Practices	9
Supported Employment and Job Carving	3
Partnerships	14
Workplace Culture	20
Vocational Rehabilitation for Injured Workers	4
Communication	10
Accommodation Process	8

It is important to note that, while a wide variety of workplace accommodations are presented in this section, many were obtained from studies that did not evaluate their effectiveness. In cases

where information on effectiveness was reported, it is presented both in the Findings section and in the Findings table (Appendix F).

a. Assistive Devices

The most common form of workplace accommodation arising in 40 studies consulted for this review was the implementation of assistive devices (see Appendix F, Section 1). In this case, "assistive device" is a catch-all term referring to equipment or technology that a person with a disability can use to overcome limitations posed by their condition, and enables them to perform work tasks on par with their coworkers without disabilities. Assistive devices exist for a wide variety of specific disabilities, including musculoskeletal disabilities, multiple sclerosis, visual and auditory impairments, and physical disabilities like cerebral palsy, paraplegia, quadriplegia, spina bifida and muscular dystrophy.

There are numerous types of assistive devices that employers use to accommodate staff members with disabilities. Assistive technology options abound, including letter folding machines, electric staplers, magnifiers and electronic communication devices. Computer adaptations and assistive software are frequently used to ensure that employees with disabilities can effectively engage in computer tasks on the job. Telephone aids provide people with auditory or dexterity impairments with ready access to workplace phones. And not all assistive devices are high-tech, since adapted equipment or tools as simple as hooks, gloves or change dispensers can be all that a person with a disability requires to be successful at work.

Implementing assistive technology for an employee with a disability must be a collaborative, informed and well-timed process. In some cases, employers pursue training to understand the types of assistive devices available, and in what situations they are needed, in order to be able to identify solutions for employees with disabilities. Employers who opt not to pursue training themselves will utilize assistive technology services instead, hiring a third-party consultant to provide suitable recommendations for assistive devices after evaluating the employee's needs. In either approach, it is critically important that the employer arranges for assistive devices as soon as the need for them is identified, rather than trying to procure the necessary items in a time of crisis. In addition, employers must also engage the employee with a disability in the assistive device selection process, and ensure that the devices implemented are customized to his or her needs.

The employer's responsibility is not necessarily over once appropriate assistive devices are in place. If required, employers will ideally arrange for the employee to receive training on how to use their assistive device or devices, either from the vendor or from others familiar with the technology. This training should be factored into accommodation budgets. In addition, many employers meet regularly with their employees with disabilities to review the appropriateness and effectiveness of assistive devices, and expediently solve any problems that arise.

b. Built Environment (Workstation)

Modifying a workstation to better suit the needs of an employee with a disability is a common workplace accommodation practice, arising in 20 articles consulted for this review (see

Appendix F, Section 2). Ergonomic modifications have been identified as the most effective method for reducing musculoskeletal symptoms (Baker, 2012), but can also benefit people with auditory and visual impairments, multiple sclerosis, and a variety of physical disabilities including cerebral palsy, spinal cord injury, amputation and carpal tunnel syndrome. Essentially, ergonomic modifications should be considered in situations where employees with disabilities are at risk of developing poor posture and pain resulting from the design of their workstation, or have problems with hand-intensive tasks and require certain positioning or support to enable them to use a computer.

There are a number of actions that employers take to provide ergonomic adjustments to their staff members with disabilities. The first step is to ensure that staff are aware of the options available to them, including the rearranging of furniture, heightening or lowering of desk surfaces, adjusting lighting, relocating power switches, and even making simple changes like creating handles for hanging folders and making frequently used items more reachable. Employers who are unable to provide information on accommodation options will often commission the services of occupational therapists or ergonomists to conduct a workstation assessment and make recommendations. In any case, employers have an obligation to match workstations to the functional abilities of their employees with disabilities, and to provide the time and resources for these employees to optimize the comfort and utility of their workspace.

Not all workstation modifications are ergonomic in nature. In order to foster inclusion in an office, employers may consciously position the workstations of employees with disabilities so that they will have more interactions with coworkers. Or, in situations where an employee is using assistive devices that can be negatively impacted by ambient noise (e.g. dictation software), employers overcome the problem by providing the individual with a separate office.

c. Built Environment (Workplace)

While employees spend most of their time at their individual workstation, it is important that employers take steps to ensure the accessibility of the entire workplace, including washrooms, elevators, common areas, entrances and exits. Fourteen studies reported on these types of workplace-level accommodations for people with arthritis (see Appendix F, Section 3), multiple sclerosis, auditory and visual impairments, and mobility-limiting physical disabilities.

Employers may consider hiring a consultant to determine what accessibility accommodations are required in a given workplace. Examples include the installation of ramps, railings and automatic doors, changes to floor surfaces, fitting doors with ramp handles as opposed to levers or knobs, implementing Braille signage, and equipping elevators with voice-activated controls. In some cases, employers have also placed employees with disabilities in cubicles and offices nearer to building entrances and exits.

In addition to consultants, employees with disabilities can also play a role in the creation of an accessible workplace. In work environments that have architectural planning or plants and operations committees, employers are encouraged to ensure that staff members with disabilities are represented at the table.

d. Scheduling Accommodations

For people with arthritis, multiple sclerosis, traumatic brain injury, musculoskeletal disabilities, auditory and visual impairments, and physical disabilities including cerebral palsy, spina bifida and paraplegia, changes to the work schedule have been a very effective workplace accommodation. In 30 studies (see Appendix F, Section 4), flexible scheduling was mentioned as an accommodation that employers use to effectively reduce productivity losses, job disruptions and workplace activity limitations.

Employers and employees with disabilities can work together to structure the employee's day-to-day work schedule, accommodating fluctuations in energy levels, frequent breaks or rest periods, and medical appointments. In some cases, scheduling is even used as a tool to promote an inclusive workplace environment. For example, some employers will time communal breaks and informal meetings so that employees with disabilities will have a chance to interact with their coworkers or work as part of a team.

In situations where full-time work is temporarily unfeasible, employers will accommodate employees with disabilities by granting short-term, unpaid leave, or permitting an extension to the maximum medical leave permitted by their organization. If full-time work is permanently unfeasible, a part-time schedule can be put in place instead. These accommodations tend to work particularly well for people with arthritis or acute injuries.

e. Work Location

When work can be completed remotely, employers will often permit employees with disabilities to work from home. In 13 studies, working from home was found to help people with arthritis, mobility and dexterity impairments, traumatic brain injury and physical disabilities including spina bifida, cerebral palsy and carpal tunnel syndrome (see Appendix F, Section 5). This approach to accommodation removes potential barriers associated with travel and commuting, and is similar to flexible scheduling in its ability to prevent productivity loss, work disruption and workplace activity limitations.

Many employers have kept employees with disabilities connected to the organization by having them engage in telework, which combines the benefits of flexible scheduling and working from home. In addition to the disabilities mentioned above, telework can also be especially effective for people with visual and auditory impairments, but should be implemented carefully. First, employers ought to set out a framework for evaluating when telework is an appropriate accommodation, and use this assessment tool on a case-by-case basis to determine the reasonableness of telework requests. This keeps the process transparent and consistent, from the perspective of both the employer and the employee. Second, employers should be careful to monitor and respond to feelings of isolation expressed by employees with disabilities engaged in telework, and make adjustments to the arrangement as necessary.

f. Job Restructuring

Sometimes, workplace accommodation has less to do with the workplace, and more to do with an employee's actual work. Many employers accommodate people with disabilities by modifying the requirements or expectations of their position in order to create a better fit between the employee and their role. This approach was mentioned in 23 of the articles reviewed for this report (see Appendix F, Section 6), and in one study, 34% of respondents with disabilities cited it as their preferred accommodation (Schoppen, 2001). Indeed, job restructuring can benefit employees with arthritis, multiple sclerosis, musculoskeletal conditions, visual and auditory impairments, acute burns, traumatic brain injury and physical disabilities including cerebral palsy, spina bifida, lower limb amputation and spinal cord injury.

Job restructuring can involve reducing the physical requirements of work, ordering high- and low-concentration tasks according to fluctuations in an employee's energy level, decreasing the pace of work, trading less suitable tasks with coworkers for other, more suitable tasks, or simply delegating components of an employee's job to coworkers. In all cases, the employer should have a discussion with the employee requiring accommodation in order to find the solution that will optimize his or her productivity.

g. Natural Supports

Effective workplace accommodation for people with visible disabilities involves not only employers, but all staff in a given workplace. Accommodation approaches involving coworkers arose in 16 of the studies consulted for this review (see Appendix F, Section 7), and benefit employees with rheumatic diseases, auditory impairments, traumatic brain injury, and a variety of physical disabilities including acute burns and lower limb amputation.

When managers or supervisors have limited availability, or when an employee with a disability is transitioning to independence after receiving support from a rehabilitation professional or employment specialist, research has demonstrated that coworkers can step in to provide instruction, feedback, modeling and physical prompts to a colleague with a disability, but may require training to do so (Storey, 1996). In some cases, having a formally appointed mentor or teammate with a similar job within the workplace can be an effective practice, especially if a manager volunteers to act as a mentor in the early stages of the program.

Even when colleagues are not actively involved in workplace accommodation, their support for the accommodations being provided to their coworkers with disabilities are immensely important. To foster this support, the employer can inform all staff of the accommodations being instated in order to obtain widespread assistance and cooperation with their implementation.

h. Employer Supports

While the support of coworkers is important, many workforce members with disabilities have cited support from their employer as the most important method of workplace accommodation (Dong, 2012; Detaille, 2003). Of the articles reviewed for this study, 23 mentioned ways that employers can provide support to their employees with arthritis, musculoskeletal disorders,

visual and auditory impairments, severe head injury or other physical disabilities (see appendix F, Section 8).

Many employers provide effective accommodation to their employees with disabilities simply by exhibiting a positive attitude and offering empathy and emotional support when needed. Especially successful in this endeavor are employers who champion fair treatment for their staff members with disabilities, and defuse hostile work environments or interpersonal conflicts impacting these employees.

Employers also maximize the potential of their staff members with disabilities by providing career planning and development tools, arranging for additional supervision or training, adjusting the standards of performance evaluations, and lengthening timelines for promotion decisions. Or, to help employees with disabilities with their transition into the workplace, or into their recently acquired disability, employers also provide access to extended health benefits and mental health supports. These accommodations enable people with disabilities to truly thrive, both in the workplace and in their overall careers.

i. Personal Assistance Services

In cases where natural workplace supports are insufficient for the day-to-day needs of employees with disabilities, employers often work with these staff members to arrange personal assistance services in the workplace. A personal assistant is someone who enters into an employment arrangement with a company or organization, and provides support with daily activities and tasks to one or more employees with disabilities.

A total of 11 studies discussed personal assistance services as an effective accommodation for people with visual and auditory impairments, musculoskeletal disorders, traumatic brain injuries, mobility and dexterity impairments, and physical disabilities like spina bifida, cerebral palsy and paraplegia (see Appendix F, Section 9).

In cases where personal care needs like eating and washroom assistance are involved, an employer may consider hiring a personal assistant for an employee with a disability to assist with these tasks. In these cases, the individual with the disability can be made responsible for recruiting and training his or her personal assistant, but the assistant's compensation is provided by the employer.

In cases where employees with disabilities simply need assistance with day-to-day work tasks, employers can provide additional clerical or secretarial assistance, readers, note-takers, sign language interpreters, job coaches or drivers as a form of accommodation. These professional assistants can even be shared between more than one employee to minimize costs and maximize productivity. Indeed, people with disabilities in one particular study who implemented personal assistance services at work indicated that their work ability increased from being substantially limited to not limited at all.

j. Transportation Accommodations

Workplace accommodation can even extend outside the workplace, as employers will also ensure that arrangements are in place to enable their employees with disabilities to get to and from work. Seven articles mentioned accommodation practices related to transportation for staff members with rheumatoid arthritis, musculoskeletal disorders, cerebral palsy, spina bifida and other mobility impairments (see Appendix F, Section 10).

For employees with disabilities who use their own vehicles to travel to and from work, employers will often ensure that sufficient accessible parking is located near the workplace entrance. In cases where an employee with a disability does not use a personal vehicle to commute, employers have even been known to provide a car service or other mode of transportation to ease difficulties with traveling and commuting. Finally, in fields like academia, employers are encouraged to reassess the requirements for travel that often accompany promotions, since these obligations can serve as a barrier to faculty members with disabilities who seek to advance their careers.

k. Inclusive Recruitment and Hiring Practices

The need for workplace accommodation begins even before an employee with a disability is hired. Accommodating applicants with disabilities is a necessary first step toward accommodating staff members with disabilities, and nine articles consulted for this review provided examples of how employers engage in this practice (see Appendix F, Section 11).

First, when recruiting employees, some employers specifically target applicants from the disability community, either by establishing their own training or hiring programs designed to recruit people with disabilities, or by participating in job fairs with this mandate. Even if not explicitly targeting applicants with disabilities, employers can at the very least ensure that there are no barriers preventing people with disabilities from applying for work with their organization. This has involved direct statements in job advertisements welcoming candidates with disabilities, and regular accessibility reviews of organizations' online recruitment websites.

Once a candidate with a disability has moved beyond the application stage, employers will prepare for their interview by ensuring that the interview location is accessible to the interviewee, and that the staff involved in the interview—including reception staff—are made aware of the applicant's disability and the accommodations they may require. In fact, many employers may train their human resources staff on the effective interviewing of people with different disabilities. In one study, only 2% of organizations that engaged in this practice rated it as ineffective (Erickson, 2014).

The kinds of practices outlined above cannot be implemented without an organization's senior management committing to the active recruitment of people with disabilities, and removing any barriers that may hinder a candidate with a disability during their application process. Indeed, only 12% of organizations that both reported setting explicit goals for the recruitment of people with disabilities, and rated senior management as committed to disability recruitment, found these practices to be ineffective (Erickson, 2014).

l. Supported Employment and Job Carving

Many employers have proven that it is not always necessary to wait for employees with disabilities to apply for jobs at their organization. Supported employment approaches provide an alternative whereby positions are specifically created for certain candidates with disabilities. While this approach is often taken with people who have what may be considered invisible disabilities, three articles in this review found it to be a viable option for people with spinal cord injury and other severe disabilities (see Appendix F, Section 12).

Employers who pursue supported employment often partner with an employment specialist, who works with them to think of tasks that are currently completed by several different employees, or by employees working overtime, that could be consolidated into one role for an employee with a disability. In this way, the employer creates efficiencies within the organization, and benefits from the assistance of the employment specialist, who acts simultaneously as planner, community resource expert, consultant and technician to reduce the impact of disability during work time (Inge, 1998; Wehman, 1999).

m. Partnerships

As the model of supported employment suggests, employers are not entirely on their own when it comes to accommodating employees with disabilities. Indeed, fourteen studies (see Appendix F, Section 13) have provided examples of partnerships that employers have pursued in order to accommodate workers with multiple sclerosis, low back pain, auditory and visual impairments, traumatic brain injury, musculoskeletal disorders and physical disabilities including cerebral palsy and spinal cord injury.

Partnerships with medical and rehabilitation professionals have proven effective for ensuring that appropriate accommodations are in place for employees with disabilities, as long as the employee consents to the relationship and is given an active role in facilitating good-quality, jargon-free conversations between the two parties. In one study, several interviewees commented on how important it was for their supervisor to interact with their medical providers, especially when structuring their work role (Coole, 2010).

There are a variety of organizations that offer support to employers in the area of workplace accommodation as well, including vocational service agencies, community organizations and employment agencies. These partnerships are especially helpful when employers and coworkers do not have sufficient availability to support employees with disabilities, and in one study, an organization's partnership with a vocational service agency measurably improved workplace satisfaction and reduced sick leave rates (Kalef, 2014). In addition, other employers who have experience in hiring and retaining employees with disabilities can be a wonderful resource for less-experienced employers seeking information on workplace accommodation. Many employers form these connections by joining a trade or industry organization that connects them to colleagues in their field.

n. Workplace Culture

Twenty articles reviewed as part of this study found that employers complement many of the workplace accommodations mentioned thus far with a supportive workplace environment that embraces staff members with disabilities (see Appendix F, Section 14). Workplace culture accommodations and initiatives were found to support people with auditory and visual impairments, musculoskeletal disorders, traumatic brain injury and paraplegia in organizations where they are employed.

As a starting point, many employers have looked to improve organizational and coworker attitudes toward people with disabilities. This is achieved using a variety of strategies. First, employers leverage the unique function of their organization's human resources professionals to affect organizational culture, as these individuals possess a number of levers for shaping and promoting an accepting workplace climate. Employers are also known to offer opportunities for formal and informal education and training sessions for staff members without disabilities.

Formal training, including sensitivity training and education on their coworkers' specific disabilities, seems to be effective. In one study, the practice was reported as ineffective by only 2% of organizations implementing it (Erickson, 2014). In addition, employers themselves undergo training in the legal requirements surrounding accommodation of workers with disabilities, and will mandate training for their management staff to ensure that they are well-equipped to supervise employees with specific disabilities. Not all training is formal in nature, however—simply encouraging employees to be open about the specifics of their particular disability, or creating structured opportunities for social interaction between employees with disabilities and their colleagues can be accommodations in and of themselves.

Certainly, training is a good way to start building an inclusive organizational culture, but employers need to establish workplace structures in order to hold the gains that training provides. One way of doing this is to include disability in diversity policies and programs, and assign specific actions and responsibilities to staff members to ensure that awareness of disability issues is sustained among all staff. Other strategies include the creation of a disability-focused employee network, and setting specific goals related to the retention or advancement of employees with disabilities. These types of initiatives can help to reduce negative attitudes, stereotypes and misconceptions about the productivity of people with disabilities among all staff members of a given company or organization.

o. Vocational Rehabilitation for Injured Workers

When a worker acquires a disability through illness or injury, and later returns to work, employers may find that a slightly different set of accommodations is required. Four articles focused on employer responses to this particular situation in cases of multiple sclerosis, acute burns and different types of acquired injuries, including brain injury, back injury and injuries of specific body sites (see Appendix F, Section15).

In cases where employees are returning to work after acquiring a disability, employers are encouraged to permit a gradual return to work, accompanied by support and retraining. A return

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to work between six and 18 months post-injury is recommended, as is an extended period of reduced workload or work intensity with appropriate supports. In one study, workers who successfully returned to work benefitted from a gradual return-to-work process that lasted for an average of eight months. Workers who were ultimately unsuccessful in permanently returning to work tended to have much shorter return-to-work processes (Johnson, 1998).

Many employers also provide modified work to injured employees returning to the workplace, which is generally a temporary change to an employee's usual duties, customized to their abilities during their recovery period. One particular literature review praised modified work as an effective accommodation, mentioning that employees with access to modified work post-injury will make a full return to work twice as often as those without access (Krause, 1998).

p. Communication

Some of the simplest accommodations employers can make for staff members with disabilities simply involve good communication. This was pointed out in 10 different articles consulted for this review, and is especially important when accommodating employees with auditory and visual impairments, traumatic brain injury and, in some cases, reduced mobility (see Appendix F, Section 16).

Accessibility of communication is one of the first considerations that employers make after hiring a person with an auditory or visual impairment on their staff. For example, someone who is Deaf has a variety of communication options available to them, including lip reading, sign language and computer-assisted translators (Hansen, 1999). Similarly, someone with a mild visual impairment may be able to use written materials as long as they are written in large font, while someone with a more severe visual impairment may require written materials to be provided in Braille. Determining the preferred communication style of staff members with disabilities, and ensuring that that form of communication is consistently available in the workplace is one critical way that employers accommodate employees with visual or auditory impairments.

Communication, of course, consists both of what you say and how you say it. Indeed, employers accommodate employees with visible disabilities simply by encouraging certain topics of discussion. Conversations around the appropriateness of a worker's tasks for his or her skills and abilities, as well as open communication about the different ways in which tasks can be approached and completed are useful accommodations that employers undertake in order to prevent or mitigate conflicts among coworkers, or ensure that other necessary accommodations are identified and implemented. In addition, some employers use workplace surveys to encourage employees to disclose disabilities that may impact their work. While this is likely more relevant for invisible disabilities than visible ones, staff members who find their hearing or eyesight deteriorate as they age may benefit from having an avenue to report these concerns.

q. Accommodation Process

The way that accommodations are implemented within an organization is arguably just as important as the accommodations themselves. Eight of the studies reviewed for this report

provide examples of accommodation policies and processes that address how accommodations should be put in place for people with visual and auditory impairments, musculoskeletal disorders, amputations and mobility impairments (see Appendix F, Section 17).

First, it is important for employers to establish a formal decision-making process, enshrined in organizational policy, for the case-by-case provision of workplace accommodations. Part of this process can include a worksite walkthrough to identify where accommodations are needed, and regular reviews of accommodations with employees who already have them in place.

As part of instituting structured accommodation protocols, many employers designate an office or individual to be responsible for workplace accommodation issues, which more than half of organizations in one study reported as an effective practice (Erickson, 2014). In the same study, having a centralized accommodation fund was also found to be effective, having been reported as ineffective by only 2% of the organizations implementing it (Erickson, 2014).

When it comes to employees who have acquired a disability as a result of injury, accommodation approaches are not limited simply to the mechanics of structuring their return to work. There are important interpersonal aspects that employers engage in as well, including keeping in touch with injured workers to monitor their recovery both at home and at work, and ensuring that managers are aware of organizational procedures and rules associated with a return to work after injury.

Indeed, management has a very important role when it comes to the accommodation of staff members with disabilities. Some organizations even go as far as to include progress toward the retention or career advancement of employees with disabilities in the performance appraisals of senior management.

Finally, while the findings presented in this report have revolved primarily around employees with disabilities, there is one interesting approach to workplace accommodation that focuses on accommodations for all staff members within an organization. This is the idea of universal accommodation—an approach that involves conducting an assessment for every member of a workplace to identify potential accommodation needs. This is a novel approach, but one that makes sense when considering that it is not only people with disabilities who require workplace accommodations. Many employees without disabilities benefit from a variety of accommodations, including flexible work schedules and locations, ergonomic modifications to their workstation, open communication and support from coworkers. Not only can universal accommodation be beneficial for all employees, but it can also decrease the feelings of stigma that employees with disabilities may experience when requesting or utilizing a workplace accommodation. With this in mind, it is possible to think of all of the accommodations identified in this literature review as being helpful not solely to individuals with disabilities, but to everyone in the workplace.

ii.   **Grey Literature Search**

   a. **Summary and Overview**

The search of the grey literature found that the majority of resources provide a wide range of suggestions for workplace accommodations for people with disabilities, broadly speaking. These suggestions range in specificity from broad principles of conduct to specific and concrete recommendations for effective communication, assistive technologies and workplace modifications. Overall, more than 20 websites were identified from across Canada, the UK, USA and Australia that provide helpful tools and recommendations to assist employers to develop reasonable accommodations for people with various disabilities.

The majority of the resources identified are intended to support employers to effectively recruit and retain employees with disabilities. Much of the literature on reasonable accommodation focuses on what employers are required to or should do to retain people with disabilities in their workplaces. This literature takes the form of how-to guides, toolkits and guidelines. Several documents provide suggestions and templates to assist employers to comply with disability legislation, promote human rights and avoid discriminatory behavior. Employers who have successfully hired and retained people with disabilities are often profiled as business diversity leaders.

Recommendations on accommodation practices that may be effective for specific types of visible (and invisible) disabilities in various occupations and industries are available on a few key websites. For example, the Job Accommodation Network is frequently cited in Canadian and US documents and websites as a helpful resource for employers to find a variety of accommodation options for particular impairments. Other helpful sources for specific information on accommodation practices for different types of disabilities in various contexts are listed in Appendix G. Based on this review, Appendix H provides the top four websites that provide the most comprehensive guidance on the accommodations to consider for different types of disabilities. Content for three of these sites is produced in the United States, while content for the fourth is produced in Australia. Unfortunately, there are no equivalent resources available from Canadian organizations.

   b. **Examples of accommodations**

The Conference Board of Canada's (2012) definition of job accommodations reflects the wide range of accommodation examples we found in the grey literature:

> Job accommodations can include accessible formats and communication supports for information, physical or structural modifications, changes in work demands and schedules, or the use of assistive devices. An accommodation allows an employee with a disability to fully access and participate in the workplace and to complete the same duties and requirements as other employees. It can be temporary or permanent, depending on the needs of the employee (p.24).

The majority of websites and documents we reviewed emphasize that accommodations must be made on an individual basis, with the active involvement of the individual with a disability. This process should be repeated for each candidate or employee with a disability, including people with the same or similar impairments.

Flexible work arrangements are often described as a low-cost form of accommodation which are already provided for all employees. "Flexible work arrangements tend to cost very little after up-front costs, which are typically the development of guidelines, policies, and training and the managerial time needed to consider flexible work requests and participate in training" (Employer Assistance and Resource Network, 2014, p.15).

According to the Employer Assistance and Resource Network[1], flexible work options can include:
- **Flextime**: Schedules that permit employees to choose their starting and ending times within limits established by management.
- **Compressed workweeks**: A standard workweek compressed into fewer than five days.
- **Telework / Remote work**: This option includes arrangements to work from home or from an alternative location. This option should be taken with caution so employees with disabilities are not isolated or removed from the workplace to avoid making other accommodations.
- **Part-time**: For those who choose to work less than 40 hours a week.
- **Job sharing**: Two or more people voluntarily share the responsibilities of one job with benefits and salaries typically prorated between the employees.
- **Job carving or restructuring**: An existing job description is modified so that it contains one or more, but not all, of the tasks from the original job description. This may also involve reallocating, restructuring duties or tasks, and altering how tasks are performed.

Assistive technologies are another frequently cited accommodation for employees with disabilities in the workplace. Assistive technologies include software and hardware products that help people with disabilities manage or overcome limitations associated with their impairment. Assistive technologies for people with visible disabilities are numerous and can include hearing aids, screen reader software, wheelchairs, walkers, etc.

An exploratory white paper on the implementation and outcomes of assistive technology as a workplace accommodation by Job Accommodation Network (2007)[2] found:
- Employers considered purchasing or modifying a product primarily for individuals with motor and sensory impairments.
- Employers who considered purchasing or modifying a product were from a variety of industries including government, service, finance, healthcare, education and manufacturing industries.

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[1] See p. 15 of *Opening the Doors of Small Business to Employees with Disabilities (Employer Assistance and Resource Network)*

[2] Available at https://askjan.org/topics/tech.htm

- Most employers report low cost of approximately $500 when providing accommodations that involve purchasing or modifying a product.

It is important to note that, while the low cost of $500 for workplace accommodations is a commonly reported figure, it reflects only what employers spent on accommodation—not necessarily what was needed by the employees who received accommodation.

In addition to these findings, the Job Accommodation Network also provides a step by step process for choosing assistive technology for employees with disabilities.

c. Guidance on Organizational Policies and Procedures

The following section provides a synthesis of the key components of sound policies related to accommodation practices. Much of this literature is derived from toolkits, guides, organizational case studies and sample policies from various employers. These online resources are listed in Appendix H with a brief description and links to relevant websites.

According to the Employer Assistance and Resource Network (2014), a reasonable accommodation should be:
- ✓ **Effective.** Accommodations should resolve the problem, address barriers and challenges in the workplace and allow the person with the disability to carry out the job successfully.
- ✓ **Timely**. Setting clear timelines for the various stages of an accommodation process will assist implementation in a reasonable amount of time.
- ✓ **Durable**. Accommodations should be useful and flexible enough to last the tenure of the employee's service and can be easily modified and updated as conditions or job requirements change.
- ✓ **Transparent**. Accommodations should have either no effect on other employees and customers or improve the workplace for everyone.

While durability and transparency are ideals to strive for, there may be situations where it is not possible to implement a permanent solution or to avoid a particular accommodation's impact on coworkers. Employers should be open to upgrading accommodations to ensure continued compatibility with other workplace technology, and suitability for different stages of an individual's disability. Regular reviews of accommodations with the employees who use them can guide these modifications. In situations where transparency cannot be achieved, employers are encouraged to seek support and cooperation from the affected coworkers in regards to the proposed or implemented accommodation.

There are benefits of having formal policies and procedures for workplace accommodation. According to the Job Accommodation Network (http://askjan.org), and the Canadian Human Rights Commission (2006), if supervisors, managers and human resource professionals have formal policies and procedures to refer to, they are more likely to handle accommodation requests properly and consistently. Without clear and formal procedures to follow, employers are more vulnerable to human rights complaints and inconsistencies in the application of policies. Formal procedures help employers document their efforts to comply with disability inclusion legislation such as the Accessibility for Ontarians with Disabilities Act.

In addition, a formal policy that is shared with employees helps employees know what to expect if they request an accommodation. The policy also sends a message to employees that other employees might be requesting and receiving accommodations as well. With that in mind, policies and procedures should explicitly recognize that people with disabilities, even those with the same type of impairment, cope in different ways. There is no 'one size fits all' accommodation plan.

Based on a review of several sample policies (e.g. University of British Columbia[3]; General Dynamics Mission Systems[4]), organizational accommodation policies and procedures vary in length and detail. Most indicate at least the organization's standpoint or commitment toward disability inclusion in their workplace with contact information to the relevant person or department (usually human resources) for further information.

Based on findings from this literature review, some of the key components of a sound accommodation policy include:
- ✓ **Stating the organization's commitment** to disability inclusion in the workplace.
- ✓ Identifying the **purpose and scope** of the policy, such as who the policy applies to and their roles and responsibilities in the accommodation process.
- ✓ Creating a procedure for **denying an accommodation request** in situations where the request is not appropriate.
- ✓ Focusing on the **job requirements, and the skills, abilities and capacities of the person** with a disability to perform the job.
- ✓ **Clear definitions** of terms such as "disability", "reasonable accommodation" and "undue hardship".
- ✓ **Step by step processes** of developing and implementing an accommodation plan (including confidentiality and discrimination considerations).
- ✓ **Contact information** for relevant internal resources (e.g. human resources department, other policies), online and community resources that support accommodation planning.

> For detailed guidelines and templates of model employer policies and procedures see the Canadian Human Rights Commission (2012) *A Place for All: A Guide to Creating an Inclusive Workplace* available on Commission's website.

d. The Accommodation Process

The accommodation process follows four general steps and actions that an employer can take to provide accommodations for an employee. The Conference Board of Canada (2012) in collaboration with the Ontario government's EnAbling Change program recently conducted a literature review, along with a survey of Ontarians with disabilities, and in-depth interviews with key informants and best practice employers to develop a toolkit that summarizes this process.

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[3]Available at http://equity.ubc.ca
[4] Available at http://www.gdc4s.com/careers/reasonable-accommodation-policy.html

The following flow chart outlines these potential steps and actions and illustrates some of the key aspects of sound policies to accommodate employees with disabilities.

Figure 1: The Accommodation Process

Step 1. Recognizing the need for accommodation
- Requested by the employee or identified by the employer
- Employer informs employee of the steps taken to ensure the privacy of the personal information

Step 2. Gathering relevant information and assessing needs
- Employee is an active participant in this step
- Employer may ask for a functional capacity assessment at the employer's expense
- Employee and employer explore a range of specific and universal accommodations to find the most appropriate measure (an external expert may be involved)
- If the accommodation is denied, the reason is provided to the employee

Step 3. Writing a formal individual accommodation plan
Accommodation details are written down in a formal individual plan, including:
- accessible formats and communication supports, if requested
- workplace emergency response information, if required
- any other accommodation that is to be provided

Step 4. Implementing, monitoring, and reviewing the accommodation plan
- Employee and manager monitor the accommodation to ensure that it has effectively met the need
- Formal reviews are conducted at predetermined intervals
- The accommodation plan is reviewed if the employee's work location or position changes
- The accommodation is reviewed if the nature of the employee's disability changes

If the accommodation is no longer appropriate

Source: The Conference Board of Canada.

The following discussion summarizes and builds on the Conference Board of Canada's description of the steps within the accommodation process.

Step 1: Recognizing the need for accommodation
Several guides and toolkits on accommodation policies and procedures indicate that the first step in the accommodation process is the employee making a request for an accommodation. However, employees with disabilities who qualify for a reasonable accommodation may often hesitate to request it, or may be unaware of their accommodation options.

There are several variables that influence the likelihood of an employee to request an accommodation (Employer Assistance and Resource Network, 2014). These include the requestor's knowledge and awareness of:

- The accommodation process.
- Their rights to make an accommodation request.
- The extent to which the accommodation would more helpful than harmful to their ability to accomplish work tasks and maintain their image as an equal employee.
- The fairness of the request and belief about the likelihood of actual compliance with the request.
- The degree to which the culture of the organization supports and values inclusion.
- The costs of an accommodation in terms of money, time and convenience.

Sometimes a supervisor may notice that an employee appears to be struggling with a particular task and may suggest an accommodation. The accommodation may then be implemented if needed and requested by the employee.

Step 2: Gathering Relevant Information and Assessing Needs
A key component of gathering relevant information and assessing needs involves **collaborative processes** to support effective accommodation plans and procedures. Collaboration in the accommodation process means that the employer and employee with a disability work together to determine and implement accommodation measures. If needed or requested, this collaborative process may also include union representatives, external experts including health professionals, job coaches or other service providers, and family members.

Several resources (e.g. Canadian Hearing Society, n.d.; Canadian National Institute for the Blind, n.d.; Employer Assistance and Resource Network, 2014) indicate that successful job accommodation depends on the active involvement of the employee with a disability and the employer. The employee with a disability is a central actor in developing the accommodation plan and process.

An example of this collaborative process that places the employee with a disability at the center of accommodation planning is presented in the following employer profile - IBM.
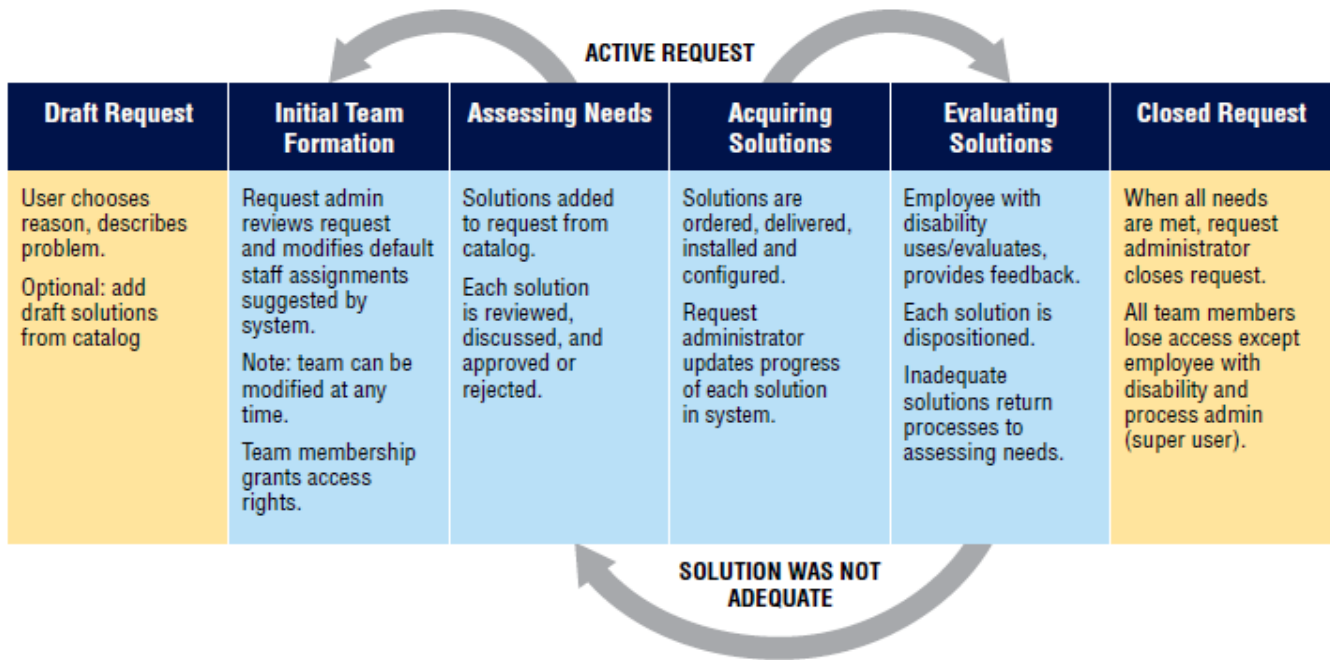
e. Employer Profiles

IBM
IBM has been employing people with disabilities in the IT sector since 1914 and has been recognized publicly for its support of employees with disabilities. The organization has implemented an accommodation process worldwide that highlights the value of collaboration with employees with disabilities and an iterative process. Advice from IBM highlights the importance of engaging in collaborative processes when developing and implementing an accommodation plan. For example, they suggest,

> *The first step in accommodating an employee with a disability…is to consult with that employee. Employees with disabilities are the best source of information on the challenges that they personally encounter in their workplaces and on what measures*

might help remove barriers. Employers should not assume that they can identify the most appropriate accommodation without this consultation process.
(quote from IBM cited in Conference Board of Canada, 2012, p. 31).

IBM's emphasis on collaboration and iteration is illustrated in their accommodation process, depicted in the chart below.[5]

Figure 2: Accommodation Process at IBM

ACTIVE REQUEST

Draft Request	Initial Team Formation	Assessing Needs	Acquiring Solutions	Evaluating Solutions	Closed Request
User chooses reason, describes problem. Optional: add draft solutions from catalog	Request admin reviews request and modifies default staff assignments suggested by system. Note: team can be modified at any time. Team membership grants access rights.	Solutions added to request from catalog. Each solution is reviewed, discussed, and approved or rejected.	Solutions are ordered, delivered, installed and configured. Request administrator updates progress of each solution in system.	Employee with disability uses/evaluates, provides feedback. Each solution is dispositioned. Inadequate solutions return processes to assessing needs.	When all needs are met, request administrator closes request. All team members lose access except employee with disability and process admin (super user).

SOLUTION WAS NOT ADEQUATE

This process occurs through IBM's online "Accessible Workplace Connection Tool" that is integrated into every employee's intranet portal. The tool allows any employee to make a request directly to the request administrator. The system guides employees through the accommodation request process whereby they can either specify their own accommodation measure or choose from IBM's existing catalogue of accommodation measures. For more information on IBM's accommodation process see the Conference Board of Canada's (2012) *Employer's Toolkit: Making Ontario Workplaces Accessible to People with Disabilities*, p.30. See also IBM's Accessibility Centre at www.ibm.com/able.

Step 3: Writing a Formal Individual Accommodation Plan
The accommodation planning process should review the requirements of the job and the needs and abilities of the employee to do the job successfully. According to the Conference Board of Canada, once an employee and employer have decided on an appropriate accommodation, a formal accommodation plan should be written down. Appendix A.6 of the Conference Board of Canada's *Employer's Toolkit* provides a sample of such a plan.

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[5] Source: IBM Research, Human Ability and Accessibility Centre, "Transforming Workplace Accommodation", cited in Conference Board of Canada, 2012

In addition, the Canadian Hearing Society (n.d.) identifies **questions for consideration in developing an accommodation plan.** These sample questions have been adapted and listed below. For example,

- *When reviewing requirements of the job, consider:*
    - What are the qualifications and expectations of the job?
    - What are the job's essential duties and requirements?
    - What does the worker do in the course of an average day? Why?
    - What specific duties are hearing/visual/mobility/attention-dependent?
    - How would others perform these duties?
    - What is the extent and type of impairment?
    - Does the employee benefit from any assistive devices (e.g. hearing aids, screen readers, wheelchair, canes, etc.)?
    - What is the employee's preferred and most effective work style?
    - What are potential workplace hazards for people with hearing/visual/mobility/attention deficit or loss, if any? What corrective measures are required?
- *When Reviewing Specific Accommodation Options:*
    - How well does the option respect the employee's dignity?
    - How long will it take to arrange?
    - Is it difficult to learn to use or implement?
    - Is it compatible with current office and workplace systems?
    - How compatible is it with the employee's personal and home accommodation supports?
    - How has the employee successfully used similar accommodations in the past?
    - How do the options compare in value for money?
    - If a trial period demonstrates that an accommodation choice is unsuitable, consider a temporary job restructuring or other interim arrangements while exploring new options.

Step 4: Implementing, monitoring and reviewing the accommodation plan
As illustrated in figures 1 and 2 above, accommodation policies and procedures should incorporate an iterative process. In other words, accommodations should be reviewed regularly to determine whether:

- the accommodation measure is appropriate and overcomes the workplace challenge;
- the nature of the disability has changed, requiring a different measure;
- the workplace has changed, creating new challenges for the employee

A strong Canadian example is Royal Bank of Canada (RBC). RBC explicitly includes diversity as one of their core values. RBC states, "[w]e strive to leverage the strengths, talents, similarities and differences of our workforce by eliminating barriers and developing our employees to their full potential" (http://www.rbc.com/careers/pwd.html). RBC has identified key relationship factors between employees/candidates, managers and the organization that promote successful accommodation and inclusion of people with disabilities in the workplace. These are listed in the figure below.

Figure 3: RBC Strategies to Increase Representation of Employees with Disabilities
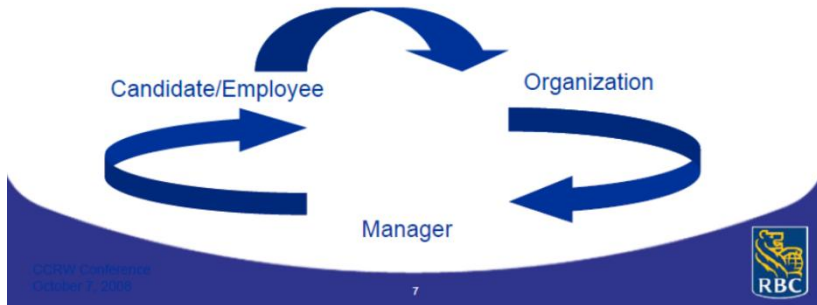
These relationship factors represent the holistic approach and iterative process of accommodation and inclusion. This process involves candidates/employees with disabilities, the organization as a whole, and managers and supervisors. RBC's integrated workplace accommodation process (Figure 4) similarly illustrates how workplace accommodation is integrated into all aspects of the employment lifecycle and organizational culture.

Figure 4: RBC's Accommodation Process

Once a person with a disability becomes an RBC employee, they will have the opportunity to join the Persons with Disability Employee Resources Group, REACH, which aims to support and enable employees to fully contribute and reach their full potential in the workplace.

Employee Resource Groups (ERGs) or diversity councils are recommended to support testing and reviewing of accommodation and inclusion policies and procedures. These groups also support business development, product testing, professional development and mentoring, cultural awareness, issue identification, community outreach, recruiting, on-boarding, and mutual support and socialization.

The Employer Assistance and Resource Network (http://askearn.org) defines employee resource groups as internal organizational structures to address the needs and issues of a diverse workforce.

> *These groups offer employees an opportunity to network, address common issues and concerns, and receive support from those who share similar backgrounds, experiences, or interests. ERGs are most effective when senior management is involved and an Executive Sponsor or Champion is assigned to lend support. Senior management participation also serves as an excellent opportunity for a CEO or other executives to be in touch with the workforce and link the group's mission to specific business goals. The catalyst behind the establishment of ERGs is common interest and a desire to create a positive workplace culture.*[6]

> For more information on employee resource groups, AskEARN.org provides a comprehensive *Toolkit for Establishing and Maintaining Successful Employee Resource Groups*. The toolkit provides detailed information on gaining organizational support, developing budgets, design structure and measuring success.

An example of the benefits of employee resource groups is presented in the following employer profile – Rockwell Collins[7].

Rockwell Collins
Rockwell Collins believes that the diverse viewpoints, ideas, and backgrounds of their employees fuels their spirit of innovation and are key to their business success in the aerospace and defense industry. Rockwell Collins uses an employee resource group to assist employees with disabilities from onboarding to retention because:

> *We recognize the value that persons with disabilities bring to the workplace, including our veterans with disabilities. Once people with disabilities join Rockwell Collins, our support for them goes well beyond orientation. A robust employee resource group, "Disability Network Group and Supporters," is available to assist them in the onboarding process, create awareness, and act as a support system as they navigate the processes and procedures of a global company. The group also keeps our executives and*

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[6] http://askearn.org/refdesk/Inclusive_Workplaces/Employee_Resource_Groups/Private_ERGs accessed Jan. 22, 2015

[7] cited in US Business Leadership Network – *Leading Practices on Disability Inclusion* (2013)

senior-level leaders up to date on best practices in supporting those with disabilities in their day-to-day work.
(quote from Rockwell Collins cited in US Business Leadership Network, 2013 p.8).

In addition, Rockwell Collins finds great value in working with outside organizations and networks that support employment of people with disabilities such as the US Business Leadership Network and the Employer Assistance and Resource Network.

f. Sample Accommodation Policies

- **Job Accommodation Network –** *ADA policies*
  - Job Accommodation Network (JAN) provides sample accommodation policies from the USA in compliance with the Americans with Disabilities Act (ADA). According to the JAN website "The links [to these policies] provide information on internet-available policies. JAN neither endorses these policies nor reviews them for content. This page is merely assimilated as a convenience to our users."[8]
  - Sample accommodation policies and procedures are from federal, state and local government agencies, private companies (i.e. General Dynamics, Southwest Airlines, and Wells Fargo), education institutions, unions, public institutions and courthouses.

- **University of British Columbia Equity Office -** *Creating a Respectful and Inclusive Workplace for Employees with Disabilities*
  This booklet begins with a statement of UBC's commitment to creating and maintaining an inclusive workplace for all employees, particularly employees with disabilities.

  THE UNIVERSITY OF BRITISH COLUMBIA
  UBC EQUITY OFFICE

  Creating a Respectful and Inclusive Workplace for Employees with Disabilities

  - "The first section focuses on accommodation as a framework for ensuring equitable access and inclusion for employees with disabilities. This section aims to: 1) raise awareness and assist in developing an understanding of the University's commitment to and obligations around accommodating employees with disabilities, 2) encourage departments to be proactive in their approach to accommodation, and 3) provide guidance for those involved in individual accommodation procedures" (p.1)
  - The second section of the booklet outlines additional suggestions and practical tips to help guide the university toward its goal of becoming a more inclusive environment. The section refers to the university's policy on discrimination and harassment with examples of discrimination on disability to avoid.

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[8] http://askjan.org/links/adapolicies.html

- o The third section lists related standards on human rights, collective agreements and other university policies, contact information for relevant university resources and online resources related to accommodation.

- **General Dynamics Mission Systems - *Reasonable Accommodation Policy***
This policy provides guidelines and procedures for outlining the:
  - o **Purpose** (to provide guidelines and procedures for employees and candidates for employment who are requesting accommodation).
  - o **Scope** of the policy (to include all employees and candidates for employment). The policy does not include General Dynamics Canada.[9]
  - o **Definitions** of "disability", "reasonable accommodation", "undue hardship", "direct threat to safety", "essential job functions", and "qualified individual with a disability".
  - o **Step by step process** of developing and implementing an accommodation including confidentiality and discrimination considerations.
  - o **Responsibilities** of employees/candidates, managers and human resources.
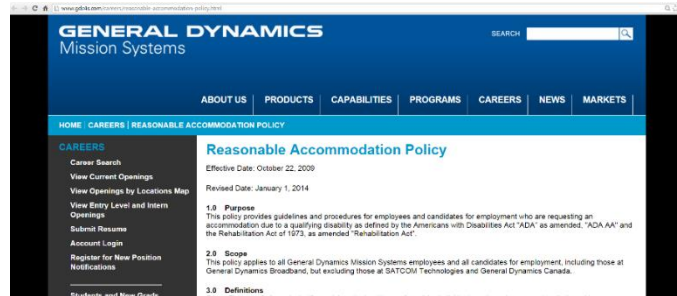
- **Shoppers Drug Mart – *Integrated Accessibility Standards Policy***
The purpose of this policy is to define the requirements and process for compliance with the IASR (Integrated Accessibility Standards [Regulation 191/11]) by Shoppers Drug Mart Inc., and its affiliates in Canada. The policy articulates the:
  - o Application and scope to anyone dealing with members of the public or other third parties on behalf of the organization.
  - o Organization's commitment to achieving an inclusive workplace culture through the removal of barriers and accommodation procedures.
  - o Definitions of barriers, communication supports, disability and accessible formats.
  - o Employment standards which build upon existing requirements under the Ontario Human Rights Code in relation to how to accommodate individuals with disabilities throughout the job application process and the employment relationship.

- **RBC Insurance – *Accessibility Plan and Policies***
RBC's 2014-21 accessibility plan "outlines the policies and actions that RBC Insurance will put in place to improve opportunities for people with disabilities and meet accessibility requirements under the Accessibility for Ontarians with Disabilities Act (Integrated Accessibility Standards)".

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[9] Repeated efforts made by the research team to determine why this policy does not apply to General Dynamics Canada were ultimately unsuccessful.

According to its Statement of Commitment[10], "RBC Insurance is committed to:
- o Providing clients with disabilities the same opportunity to access our products and services
- o Allowing clients with disabilities to benefit from the same services, in the same place, and in an equitable way as other customers
- o Providing a professional environment that promotes barrier-free access for all clients as required by applicable legislation
- o Providing employees and job applicants with reasonable accommodation
- o Providing information in ways that are accessible to people with disabilities, and
- o Meeting these commitments in a timely manner"

This plan outlines the commitment of RBC Insurance to provide accessible training, communication and IT supports to employees and contract workers with disabilities. RBC Insurance also states that they will:
- o Take steps identified in the plan to notify the public and employees that, when requested, they will accommodate people with disabilities during the recruitment, selection, and hiring processes and when people are hired by January 1, 2016.
- o Incorporate accommodation procedures into HR Policies and advise and make available to all employees and people managers.
- o Advise the public and employees through our public recruitment web sites that, when requested, we will accommodate people with disabilities during the recruitment, selection, and hiring processes.

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[10] http://www.rbcinsurance.com/accessibility/accessibility-plan.html

Discussion

Over the past few decades, there has been a dramatic shift in the conceptualization of disability. As we have noted, the current understanding is that disability is a relational concept (i.e., a person-in-context phenomenon). The environment, both physical and social, is a key factor. It can present barriers if it is not inclusive of a broad range of abilities. In many cases, these barriers can be overcome by providing appropriate accommodations.

The focus of this literature review was workplace accommodations for persons with visible disabilities. As noted, we have drawn on the definition provided by Employment and Social Development Canada (ESDC) for visible disabilities, which includes sight, hearing and mobility disabilities, chronic pain, auto immune diseases, as well as multiple sclerosis and acquired brain injury. We also noted that the distinction between visible and invisible disability is not clear-cut, and may be specific to the purpose for making the distinction. Furthermore, visible/invisible may best be thought of as on a continuum, rather than a dichotomous categorization.

Though our literature search strategy attempted to focus on visible disabilities as defined by ESDC, some of the articles identified in our literature search described accommodations but did not specify the types of disabilities under study, and others considered accommodations for people with both visible and invisible disabilities. We have included the results from all of these studies and indicated the types of disabilities for which they are relevant, when they were specified. In general, many of the accommodations are broadly applicable to a number of different types of disabilities. They are also often broadly applicable to a number of different types of occupations and industries.

A key issue that arose in the literature review is that stigma, stereotypes, fear, and lack of understanding are critical barriers for employers and workplaces to overcome. Often these social barriers are a more significant hurdle than physical barriers. A key message is that to improve employment opportunities for people with disabilities, employers and workers must change how they view these individuals. Rather than focusing on people's impairments, the focus needs to be on people's skills, talents and abilities, as is generally the case with people without disabilities. Clearly, a key prescription is to break down social barriers through education at all levels of an organization, and in society at large. Some studies describe a need for culture change in workplaces, not just to reduce stigma and discrimination, but also to ensure that all workers know that they play an important role in the accommodation process. We discuss this further below, under the rubric of natural supports.

In our review of the peer-reviewed literature, we identified specific accommodations in a table (Appendix F) that also provided references to studies that describe their application in different settings and in some cases evaluate their effectiveness. But many of the studies described "packages of accommodations" that were provided to enable people to more fully engage in paid work. Consequently, it is important to keep in mind that the accommodations identified are not necessarily intended to be applied on their own, but rather that some mix of accommodations may be required. Furthermore, these packages of accommodations are often customized to meet the specific needs of individuals. One size does not fit all, or in this case, one type of accommodation or one package does not meet the needs of all people even if they have the same

disability and are in the same occupation and industry. In fact, many of the studies suggest that the most effective way to identify and meet accommodation needs is to have the person with the disability play an active role in the identification of appropriate accommodations. This is sometimes described as the "interactive process," and for it to be the norm in practice, it needs to be embedded within organization policy. Furthermore, needed accommodations are not constant, so ongoing monitoring and evaluation is critical.

The interactive process might be seen as a form of customization. Customization can also be framed in term of job tasks. Some studies emphasized how matching tasks to people may require job restructuring (some studies described this as job carving), but this matching can result in efficiencies within an organization. In many ways, these prescriptions have similarities to the Individual Placement and Support (IPS) model widely promoted for severe mental illness.

The studies we identified in the peer reviewed literature were primarily descriptive in nature. What we mean by this is that they described accommodations provided to people with disabilities through surveys, case studies, and other study design approaches, but did not expressly evaluate their effectiveness. In some cases, "soft" effectiveness evaluations were described—for example, directly asking people with disabilities in a survey or interview if they were satisfied with the accommodations provided, or if they found the accommodations provided to be effective. Studies focused on assessing effectiveness in a more rigorous fashion, through study designs such as before-after, case-control and randomized trials, were very rare.

Furthermore, costs were very rarely assessed, though some studies inquired about who paid for accommodations or provided insights into potential or actual external sources of funding. Costs were indirectly taken into considered in some studies. For example, a number of studies focused on natural support in the workplace with an eye to minimizing costs associated with hiring someone expressly to provide supports or coaching services. Some studies also noted increases in productivity, lower turnover and other efficiencies realized by the recruitment and retention of people with disabilities supported through appropriate accommodations.

The focus on natural supports in a number of studies highlights the fact that accommodations do not involve just the person with a disability, but often require the involvement of everyone on staff. Managers, supervisors and co-workers all play a role in ensuring that a person with a disability is appropriately accommodated at work. Some studies mentioned buddy systems, peer support, and consciousness of different abilities when organizing team-based work. Supervisor assignment of tasks to different people also needs to be consciously undertaken. In addition, social opportunities need to be planned in light of different abilities. Recruitment, retention, performance evaluation and promotion all need to be respectful of people's abilities, as well as their talents and potential.

Assistive technologies are frequently cited accommodations for people with disabilities. They include software and hardware products that help manage or overcome limitations associated with impairments. They can include items such as hearing aids, screen reader software, special printers, wheelchairs, walkers, etc. The review of literature suggested that employers need to provide necessary training to employees with disabilities on how to use their assistive device or devices.

Another frequently mentioned accommodation practice was providing flexibility in terms of schedules (i.e., start and end time, number of hours worked in a period of time) and location of work (i.e., working from home, telework). These flexibility options are common in many workplaces, and are often made available to people without disabilities. With this in mind, a few studies discussed the issue of disclosure and how the introduction of universal accommodations (e.g., where all workers can ask for work arrangements such as telework) can minimize the stigma that might be created by the need to disclose a health condition or disability as a requirement for accommodation.

Other frequently cited accommodations found in the scientific literature include: job restructuring, employer support, and promoting a supportive workplace culture to improve organizational attitudes towards employees with disabilities.

The grey literature review provided similar insights about accommodation practices as the peer-reviewed literature, and also provided helpful tools and recommendations to assist employers with the development of policies and procedures. First and foremost, policies and procedures ought to be formal and shared will all employees so that they know what to expect. Most state the organization's commitment to disability inclusion, describe the purpose and scope of the policy, explain how and when to deny an accommodation, focus on the job requirements and the skills, abilities and capacities of the person with a disability to perform the job, provide clear definitions of terms such as disability, reasonable accommodation, and undue hardship, provide step by step processes for developing and implementing accommodation plans, and provide contact information for relevant internal resources.

The accommodation process generally follows four steps that an employer can take to provide accommodations. The first step is recognizing the need for accommodation. This might be initiated by the employee, but in some cases employees might be hesitant to come forward with such a request. The literature provides insights into the contextual factors that create an environment that is conducive to disclosure. Alternatively, a supervisor may notice an employee struggling and may suggest an accommodation. Step two is about gathering relevant information and assessing needs. This step is best undertaken as a collaborative process in which the employer and employee work together to determine implementation and accommodation measures. Step three involves writing a formal individual accommodation plan. The literature provides insights into the questions to consider in developing such a plan. The last step entails implementing, monitoring and reviewing the accommodation plan. The process is iterative in nature (i.e., the accommodations should be reviewed on a regular basis). Additionally, Employee Resource Groups or diversity councils are recommended to support testing and reviewing accommodations and inclusion policies and procedures.

Conclusion

It is clear from this final report that there is a substantial peer-reviewed literature that provides insights into accommodation practices, though rigorous evaluation of effectiveness and costs is still absent in much of it. The next generation of research in this field needs to focus on formal and rigorous evaluation of effectiveness and cost-effectiveness with detailed analyses of the contexts in which different practices work well and why. Peer review is critical to ensure that evaluations are rigorous and readily available to academics and stakeholders for both policy and practice development and evidence synthesis purposes, as has been done in this review. Much of the work found in the grey literature provides invaluable guidance and practice recommendations that warrant further evaluation and publication in peer review.

Nonetheless, both the peer-reviewed and grey literature provide insights into how employers in Canada and elsewhere are accommodating people with disabilities, and when these two sources of knowledge are combined they offer a reasonably comprehensive overview of the current evidence base.

From tangible accommodations like assistive technology and changes to the physical workplace environment, to policies, hiring practices and the establishment of a welcoming workplace culture, there are a wide variety of options that Canadian employers can utilize in order to address the unemployment of some 795,000 Canadians with disabilities (Fredeen, Martin, Birch & Wafer, 2013). Companies like IBM and Rockwell Collins illustrate how successful workplace accommodations can be in practice. Resources like the Job Accommodation Network, the Employer Assistance and Resource Network, and the Conference Board of Canada are available to assist in making these accommodations as effective as possible.

The way forward includes further development of evidence through field research that rigorously evaluated effectiveness, cost-effectiveness and guidelines for employer policy and practice.

Knowledge Mobilization Plans

In terms of next steps, we plan to develop several products from this final report. Our communications and knowledge mobilization plan includes outreach to disability communities, workplace parties (employers and labour/workers), disability policy makers and administrators, and academics. First, we plan to have the report reviewed by two knowledge experts in the disability community to ensure that it frames the issues appropriately. Next, we intend to develop a one-page lay summary of our findings for public distribution. Both the one-page summary and the final report will be prepared in an accessible version using Adobe InDesign. The two items will be made available on the internet through the Centre for Research on Work Disability Policy website. The findings from the report will be presented in several forums including a Knowledge Talk at Employment and Social Development Canada, and at an Institute for Work & Health Plenary session. We also plan to profile the report in newsletters that reach employers, disability communities, labour/workers, policy makers and program providers. Finally, we are planning to prepare three manuscripts for peer-reviewed publications. One manuscript will focus on the grey literature synthesis, a second on the peer-reviewed literature synthesis, and a third that combines the two to provide preliminary guidelines for practice.

References

Please Note: This list of references includes all articles reviewed for this report, even those not cited in the report text.

Abdel-Moty, E. & Khalil, T. M. (1991). Computer-aided design and analysis of the sitting workplace for the disabled. *International Disability Studies, 13,* 121-124.

Accessibility Plan and Policies for RBC Insurance (online document). Retrieved from http://www.rbcinsurance.com/accessibility/accessibility-plan.html.

Allaire, S. H., Li, W., & LaValley, M. P. (2003). Work barriers experienced and job accommodations used by persons with arthritis and other rheumatic diseases. *Rehabilitation Counseling Bulletin, 46,* 147-156.

Arthanat, S., Nochajski, S. M., Lenker, J. A., Bauer, S. M., & Wu, Y. W. (2009). Measuring usability of assistive technology from a multicontextual perspective: the case of power wheelchairs. *American Journal of Occupational Therapy, 63,* 751-764.

Arvonio, L., Cull, I., & Marini, I. (1997). Employment interview perceptions of persons with visible disabilities. *International Journal of Rehabilitation Research, 20,* 413-416.

Baker, N. A., Rubinstein, E. N., & Rogers, J. C. (2012). Problems and accommodation strategies reported by computer users with rheumatoid arthritis or fibromyalgia. *Journal of Occupational Rehabilitation, 22,* 353-362.

Barcus, J. M. & Targett, P. (2003). Maximizing employee effectiveness through use of Personal Assistance Services at the workplace. *Journal of Vocational Rehabilitation, 18*, 99-106.

Barnard, L., Stevens, T., Siwatu, K. O., & Lan, W. (2008). Diversity beliefs as a mediator to faculty attitudes toward students with disabilities. *Journal of Diversity in Higher Education, 1,* 169-175.

Blanck, P. D. (1996). Implementing the Americans with disabilities act. 1996 Follow-up report on Sears, Roebuck and Co. *Spine, 21 (13*, 1602-1608.

Brooke, V., Green, H., Kregel, J., Barcus, M., Selvy, G., Bunting, K. et al. (1998). Findings from a national disability business summit: Implications for the field. *Journal of Vocational Rehabilitation, 10 (1),* 31-38.

Bruins, M., Geertzen, J. H., Groothoff, J. W., & Schoppen, T. (2003). Vocational reintegration after a lower limb amputation: a qualitative study. *Prosthetics & Orthotics International, 27,* 4-10.

Burgstahler, S., Comden, D., Lee, S. M., Arnold, A., & Brown, K. (2011). Computer and cell phone access for individuals with mobility impairments: An overview and case studies. *Neurorehabilitation, 28,* 183-197.

Butterfield, T. M. & Ramseur, J. H. (2004). Research and case study findings in the area of workplace accommodations including provisions for assistive technology: A literature review. *Technology and Disability, 16 (4),* 201-210.

Campolieti, M. (2005). How Accommodations Affect the Duration of Post-Injury Employment Spells. *Journal of Labor Research, 26,* 485-499.

Canadian Hearing Society. (n.d.). *Guide for Employers.* Retrieved November 14, 2014 from http://www.chs.ca/sites/default/files/uploads/breaking_the_sound_barriers.pdf.

Canadian Human Rights Commission. (2006). *A place for all: a guide to creating an inclusive workplace.* Retrieved November 19, 2014 from http://www.chrc-ccdp.ca/sites/default/files/aplaceforall_1.pdf.

Canadian National Institute for the Blind. (n.d.). *Accessibility Resources.* Retrieved November 14, 2014 from www.cnib.ca/en/services/ resources/Pages/default.aspx.

Challenger, J. (2008, October 7). Strategies to Increase the Representation of RBC Employees With Disabilities, CCRW Annual Conference presentation. Retrieved from http://www.ccrw.org/conf/pdf/jc.pdf.

Conference Board of Canada. (2012). *Employers' Toolkit: Making Ontario Workplaces Accessible to People with Disabilities.* Retrieved November 14, 2014 from http://www.conferenceboard.ca/e-library/abstract.aspx?did=5258.

Conference Board of Canada. (2013). *Leveling the playing field: Attracting, engaging, and advancing people with disabilities.* Retrieved November 28, 2014 from http://hcexchange.conference-board.org/publications/publicationdetail.cfm?publicationid=2430.

Coole, C., Watson, P. J., & Drummond, A. (2010). Low back pain patients' experiences of work modifications; a qualitative study. *BMC Musculoskeletal Disorders, 11:277, 2010.*

Cooper, R. A., Boninger, M. L., Cooper, R., Fitzgerald, S. G., & Kellerher, A. (2004). Preliminary assessment of a prototype advanced mobility device in the work environment of veterans with spinal cord injury. *Neurorehabilitation, 19,* 161-170.

Crockatt, S. Y., Targett, P., Cifu, D., & Wehman, P. (2009). Return to work of individuals with arthritis: A review of job performance and retention. *Journal of Vocational Rehabilitation, 30 (2),* 121-131.

Crudden, A. & McBroom, L. W. (1999). Barriers to employment: A survey of employed persons who are visually impaired. *Journal of Visual Impairment and Blindness, 93 (6),* 341-350.

Daly, M. C. & Bound, J. (1996). Worker adaptation and employer accommodation following the onset of a health impairment. *The Journals of Gerontology, Series B, Psychological Sciences and Social Sciences 51,* S53-S60.

De Jonge, D. M. & Rodger, S. A. (2006). Consumer-identified barriers and strategies for optimizing technology use in the workplace. *Disability and Rehabilitation, 1 (1-2)*, 79-88.

DeJonge, D., Rodger, S., & Fitzgibbon, H. (2001). Putting technology to work: Users' perspective on integrating assistive technology into the workplace. *Work.16 (2),* 77-89.

Deloitte Canada. (2010). The Road to Inclusion: Integrating People with Disabilities into the Workplace. White Paper by Deloitte Canada.

Detaille, S. I., Haafkens, J. A., & van Dijk, F. J. (2003). What employees with rheumatoid arthritis, diabetes mellitus and hearing loss need to cope at work. *Scandinavian Journal of Work, Environment & Health, 29,* 134-142.

Dietz, M. W. (2007). Reasonable accommodations for attorneys with disabilities. *Florida Bar Journal, 81,* 66-69.

Dong, S., Oire, S. N., MacDonald-Wilson, K. L., & Fabian, E. S. (2012). A Comparison of Perceptions of Factors in the Job Accommodation Process Among Employees With Disabilities, Employers, and Service Providers. *Rehabilitation Counseling Bulletin, 56,* 182-189.

Doogan, C. & Playford, E. D. (2014). Supporting work for people with multiple sclerosis. *Multiple Sclerosis.20 (6),* 646-650.

Dowler, D., Batiste, L., & Whidden, E. (1998). Accommodating workers with spinal cord injury. *Journal of Vocational Rehabilitation.10 (2),* 115-122.

Dowler, D. L., Solovieva, T. I., & Walls, R. T. (2011). Personal assistance services in the workplace: A literature review. *Disability & Health Journal, 4,* 201-208.

Employer Assistance and Resource Network (EARN). (2014). *Opening the doors of small business to employees with disabilities: Critical concerns and strategies for success.* Retrieved November 28, 2014 from http://hcexchange.conference-board.org/publications/publicationdetail.cfm?publicationid=2822.

Erickson, W. A., von Schrader, S., Bruyere, S. M., & VanLooy, S. A. (2014). The employment environment: Employer perspectives, policies, and practices regarding the employment of persons with disabilities. *Rehabilitation Counseling Bulletin, 57,* 195-208.

Fredeen, K., Martin, K., Birch, G., & Wafer, M. (2013). Rethinking DisAbility in the Private Sector. *Panel on Labour Market Opportunities for Persons with Disabilities*, 28.

Gamble, M. J., Dowler, D. L., & Orslene, L. E. (2006). Assistive technology: Choosing the right tool for the right job. *Journal of Vocational Rehabilitation, 24 (2),* 73-80.

Gates, L. B. (2000). Workplace accommodation as a social process. *Journal of Occupational Rehabilitation.10 (1) ()(pp 85-98), 2000.Date of Publication: 2000.,* 85-98.

General Dynamics Mission Systems. (2015). *Reasonable Accommodation Policy*. Retrieved January 30, 2015 from http://www.gdc4s.com/careers/reasonable-accommodation-policy.html

Gewurtz, R. & Kirsh, B. (2009). Disruption, disbelief and resistance: A meta-synthesis of disability in the workplace. *Work, 34,* 33-44.

Gignac, M. A., Cao, X., & McAlpine, J. (2014). Availability, Need for, and Use of Work Accommodations and Benefits: Are they related to Employment Outcomes in People with Arthritis? *Arthritis Care Research, ePub ahead of print.*

Golub, D. B. (2006). A model of successful work experience for employees who are visually impaired: The results of a study. *Journal of Visual Impairment & Blindness, Vol.100,* -725.

Gustafsson, J., Peralta, J. P., & Danermark, B. (2013). The employer's perspective on Supported employment for people with disabilities: Successful approaches of Supported employment organizations. *Journal of Vocational Rehabilitation, 38 (2),* 99-111.

Hagner, D., Butterworth, J., & Keith, G. (1995). Strategies and barriers in facilitating natural supports for employment of adults with severe disabilities. *Journal of the Association for Persons with Severe Handicaps, 20,* 110-120.

Hansen, E. M. (1999). Supported employment for people who are deaf: An overview of the unique needs and challenges. *Journal of Vocational Rehabilitation, 13 (3),* 143-152.

Hashim, J. & Saodah, W. (2014). Predictors to employees with disabilities' organisational behaviour and involvement in employment. *Equality, Diversity and Inclusion: An International Journal, 33,* 193-209.

Haynes, S. & Linden, M. (2012). Workplace accommodations and unmet needs specific to individuals who are deaf or hard of hearing. *Disability and Rehabilitation: Assistive Technology, 7 (5),* 408-415.

Hazer, J. T. & Bedell, K. V. (2000). Effects of seeking accommodation and disability on preemployment evaluations. *Journal of Applied Social Psychology, Vol.30,* -1223.

Hearne, P. G. (1991). Employment strategies for people with disabilities: a prescription for change. *Milbank Quarterly, 69 Suppl 1-2,* 111-28.

Hernandez, B., McDonald, K., Divilbiss, M., Horin, E., Velcoff, J., & Donoso, O. (2008). Reflections from employers on the disabled workforce: Focus groups with healthcare, hospitality and retail administrators. [References]. *Employee Responsibilities and Rights Journal, Vol.20,* -164.

Hernandez, B., McDonald, K., Lepera, N., Shahna, M., Wang, T. A., & Levy, J. M. (2009). Moving beyond misperceptions: the provision of workplace accommodations. *Journal of Social Work in Disability & Rehabilitation, 8,* 189-204.

Hernandez, B. & McDonald, K. (2010). Exploring the costs and benefits of workers with disabilities. *The Journal of Rehabilitation, 76,* 15-23.

Houtenville, A. & Kalargyrou, V. (2012). People with Disabilities: Employers' Perspectives on Recruitment Practices, Strategies, and Challenges in Leisure and Hospitality. *Cornell Hospitality Quarterly, 53,* 40.

Hyland, P. K. & Rutigliano, P. J. (2013). Eradicating discrimination: Identifying and removing workplace barriers for employees with disabilities. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 6,* 471-475.

Inge, K. J., Wehman, P., Strobel, W., Powell, D., & Todd, J. (1998). Supported employment and assistive technology for persons with spinal cord injury: Three illustrations of successful work supports. *Journal of Vocational Rehabilitation, 10 (2),* 141-152.

Inge, K. J., Strobel, W., Wehman, P., Todd, J., & Targett, P. (2000). Vocational outcomes for persons with severe physical disabilities: Design and implementation of workplace supports. *NeuroRehabilitation, 15 (3),* 175-187.

Jackson, M. F., Quaal, C., & Reeves, M. A. (1991). Effects of multiple sclerosis on occupational and career patterns. *AXONE, 13,* 16-17.

Jakobsen, K. (2009). The right to work: Experiences of employees with rheumatism. [References]. *Journal of Occupational Science, Vol.16,* -127.

Jakobsen, K. & Svendsen, E. (2013). Employers' perspective: When a return to work is the objective for persons with reduced mobility. *Work: Journal of Prevention, Assessment & Rehabilitation, 44,* 145-153.

James, P., Cunningham, I., & Dibben, P. (2006). Job retention and return to work of ill and injured workers: Towards an understanding of the organisational dynamics. *Employee Relations, 28,* 290-303.

Job Accommodation Network. (2007). *Universal Design and Assistive Technology as Workplace Accommodations: An Exploratory White Paper on Implementation and Outcomes.* Retrieved November 14, 2014 from https://askjan.org/topics/tech.htm.

Johnson, K. L., Yorkston, K. M., Klasner, E. R., Kuehn, C. M., Johnson, E., & Amtmann, D. (2004). The Cost and Benefits of Employment: A Qualitative Study of Experiences of Persons with Multiple Sclerosis. *Archives of Physical Medicine and Rehabilitation, 85 (2),* 201-209.

Johnson, K. L. & Fraser, R. T. (2005). Mitigating the impact of multiple sclerosis on employment. *Physical Medicine & Rehabilitation Clinics of North America, 16,* 571-582.

Johnson, R. (1998). How do people get back to work after severe head injury? A 10 year follow-up study. *Neuropsychological Rehabilitation, 8 (1),* 61-79.

Kalef, L., Barrera, M., & Heymann, J. (2014). Developing inclusive employment: Lessons from Telenor Open Mind. *Work: Journal of Prevention, Assessment & Rehabilitation, 48,* 423-434.

Kaplan, S., Weiss, S., Moon, N. W., & Baker, P. (2006). A framework for providing telecommuting as a reasonable accommodation: some considerations on a comparative case study. *Work, 27,* 431-440.

Kaye, H. S., Jans, L. H., & Jones, E. C. (2011). Why don't employers hire and retain workers with disabilities? *Journal of Occupational Rehabilitation, 21,* 526-536.

Klimoski, R. & Donahue, L. (1997). HR strategies for integrating individuals with disabilities into the work place. *Human Resource Management Review, 7,* 109-138.

Koch, L., Rumrill, P., Hennessey, M., Vierstra, C., & Roessler, R. T. (2007). An ecological approach to facilitate successful employment outcomes among people with multiple chemical sensitivity. *Work, 29,* 341-349.

Krause, N., Dasinger, L. K., & Neuhauser, F. (1998). Modified work and return to work: A review of the literature. *Journal of Occupational Rehabilitation, 8 (2),* 113-139.

Langton, A. J. & Ramseur, H. (2001). Enhancing employment outcomes through job accommodation and assistive technology resources and services. *Journal of Vocational Rehabilitation, 16,* 27-37.

Langton, A. J. & Ramseur, H. (2001). Enhancing employment outcomes through job accommodation and assistive technology resources and services. *Journal of Vocational Rehabilitation, 16,* 27-37.

Lee, B. A. (1996). Legal requirements and employer responses to accommodating employees with disabilities. *Human Resource Management Review, 6,* 231-251.

Lee, M., Storey, K., Anderson, J. L., Goetz, L., & Zivolich, S. (1997). The effect of mentoring versus job coach instruction on integration in supported employment settings. *Journal of the Association for Persons with Severe Handicaps, 22,* 151-158.

Linden, M. & Milchus, K. (2014). Teleworkers with disabilities: Characteristics and accommodation use. *Work, 47,* 473-483.

Maier, N. A., Ulferts, G. W., & Howard, T. L. (2012). Organizational Hiring Practices Of Persons With Disabilities: A Study And Review Of Corporations, Small Businesses, Non-Profit Organizations, Foundations, And The US Government. *Journal of Diversity Management, 7,* 79-82.

Mancuso, C. A., Paget, S. A., & Charlson, M. E. (2000). Adaptations made by rheumatoid arthritis patients to continue working: a pilot study of workplace challenges and successful adaptations. *Arthritis care & research, 13,* 89-99.

Martz, E. (2003). Invisibitiy of disability and work experience as predictors of employment among community college students with disability. *Journal of Vocational Rehabilitation, 18,* 153-162.

Martz, E. (2007). Facilitating inclusive employment: an examination of the accommodations for and the barriers to employment for Russians with disabilities. *International Journal of Rehabilitation Research, 30,* 321-326.

McNaughton, D., Rackensperger, T., Dorn, D., & Wilson, N. (2014). "Home is at work and work is at home": Telework and individuals who use augmentative and alternative communication. *Work, 48,* 117-126.

Mendelson, C., Poole, J. L., & Allaire, S. (2013). Experiencing work as a daily challenge: the case of scleroderma. *Work, 44,* 405-413.

Miller, L. C., Gottlieb, M., Morgan, K. A., & Gray, D. B. (2014). Interviews with employed people with mobility impairments and limitations: Environmental supports impacting work acquisition and satisfaction. *Work, 48,* 361-372.

Murray, B. & Kenny, S. (1990). Telework as an employment option for people with disabilities. *International Journal of Rehabilitation Research, 13,* 205-214.

Nagi, S. (1965). Some conceptual issues in disability and rehabilitation. In M.B.Sussman (Ed.), *Sociology and Rehabilitation* (pp. 100-113). Washington: American Sociological Association.

Nagi, S. (1991). Disability concepts revisited: Implications for prevention. In A.Pope & A. Tarlov (Eds.), *Disability in America: Towards a National Agenda for Prevention* (pp. 309-327). Washington: National Academy Press.

Naraine, M. D. & Fels, D. I. (2013). The importance of 'strategic chat time' for people who are blind or low vision. *British Journal of Visual Impairment, 31,* 208-216.

Neal-Boylan, L., Hopkins, A., Skeete, R., Hartmann, S. B., Iezzoni, L. I., & Nunez-Smith, M. (2012). The career trajectories of health care professionals practicing with permanent disabilities. *Academic Medicine, 87 (2),* 172-178.

Newton, R. & Ormerod, M. (2005). Do disabled people have a place in the UK construction industry? *Construction Management and Economics, 23,* 1071-1081.

Nietupski, J. A. & Hamre-Nietupski, S. (2000). A systematic process for carving supported employment positions for people with severe disabilities. *Journal of Developmental and Physical Disabilities, 12,* 103-119.

Pell, S. D., Gillies, R. M., & Carss, M. (1997). Relationship between use of technology and employment rates for people with physical disabilities in Australia: implications for education and training programmes. *Disability & Rehabilitation, 19,* 332-338.

Peters, S. L. (1993). Having a disability 'sometimes'. *Canadian Woman Studies, 13,* 26-27.

Pigini, L., Andrich, R., Liverani, G., Bucciarelli, P., & Occhipinti, E. (2010). Designing reasonable accommodation of the workplace: a new methodology based on risk assessment. *Disability & Rehabilitation Assistive Technology, 5,* 184-198.

Quinn, G. & Degener, T. (2002). *Human rights and disability. The current use and future potential of United Nations human rights instruments in the context of disability* New York and Geneva: United Nations.

Reese, S. (1998). The sweet sound of success. *Business and Health, 16 (12),* 15-16.

Sabata, D., Williams, M. D., Milchus, K., Baker, P. M., & Sanford, J. A. (2008). A retrospective analysis of recommendations for workplace accommodations for persons with mobility and sensory limitations. *Assistive Technology, 20,* 28-35.

Sandler, L. A. & Blanck, P. (2005). The quest to make accessibility a corporate article of faith at Microsoft: Case study of corporate culture and human resource dimensions. *Behavioral Sciences and the Law, 23 (1),* 39-64.

Sanford, J. A. & Milchus, K. (2006). Evidence-Based Practice in Workplace Accommodations. *Work, 27,* 329-332.

Schneider, M. (1999). Achieving greater independence through assistive technology, job accommodation and supported employment. *Journal of Vocational Rehabilitation, 12 (3),* 159-164.

Schoppen, T., Boonstra, A., Groothoff, J. W., de, V. J., Goeken, L. N., & Eisma, W. H. (2001). Employment status, job characteristics, and work-related health experience of people with a lower limb amputation in The Netherlands. *Archives of Physical Medicine & Rehabilitation, 82,* 239-245.

Schur, L., Nishii, L., Adya, M., Kruse, D., Bruy+¿re, S. M., & Blanck, P. (2014). Accommodating Employees With and Without Disabilities. *Human Resource Management, 53,* 593-621.

Scroggins WA. (2007). The measurement and structural modelling of the reasonableness of workplace accommodations. *Employer Responsibility Rights Journal* (19):279-291.

Scullion, P. (2000). Disabled people as health service employees. How to break down the barriers. *Nursing Management, 7 (6),* 8-13.

Shaw, W. S., Feuerstein, M., Miller, V. I., & Lincoln, A. E. (2001). Clinical tools to facilitate workplace accommodation after treatment for an upper extremity disorder. *Assistive Technology, 13,* 94-105.

Shaw, W. S., Robertson, M. M., Pransky, G., & McLellan, R. K. (2003). Employee perspectives on the role of supervisors to prevent workplace disability after injuries. *Journal of Occupational Rehabilitation.13 (3),* 129-142.

Shaw, W. S. & Feuerstein, M. (2004). Generating workplace accommodations: Lessons learned from the integrated case management study. *Journal of Occupational Rehabilitation.14 (3),* 207-216.

Shaw, L., Tetlaff, B., Jennings, M. B., & Southall, K. E. (2013). The standpoint of persons with hearing loss on work disparities and workplace accommodations. *Work: Journal of Prevention, Assessment & Rehabilitation, 46,* 193-204.

Shoppers Drug Mart Integrated Accessibility Standards Policy (online document). Retrieved from http://files.shoppersdrugmart.ca/contactus/IntegratedAccessibilityStandardsPolicy.pdf.

Smith, T. (2002). Diversity and disability: Exploring the experiences of vision impaired people in the workplace. *Equal Opportunities International, 21,* 59-72.

Solovieva, T. I., Hendricks, D. J., Wallsh, R. T., & Dowler, D. L. (2010). Workplace Personal Assistance Services for People with Disabilities: Making Productive Employment Possible. *Journal of Rehabilitation, 76,* 3-8.

Solovieva, T. I., Dowler, D. L., & Walls, R. T. (2011). Employer benefits from making workplace accommodations. *Disability & Health Journal, 4,* 39-45.

Solovieva, T. I. & Walls, R. T. (2013). Implications of workplace accommodations for persons with disabilities. *Journal of Workplace Behavioral Health, 28,* 192-211.

Steinberg, A. G., Iezzoni, L. I., Conill, A., & Stineman, M. (2002). Accommodating medical school faculty with disabilities. *LDI Issue Brief, 8 (4),* 1-4.

Stergiou-Kita, M., Mansfield, E., & Colantonio, A. (2014). Injured workers' perspectives on how workplace accommodations are conceptualized and delivered following electrical injuries. *Journal of Occupational Rehabilitation, 24,* 173-188.

Stoddard, S. (2006). Personal assistance services as a workplace accommodation. *Work, 27 (4),* 363-369.

Stoddard, S. & Kraus, L. (2006). Arranging for personal assistance services and assistive technology at work. A report of the rehabilitation research and training center on personal assistance services. *Disability & Rehabilitation Assistive Technology, 1,* 89-95.

Stone, S. D. (1995). The myth of bodily perfection. *Disability & Society, 10,* 413-424.

Stone, S. D. (2005). Reactions to invisible disability: The experiences of young women survivors of hemorrhagic stroke. *Disability and Rehabilitation, 27,* 293-304.

Storey, K. & Certo, N. J. (1996). Natural supports for increasing integration in the workplace for people with disabilities: A review of the literature and guidelines for implementation. *Rehabilitation Counseling Bulletin, 40,* 62-76.

Storey, K. (2003). A review of research on natural support interventions in the workplace for people with disabilities. *International Journal of Rehabilitation Research, 26 (2),* 79-84.

Summers, K. (2014). Help with MSDs. *Occupational Health, 66,* 18-19.

Sundstrup, E., Jakobsen, M. D., Brandt, M., Jay, K., Persson, R., Aagaard, P. et al. (2014). Workplace strength training prevents deterioration of work ability among workers with chronic pain and work disability: A randomized controlled trial. *Scandinavian Journal of Work, Environment and Health, 40 (3),* 244-251.

Szymanski, E.M., Fernandez, D., Koch, L., Merz, M.A. (1996a). *Career Planning: Preparing for placement.* Training materials for Rehabilitation Research and Training Center of Career Development and Advancement, Madison, WI.

Szymanski, E.M., Hershenson, D.B., Enright, M.S., & Ettinger, J.M. (1996b). Career development theories, constructs, and research: Implications for people with disabilities. In E.M. Szymanski and R.M. Parker (Eds.), *Work and disability: Issues and strategies in career development and job placement* (pp.79-126)*.* Austin TX: Pro-ed.

Szymanski, E.M., Hershenson, D.B., Ettinger, J.M., Enright, M.S. (1996c). Career development interventions for people with disabilities. In E.M. Szymanski and R.M. Parker (Eds.), *Work and disability: Issues and strategies in career development and job placement* (pp.255-76)*.* Austin TX: Pro-ed.

Tagalakis, V., Amsel, R., & Fichten, C. S. (1988). Job interview strategies for people with a visible disability. *Journal of Applied Social Psychology, 18,* 520-532.

Tatnall, A. D. (2005). Employer perceptions regarding organizational costs and benefits of hiring individuals with disabilities. *Dissertation Abstracts International: Section B: The Sciences and Engineering, Vol.65,* -B.

Test, D. W. & Wood, W. M. (1996). Natural supports in the workplace: The jury is still out. *Journal of the Association for Persons with Severe Handicaps, 21,* 155-173.

Thornburg, L. (1994). Approaching architectural challenges under the ADA. *The Journal of Long Term Care Administration, 22 (1),* 17-18.

Tompa, E., De, O. C., Dolinschi, R., & Irvin, E. (2008). A systematic review of disability management interventions with economic evaluations. *Journal of Occupational Rehabilitation, 18 (1),* 16-26.

Trach, J. S. & Mayhall, C. D. (1997). Analysis of the types of natural supports utilized during job placement and development. *Journal of Rehabilitation, 63,* 43-48.

Unger, D. & Kregel, J. (2003). Employers' knowledge and utilization of accommodations. *Work, 21,* 5-15.

Unger, D. (2007). Addressing employer personnel needs and improving employment training, job placement and retention for individuals with disabilities through public-private partnerships. *Journal of Vocational Rehabilitation, 26 (1),* 39-48.

University of British Columbia Equity Office. (2010). *Creating a Respectful and Inclusive Workplace for Employees with Disabilities.* Retrieved December 2, 2014 from http://equity.ubc.ca/files/2010/06/creating_a_respectful_and_inclusive_ workplace_for_employees_with_disabilities.pdf.

U.S. Business Leadership Network. (2013). *Leading Practices on Disability Inclusion*. Retrieved December 15, 2014 from http://www.usbln.org/leading_practices_ on_disability_inclusion_2013.html.

Vedeler, J. S. & Schreuer, N. (2011). Policy in Action: Stories on the Workplace Accommodation Process. *Journal of Disability Policy Studies, 22,* 95-105.

Wall, J. R., Niemczura, J. G., & Rosenthal, M. (1998). Community-based training and employment: An effective program for persons with traumatic brain injury. *NeuroRehabilitation, 10 (1),* 39-49.

Wehman, P. (1999). Supported employment: Toward reducing the impact of disability. *Journal of Vocational Rehabilitation, 12 (3),* 131-133.

Wehman, P. (2003). Workplace inclusion: Persons with disabilities and coworkers working together. *Journal of Vocational Rehabilitation, 18 (2),* 131-141.

Weiner, J. S. & Zivolich, S. (1998). Universal access: A natural support corporate initiative at Universal Studios Hollywood. *Journal of Vocational Rehabilitation, 10,* 5-14.

Wheeler-Scruggs, K. (2002). Assessing the employment and independence of people who are deaf and low functioning. *American Annals of the Deaf, 147,* 11-17.

Williams, M., Sabata, D., & Zolna, J. (2006). User needs evaluation of workplace accommodations. *Work, 27,* 355-362.

World Health Organization (2001). *ICF: International Classification of Functioning, Disability and Health* Geneva, Switzerland: World Health Organization.

Yeager, P., Kaye, H. S., Reed, M., & Doe, T. M. (2006). Assistive technology and employment: experiences of Californians with disabilities. *Work, 27,* 333-344.

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,* 168-176.

Yelin, E. (2007). Work disability in rheumatic diseases. *Current Opinion in Rheumatology.19 (2),* 91-96.

Younes, N. (2001). Getting corporations ready to recruit workers with disabilities. *Journal of Vocational Rehabilitation, 16 (2),* 89.

Zeitzer, I. R. (1991). The role of assistive technology in promoting return to work for people with disabilities: the U.S. and Swedish systems. *Social Security Bulletin, 54,* 24-29.

Zolna, J. S., Sanford, J., Sabata, D., & Goldthwaite, J. (2007). Review of accommodation strategies in the workplace for persons with mobility and dexterity impairments: Application to criteria for universal design. *Technology and Disability, 19 (4),* 189-198.

Appendix A: Scholarly Literature Search
Final List of Search Terms

Population: Persons with Visible Disabilities	Interventions: Workplace Accommodations	Outcomes: Employment, Work, etc.
Disabled	Assistive Device(s)	Earning(s)
Disabilities	Assistive Technology/ies	employability
Blind	Equipment accommodation(s)	Employee(s)
Cane(s)	Equipment adjustment(s)	Employer(s)
Crutch(es)	Equipment modification(s)	Employment
Deaf	Flexible hour(s)	Job(s)
Hearing aid(s)	Flexible shift(s)	Occupation(s)
Hearing impaired	Modified duty/duties	Occupational
Mobility issues	Modified job(s)	Occupational
Seeing eye dog(s)	Modified task(s)	Recruiting/recruitment
Wheel chair(s)	Modified work	Retaining employee(s)/worker(s)
Visually impaired	technical aid(s)	Retention of employee(s)/ worker(s)
	Training	work capacity/
	work accommodation(s)	Work environment(s)
	Work(ing) from home	Worker(s)
	workplace accommodation(s)	Workplace(s)
	workplace socialization	Work-related

Please note: Search terms were combined so that terms within a category (e.g., the population category) were combined with a Boolean "OR" operator. The three categories were subsequently combined with a Boolean "AND" operator. In this way, references were captured if they had at least one search term in each of the three categories.

These terms were mapped to the controlled vocabulary terms of each database when possible. In addition, the terms were searched as keywords so that articles including one or more terms in the title or abstract would be captured.

Appendix B: Scholarly Literature Search
Inclusion and Exclusion Criteria for First Screening

#	Question	Notes
	Question	Notes
Only articles that answer "yes" to both questions, or "yes" to the first question and "unsure" to the second question, are included.		
1	**Is the study population persons with disabilities who are employed, trying to find employment or return to work, or are encountering barriers related to work accommodation issues?**	• For the purposes of this study we do not include articles describing transition to work of students with disabilities, unless this article could be of special interest. • For the purposes of this study, we do not include articles describing support to disabled individuals to start their own businesses or become self-employed.
2	**Is the study population workers who have visible disabilities?**	• We define visible disabilities according to the definition from the original RFP. Visible disabilities include sight, hearing and mobility disabilities, as well as chronic pain and auto immune diseases. There are also other disabilities including acquired brain injury (ABI), multiple sclerosis and ADHD which also have visible manifestations. • If it is mentioned in the abstract that both visible and invisible disabilities are studied, we recommend exclusion of this article unless there is something specific discussed regarding visible disabilities in the study.
Only if the article was included based on the study population, consider the following inclusion criteria. Only articles that answer yes to at least one of the following two questions are included:		
3	**Does the study describe or evaluate policies or practices of accommodation of workers with disabilities at work, or describe the issues/gaps/barriers/needs related to workers' accommodation?**	• By "accommodation of workers with disabilities at work" we mean any physical or non-physical accommodation, including accommodation in hiring or recruiting, as well as accommodations for ongoing engagement and retention.
4	**Does the study describe/evaluate how specific supports provided by different entities within the disability policy system influence the possibility of getting and keeping a job by injured workers?**	• These supports include employers, service providers, disability support programs, municipalities and provincial and federal governments.
5	**If the article is excluded based on the above criteria, does it contain a theory/discussion/conceptual frame of interest to our study?**	• Some studies were included on this basis for use in the introduction or conclusion sections of the report.

Appendix C: Scholarly Literature Search
Inclusion and Exclusion Criteria for Second Screening

#	Question	Notes
— Only articles that answer "yes" to both questions, or "yes" to the first question and "unsure" to the second question, are included.		
1	**Is the study population persons with disabilities who are employed, trying to find employment or return to work, or are encountering barriers related to work accommodation issues?**	• For the purposes of this study we do not include articles describing transition to work of students with disabilities, unless this article could be of special interest. • For the purposes of this study, we do not include articles describing support to disabled individuals to start their own businesses or become self-employed.
2	**Is the study population workers who have visible disabilities?**	• We define visible disabilities according to the definition from the original RFP. Visible disabilities include sight, hearing and mobility disabilities, as well as chronic pain and auto immune diseases. There are also other disabilities including acquired brain injury (ABI), multiple sclerosis and ADHD which also have visible manifestations. • If it is mentioned in the abstract that both visible and invisible disabilities are studied, we recommend exclusion of this article unless there is something specific discussed regarding visible disabilities in the study.
— Only if the article was included based on the study population, consider the following inclusion criteria. Only articles that answer yes to at least one of the following two questions are included:		
3	**Does the study describe or evaluate policies or practices of accommodation of workers with disabilities at work, or describe the issues/gaps/barriers/needs related to workers' accommodation?**	• By "accommodation of workers with disabilities at work" we mean any physical or non-physical accommodation, including accommodation in hiring or recruiting, as well as accommodations for ongoing engagement and retention.
4	**Does the study describe/evaluate how specific supports provided by different entities within the disability policy system influence the possibility of getting and keeping a job by injured workers?**	• These supports include employers, service providers, disability support programs, municipalities and provincial and federal governments.
— Only if the article was included based on one of the above criteria, consider the following inclusion criteria. Only articles that answer yes to Question 5 and <u>one of</u> Questions 6 and 7 are included.		
5	**Is the study published in a scientific journal, and is not a PhD dissertation?**	

6	Does the study identify accommodations made for people with visible disabilities *at the workplace level?*	
7	Is this study of interest for this project?	

Appendix D: Grey Literature Search
Prescriptions for Data Extraction and Synthesis for Different Types of
Evidence/Information/Guidance

Here are four types of evidence/information/guidance that might be found in the grey literature search and some prescriptions on what data to extract and how to synthesis the data. Focus on the key resource that you identify, i.e., those that appear to be of greatest value for employers, workers and other stakeholders.

1. Website resources and tools that provide guidance on the accommodations to consider for different types of disabilities and other guidance related to the recruitment and retention of people with visible disabilities.
    a. provide a short (1-2 page) summary of these websites with details on the following
        i. site URL
        ii. organization name and contact information for who owns the website
        iii. the organization mandate
        iv. the purpose of the website—who is it for, what does it offer
        v. a more detailed description of what the website offers in terms of information, knowledge, resources, services, and guidance related to employer accommodation of people with disabilities
        vi. possibly provide a URL and screen print of key pages
        vii. your assessment of the value of the website for employers, workers and for other stakeholders

2. Guidance on organizational policies for the recruitment and retention of people with disabilities.
    a. provide a synthesis of the key components of a sound policy on the recruitment and retention of people with disabilities, with a focus on policies related to accommodation practices.
    b. provide links to key sites and a short (1 paragraph) summary of what the sight has to offer, along with your assessment of the value of the site for employers, workers and other stakeholders

3. Case studies of employer practices related to the accommodation of people with disabilities.
    a. provide a list of case studies (title might be the one given on the website or something you construct from the organizations name and the nature of the case study, e.g., IBM case study of accommodation for a manager with a mobility impairment)
    b. Provide the URL and a short 3-4 sentence description of the case and your assessment of the value of the site for employers, workers and other stakeholders

4. Reports on the effectiveness and cost-effectiveness of accommodations for different types of disabilities. These are similar to the peer review studies and should be included with

those studies for data extraction and synthesis. Here is my prescription on what data to extract from these reports.

    a. Develop a table the following information:
- i. citation for the report
- ii. the types of visible disabilities considered in the study (for each type you might have a separate row in the table)
- iii. the occupation and industry of the study (these might also be best in separate rows if the accommodations are different for different occupations and different industries)
- iv. the nature of the accommodations being evaluated
- v. how the study was undertaken (e.g., case control, before after)
- vi. other details of the study (sample size, location)
- vii. the findings of the study (may be separate finding for different types of visible disabilities, and or occupation and industry)
- viii. study recommendation for best practices (again, may be clustered by type of disability, occupation and industry)
- ix. your assessment of the value of the study for employers, workers and other stakeholders

Appendix E: Environmental Scan
Contact List and Results

In total, 32 individuals were identified and contacted via e-mail through the Environmental Scan portion of the review. Of these 32 contacts, 15 responses were received—a response rate of 47%.

The following table summarizes these responses.

#	Name	Affiliation	Role	Resources Recommended
Academics and Researchers			
1	Rebecca Guwertz	McMaster University, School of Rehabilitation	Assistant Professor	• Additional Environmental Scan Contacts • Grey Literature • Scholarly Literature
		Centre for Research on Work Disability Policy	Co-Investigator	
2	Marcia Rioux	York University, Critical Disability Studies Program	Professor	• Additional Environmental Scan Contacts
		Centre for Research on Work Disability Policy (CRWDP)	Co-Lead	
3	Bonnie Kirsch	University of Toronto, School of Rehabilitation	Associate Professor	• Scholarly Literature • Additional Environmental Scan Contact
4	Tom Klassen	York University, Department of Political Science	Professor	• Grey Literature
		York University, School of Public Policy and Administration		
5	Cam Crawford	Ryerson University	Part-Time Instructor and Academic Lead, AODA Certificate	• None
		York University	Ph.D Candidate, Critical Disability Studies	
		Centre for Research on Work Disability Policy (CRWDP)	Provincial Co-Lead	
6	Normand Boucher	Université Laval	Researcher, Centre for Interdisciplinary Research in Rehabilitation and Social Integration	• None
		Centre for Research on Work Disability Policy (CRWDP)	Theme Lead	

#	Name	Affiliation	Role	Resources Recommended
		Centre for Research on Work Disability Policy	Co-Investigator	
7	Michael Feuerstein	Uniformed Services University of Health Sciences	Director, Clinical Training Program	• Additional Environmental Scan Contact
9	Susanne Bruyère	Cornell University, Employment and Disability Institute	Director and Professor of Disability Studies	• Scholarly Literature • Grey Literature
10	Katherine McDonald	Portland State University, Department of Psychology	Assistant Professor	• Scholarly Literature • Grey Literature
	Cameron Graham	York University	Professor	• None
11	**Organizational Representatives**			
12	Alec Farquhar	Ontario Ministry of Labour	Director, Office of the Worker Adviser	• None
		Centre for Research on Work Disability Policy	Engagement Committee Lead	
13	Steve Mantis	Ontario Network of Injured Workers' Groups	Secretary	• Grey Literature
		Occupational Health Clinic for Ontario Workers	Board Member	
		Centre for Research on Work Disability Policy (CRWDP)	Executive Committee Member	
		Centre for Research on Work Disability Policy	Executive Committee Member	
14	Keenan Wellar	LiveWorkPlay	Co-Leader and Director of Communications	• None
		Centre for Research on Work Disability Policy	Partner	
15	Mark Wafer	Tim Horton's	Franchise Owner	• None
16	David Brown	CIBC	Corporate Medical Director	• Scholarly Literature

Appendix F: Findings Table

Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
1. Assistive Devices	**1.1. Assistive Technology** Examples: • Vibrating watches for Deaf employees to monitor their work speed and return from break on time. • Vibrating text beepers to page Deaf employees or to send instructions. • Light systems for Deaf employees using different coloured lights to signal different events (e.g. ringing of TTY, arrival of customers or deliveries, fire). • Letter folding machines • Electric staplers • Adaptive keyboards • Telephone headsets • Material lifts		• Cerebral palsy • Multiple sclerosis • Congenital spinal condition • Spinal atrophy • Spina bifida • Rheumatoid arthritis • Amputation of upper or lower limb • Overuse syndrome • Mobility and dexterity impairments • Visual impairments • Severe disabilities • Upper-extremity disorders • Musculoskeletal disabilities • Sensorineural disabilities • Paraplegia • Quadriplegia • Traumatic brain injury	• Legal profession • Information technology • Governmental organizations • Small community organizations • Administration • Program coordination • Business education • Research • Computer programming • Food industry • Healthcare		• Employers can consult the Job Accommodation Network for advice on how to best implement assistive technology for employees with disabilities. • Can be combined with supported employment to help people with disabilities to obtain and sustain employment. • Back-up technology should be available for situations in which an employee's primary assistive technology crashes or needs to be repaired. • Employers should conduct regular reviews with employees who use assistive technology to ensure that users have the most appropriate technology for their needs, and that it is appropriately customized.	Wagner, Blackorby 1996 Smith 2002, Zeitzer 1991 Langton, Ramseur 2001 De et al., 2001 De Jonge, Rodger 2006 Hansen 1999 Haynes, Linden 2012, Zolna et al., 2007 Golub 2006 Schneider 1999 Reese 1998 Inge et al., 1998 Hyland, Rutigliano 2013 Shaw et al., 2001 Neal-Boylan et al., 2012 Schneider 1999 Arthanat et al., 2009

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
1. Assistive Devices (Cont'd)	**1.1. Assistive Technology (Cont'd)** • Power wheelchairs • Magnifiers • Text pagers linked to computer-based calendars • Cooling jackets • Heat extraction system • Independence 3000 IBOT Transporter					• Employers should purchase assistive technology from vendors who are willing to provide after-sales service. • Employers should budget for training needs as part of the purchase of an assistive device. • In cases where someone other than the user sets up an assistive device, the user should be provided with instruction or training on how to use it. • Assistive technology users should also have ongoing access to trainers, or people with knowledge of the assistive device and what it can do (e.g. online support community). • Using the same device(s) at work and at home can help employees to learn how to use the technology. • Assistive technology should be customized	Stoddard, Kraus 2006 Yeager et al., 2006 Johnson, Fraser 2005 Cooper et al., 2004 Schoppen et al., 2001 Yelin et al., 2000

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
1. Assistive Devices (Cont'd)	**1.1. Assistive Technology (Cont'd)**					for the user, since people with the same medical condition may have different abilities that lead to different technology solutions. • Employers and consumers should be trained regarding possible workplace accommodations. • An on-site evaluation of the consumer's technology needs should be performed. • Employers must focus on identifying the needed supports, not 'curing' the disability.	
	1.2. Adapted Computers	• Inappropriate positioning of devices • Lack of strength in arms and hands to operate standard keyboard or mouse.	• Spinal cord injury • Cerebral palsy • Muscular dystrophy • Musculoskeletal limitations • Paraplegia • Quadriplegia	• University faculty	• Computer technology was described by respondents of one study as most helpful in enabling them to get or keep a job.	• Education of employers on the nature, need for, and types of assistive devices available may help to secure employment for people with disabilities. • Keyboards, mice, and monitor screens should be customized for the user. • Examples include using switches that	Pell et al., 1997 Butterfield, Ramseur 2004 Burgstahler et al., 2011 Sandler, Blanck 2005 Yeager et al., 2006

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
1. Assistive Devices (Cont'd)	**1.2. Adapted Computers (Cont'd)**					can be activated with different parts of the body (e.g. with the kick of a foot, swipe of a hand, sip or puff, move of the head, blink of an eye) • The sensitivity of head-controlled assistive devices for using computers should be reduces to improve accuracy when using the device.	
	1.3. Assistive Software for Computers and Mobile Phones	• Not all computer applications allow mouse functionality through keyboard commands. • Cell phones must be held in one hand and operated with the other. • Phones with touchscreens, have small icons that can be challenging to activate.	• Cerebral palsy • Visual impairments • Multiple sclerosis • Spinal atrophy • Spina bifida • Rheumatoid arthritis • Amputation of the upper limb • Overuse syndrome • Muscular dystrophy • Paraplegia • Quadriplegia	• Governmental organizations • Small community organizations • Administration • Program coordination • Business education • Research • Computer programming • University faculty		• Compatibility problems should be resolved as soon as possible to enable those who use assistive devices to return to work. • Accessibility should be considered when IT is procured at an organization • Examples include Accessibility Options control panel in Windows or Macintosh, using FilterKeys to eliminate unwanted key strokes, disabling the key repeat function for those	De et al., 2001 Burgstahler et al., 2011 Sandler, Blanck 2005 Solovieva et al., 2010

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
1. Assistive Devices (Cont'd)	1.3. Assistive Software for Computers and Mobile Phones (Cont'd)	• Proprietary connection ports on some phones limit options for attaching alternate input devices.				who cannot release a key quickly enough to avoid multiple selections, using input filters such as key guards, using speech recognition systems, using computer input software support, using abbreviation expansion macros and word prediction software.	
	1.4 Adapted Equipment and Tools		• Multiple sclerosis • Mobility and dexterity impairments • Visual impairments • Auditory impairments • Spinal cord injury • Carpal tunnel syndrome • Traumatic brain injury • Arthritis and other rheumatic diseases • Lower limb amputation	• Legal profession • Food services • Retail industry • Healthcare • Hospitality	• In one study, 81% of participants rated the accommodations they made for an employee with a disability as effective. • In one case study, two-thirds of cases required only low-tech assistive technology to be successful (e.g. change dispenser, hooks, etc.)	• Adaptations need to be timed appropriately before, rather than during, periods of crisis. • There should be an open discussion between the employer and employee to find an accommodation that will make the employee more productive. This is called the "interactive process."	Johnson et al., 2004 Dietz 2007 Zolna et al., 2007 Crudden, McBroom 1999 Inge et al., 1998 Solovieva et al., 2011 Hernandez et al., 2009 Martz 2007 Allaire et al., 2003 Bruins et al., 2003
	1.5. Telephone Aids		• Auditory impairments • Wheelchair users with			• Examples include hands-free	Haynes, Linden 2012

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
1. Assistive Devices (Cont'd)	1.5. Telephone Aids (Cont'd)		physical disabilities • Visual impairments • Electrical injuries involving acute burns			telephones	Steinberg et al., 2002 Stergiou-Kita et al., 2014
	1.6 Personal Protective Equipment		• Upper extremity disorders • Contact dermatitis • Electrical injuries involving acute burns	• Government • Healthcare		• Examples include weight belt, gloves, wrist splints, anti-vibration gloves.	Shaw et al., 2001 Stergiou-Kita et al., 2014
	1.7 Assistive Technology Services					• Assistive technology services can be used to assist individuals with disabilities in the selection, acquisition or use of assistive technology devices. • Service include (1) evaluating the needs of an individual in their customary environment, (2) selecting, designing, fitting, customising, adapting, applying, maintaining or replacing assistive technology devices, (3) training in the context of implementing devices, (4) co-ordinating and using other services with assistive technology..	Schneider 1999

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
1. Assistive Devices (Cont'd)	1.8 Workplace Technology Predisposition Assessment					• Employers can conduct a Workplace Technology Predisposition Assessment to predict how well a particular employee will make use of assistive technology.	Pigini et al., 2010
2. Built Environment (Workstation)	2.1. Ergonomic Accommodat-ions	• Poor posture and pain resulting from workstation design. • People with rheumatoid arthritis and fibromyalgia have problems with hand intensive tasks and, therefore, with computer work. • Return to work accommodat-ion are more difficult when dealing with injuries that do not have a clear pathology or	• Upper extremity disorders • Wheelchair users with physical disabilities • Auditory impairments • Visual impairments • Functional and/or activity limitations • Mobility and dexterity impairments • Multiple disabilities • Electrical injuries with acute burns • Carpal tunnel syndrome • Rheumatoid arthritis • Fibromyalgia • Spinal cord injury • Congenital spinal condition • Spinal atrophy • Multiple sclerosis • Cerebral palsy • Rheumatoid arthritis • Amputation • Overuse syndrome	• Federal Civilian Workers • Office environments • Financial industry • Governmental organizations • Small community organizations • Managerial work • Professional work • Administrative work • Program coordination • Business • Education • Research	• Modifying the environment has been reported in the literature as the most effective method to reduce musculoskeletal symptoms.	• Employers ought to adjust workstations to match the functional ability of an employee with a disability. • Examples include bringing frequently used items closer, lowering work surfaces, raising desk height, creating handles on hanging files, relocating power switches and rearranging furniture and desk items. • To be able to successfully adapt their computer workstations, workers with rheumatoid arthritis and fibromyalgia must know that there are methods and equipment available that can modify the	Shaw et al., 2001 Abdel-Moty, Khalil 1991 Zolna et al., 2007 Kalef et al., 2014 Younes 2001 Golub 2006 Bruins et al., 2003 Baker et al., 2012 De Jonge, Rodger 2006 Mancuso et al., 2000 Sabata et al., 2008

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
2. Built Environment (Workstation) (Cont'd)	2.1. Ergonomic Accommodat-ions (Cont'd)	recovery pattern, such as electrical injury.				environment, where to get the equipment and how to install and implement it. • Employees should be given time and flexibility to set up their workstations and position equipment for comfort. • Implementation should include work site ergonomic assessment and follow-up instruction. • Occupational therapists can be brought in to assist employees with disabilities in customizing their workstations. • Ergonomists can be hired to optimize ergonomics using specialized software.	
	2.2. Lighting Modifications		• Mobility and dexterity impairments • Musculoskeletal and sensorineural disabilities	• Healthcare		• Adding low wattage overhead lights (task lighting) • Eliminating flickering lights • Using blinds or light filters • Additional lighting in spaces where writing takes place	Zolna et al., 2007 Shaw et al., 2001 Neal-Boylan et al., 2012 Scullion 2000

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
2. Built Environment (Workstation) (Cont'd)	**2.3. Job Site Modifications to Promote Workplace Inclusion**		• Auditory impairments • Visual impairments • Functional and/or activity limitations • Traumatic brain injuries	• Tele-communications		• Workstations of workers with disabilities can be turned so that he/she faces other employees • An open-concept working environment can be created so that employees with disabilities have more opportunities for interaction.	Wehman 2003 Kalef et al., 2014
	2.4 Provision of Separate Office		• Cerebral palsy • Visual impairments • Multiple sclerosis • Spinal atrophy • Spina bifida • Rheumatoid arthritis • Amputation of the upper limb • Overuse syndrome	• Governmental organizations • Small community organizations • Administration • Program coordination • Business education • Research • Computer programming		• A separate office can be especially useful for employees using assistive devices that may interact negatively with environmental sounds (e.g. dictation software).	Wagner, Blackorby 1996 De et al., 2001 Johnson, Fraser 2005
3. Built Environment (Workplace)	**3.1. Accessibility Modifications**		• Multiple sclerosis • Wheelchair users with physical disabilities • Auditory impairments • Visual impairments • Functional and/or activity limitations • Multiple disabilities • Mobility and dexterity impairments • Arthritis and other	• Long-term care facilities • Tele-communications • Healthcare • University faculty • Legal profession		• Employers should ensure that workplace and washrooms are accessible to wheelchair users and people with mobility issues. • Examples include accessible paths, ramps, railings, ramp	Vedeler, Schreuer 2011 Butterfield, Ramseur 2004 Jackson et al., 1920 Thornburg 1994

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
3. Built Environment (Workplace)	**3.1. Accessibility Modifications (Cont'd)**		rheumatic diseases • Lower limb amputation • Scleroderma			handles on doors, accessible opening and locking systems, floor surface changes and automatic doors. • Employees with disabilities can be placed in offices or cubicles near to exits. • All common areas should be made accessible as well. • It is advisable to hire a consultant to see what needs to be modified and to help with starting the process. • An employee with a disability should be a permanent member of an institution's committees involved with architectural planning, plants and operations. • Voice-activated elevator controls can be installed for people with mobility or visual impairments. • Accessible, multi-modal signage can be implemented for people with visual impairments.	Zolna et al., 2007 Kalef et al., 2014 Scullion 2000 Steinberg et al., 2002 Dietz 2007 Sabata et al., 2008 Williams et al., 2006 Allaire et al., 2003 Bruins et al., 2003 Mendelson et al., 2013

Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
	3.2. Off-Site Work Events			• Legal Profession		• Environments for off-site staff events (trainings, celebrations, etc.) should be accessible to staff members with disabilities.	Dietz 2007
4. Scheduling Accommodations	**4.1 Flexible Work Hours**	• Arriving to work on time	• Osteoarthritis • Rheumatoid arthritis • Inflammatory arthritis • Multiple sclerosis • Musculoskeletal disabilities • Sensorineural disabilities • Auditory impairments • Visual impairments • Wheelchair users with physical disabilities • Cerebral palsy • Osteogenesis imperfecta • Spina bifida • Paraplegia • Traumatic brain injury • Lower limb amputation • Musculoskeletal disorders • Scleroderma	• Business • Finance • Administration • Healthcare • Teaching • Sciences • Arts • Sales • Services • Trades • Transportation • Equipment operation • University Faculty • Legal profession • Health and Welfare • Education and Research • Finance and Records • Transportation • Legal profession • Manufacturing • Entertainment industry • Retail industry • Construction industry	• Making a modified work schedule can help reduce productivity losses, job disruptions and workplace activity limitations. • In one study, half of the organizations that implemented flexible work schedules reported it as a very effective accommodation. • Based on duration modeling using survey data, flexible scheduling is one of the most effective accommodations	• Allowing breaks for making or attending medical appointments • Work schedules can be created to accommodate fluctuations in an employee's energy level. • An open discussion between the employer and employee should be held to find the accommodation that would make the employee most productive. • Changes to work schedule in the retail sector are effective for both workers with disabilities and those without disabilities. • Employees with disabilities can be provided with additional breaks or rest periods	Mancuso et al., 2000 Butterfield, Ramseur 2004 Crockatt et al., 2009 Johnson et al., 2004 Gignac et al., 2014 Neal-Boylan et al., 2012 Steinberg et al., 2002 Dietz 2007 Zolna et al., 2007 Erickson et al., 2014 Lee 1996 Scullion 2000 Campolieti 2005 Miller et al., 2014

Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
4. Scheduling Accommodations (Cont'd)	**4.1. Flexible Work Hours (Cont'd)**			• Hospitality	for permanently impaired injured workers in terms of significantly increasing employment duration.	throughout the day.	Newton, Ormerod 2005 Vedeler, Schreuer 2011 Solovieva et al., 2011 Hernandez et al., 2009 Martz 2007 Johnson, Fraser 2005 Schoppen et al., 2001 Yelin et al., 2000 Daly, Bound 1996 Allaire et al., 2003 Bruins et al., 2003 Mendelson et al., 2013 Solovieva et al., 2010
	4.2. Part-Time Work	• Return to work accommodat- ion are more difficult when dealing with injuries that do not have a	• Electrical injuries involving acute burns	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry	• Viewed as very effective by around half of the organizations studied who implemented the practice.		Erickson et al., 2014, Lee 1996, Stergiou-Kita et al., 2014

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
4. Scheduling Accommodations (Cont'd)	4.2. Part-Time Work (Cont'd)	clear pathology or recovery pattern, such as electrical injury.					
	4.3. Scheduling to Promote Inclusion		• Traumatic brain injury			• Arranging schedules so that employees with disabilities can take breaks with other employees • Changing work schedules to give people with disabilities an opportunity to work in a team. • Building in informal meeting times throughout the workday.	Wehman 2003
	4.4. Leave Policies		• Inflammatory arthritis • Osteoarthritis	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry	• Less than 2% of organizations studied that implemented extended medical leave reported it as not being effective. • Short-term leave can help reduce productivity loss, job disruptions and workplace activity limitations.	• Permitting employees with disabilities to take short-term, unpaid leave. • Allow employees with disabilities to exceed the maximum medical leave duration as an accommodation.	Lee 1996 Erickson et al., 2014 Gignac et al., 2014 Martz 2007

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
5. Work Location	**5.1. Working From Home (Telework)**	• Travelling and commuting	• Rheumatoid arthritis • Mobility and dexterity impairments • Inflammatory arthritis and osteoarthritis • Cerebral palsy • Osteogenesis imperfecta • Carpal tunnel syndrome • Traumatic brain injury • Spina bifida • Physical or sensory disabilities • Cardiac problems • Spina bifida • Multiple sclerosis • Visual impairments • Auditory impairments • Paraplegia • Quadriplegia • Upper extremity disorders	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry • Managers • Professionals • Technicians • Sales • Office/Clerical • Craft Workers, Operatives and Laborers • Service Professions • Health care advocacy • Technical support • Research • Programming • Teaching • Technical writing • Skills coaching • Data entry	• Making work from home arrangements available can help reduce productivity losses, job disruptions and workplace activity limitations. • 9 people with disabilities were interviewed and identified the elimination of travel time and flexible work schedules as key strengths of telework.	• Employers should endeavor to address concerns regarding feelings of isolation and the difficulty in separating home and work environments. • Employers should conduct a fact-specific, case-by-case analysis of the essential functions of the employee's job to determine whether telecommuting is a reasonable accommodation. • Establishing a framework within which to assess the reasonableness of telecommuting as an accommodation keeps the process consistent and transparent for both employer and employee.	Mancuso et al., 2000 Zolna et al., 2007 Hagner, Cooney 2003 Gignac et al., 2014 Crockatt et al., 2009 Vedeler, Schreuer 2011 Solovieva et al., 2011 Murray, Kenny, 1990 Solovieva, Walls 2013 Linden, Milchus 2014 McNaughton et al., 2014 Solovieva et al., 2010 Kaplan et al., 2006
	5.2. Reductions in Work-Related Travel		• Rheumatoid arthritis				Mancuso et al., 2000

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
6. Job Restructuring	**6.1. Altering Work Responsibilities**		• Cerebral palsy • Spinal cord injury • Traumatic brain injury • Osteoarthritis • Rheumatoid arthritis • Auditory impairments • Visual impairments • Osteogenesis 75ccommoda • Spina bifida • Lower limb amputation • Musculoskeletal conditions • Mobility and dexterity impairments • Upper extremity disorders • Electrical injuries involving acute burns • Mobility and dexterity impairments • Multiple sclerosis • Paraplegia • Carpal tunnel syndrome	• Legal profession • Healthcare • Hospitality • Retail industry • Federal civilian workers • Legal profession • Technology sector	• In one study, 34% of questionnaire respondents stated that adjustment in workload was their most preferred accommodation.	• A mismatch between work demands and a person's capacity should be treated as a health emergency. • An open discussion between the employer and employee should be held to find the accommodation that would make the employee most productive. • Tasks that employees with disabilities are unable to take on can be delegated to co-workers. • Employers can reduce the physical requirements of work where such a change is necessary and/or possible. • Retraining employees for new roles can be a useful way to retain existing employees with disabilities.	Inge et al., 2000 Dietz 2007 Crockatt et al., 2009 Butterfield, Ramseur 2004 Crudden, McBroom 1999 Vedeler, Schreuer 2011 Hernandez et al., 2009 Schoppen et al., 2001 Yelin et al., 2000 Daly, Bound 1996 Allaire et al., 2003 Bruins et al., 2003 Mancuso et al., 2000, Yelin et al., 2000 Zolna et al., 2007 Shaw et al., 2001

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
6. Job Restructuring (Cont'd)	**6.1. Altering Work Responsibilities (Cont'd)**						Stergiou-Kita et al., 2014, Martz 2007, James et al., 2006, Solovieva, Walls 2013 Solovieva et al., 2010 Smith 2002, Solovieva et al., 2011
	6.2 Altering Pace or Order of Work		• Rheumatic diseases • Multiple sclerosis • Lower limb amputation			• Tasks can be ordered in such a way that tasks requiring more concentration are completed earlier in the day, and routine tasks are completed later on.	Yelin 2007, Johnson, Fraser 2005, Bruins et al., 2003

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
7. Natural Supports	7.1. Co-Worker Support and Assistance	• Lack of employee support • Lack of under-standing of disability by employees. • Limited supervisor availability to provide support or accommodat-ion.	• Severe disabilities • Rheumatic diseases • Auditory impairments • Electrical injuries involving acute burns • Severe physical disabilities • Lower limb amputation	• Restaurants • Clerical work • Library work • Data entry • Mail delivery • Factory work • Assembly line work • Administration • Food industry • Retail industry • Manufacturing industry	• Research has found that coworkers are able to provide instruction, modeling, physical prompts, feedback, and praise, but may require training.	• Co-workers of an employee with a disability can provide such supports as skill training, job modifications and adaptations, and instruction. • In order to transfer all or part of the responsibility for support from professional service providers, it is important to implement natural supports to provide consistent ongoing training and follow-along services.	Storey, Certo 1996 Trach, Mayhall 1997 Yelin 2007 Haynes, Linden 2012 Crockatt et al., 2009 Hagner et al., 1995 Storey 2003 Stergiou-Kita et al., 2014 Test, Wood 1996 Bruins et al., 2003
	7.2. Appointing a Mentor or Teammate		• Severe disabilities • Physical disability • Traumatic brain injury	• Financial industry • Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry • Food industry	• In a case study at Universal Studios, the retention rate of employees with disabilities provided with a mentor was 62.5% compared to 30% among staff without disabilities.	• Better integration results can be achieved if a manager (who volunteers) is assigned to mentor a new worker with a severe disability, rather than hiring a job coach for this new employee. • Mentorship programs can also match a person with a disability to someone else who has a	Weiner, Zivolich 1998 Younes 2001 Erickson et al., 2014 Klimoski, Donahue 1997 Lee et al., 1997

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
7. Natural Supports (Cont'd)	**7.2. Appointing a Mentor or Teammate (Cont'd)**					similar job. • An alignment of work-related expectations with a teammate (a staff member with whom there is a regular need to interact and coordinate behaviour) can facilitate return to work for an employee with a disability.	
	7.3 Co-Worker Support of Accommodat-ions		• Musculoskeletal disorders • Finger amputation • Lacerations	• Synthetic fabrics manufacturing • Food processing and packaging • Residential nursing care • Thrift clothing retail		• Supervisors must inform coworkers of temporary restrictions for returning workers, and obtain their assistance and cooperation.	Shaw et al., 2003 Shaw et al., 2008 Riesen 2010

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
8. Employer Supports	8.1. Positive Attitudes Toward Staff with Disabilities		• Visual impairment • Severe head injury			• Supervisors should provide encouragement to employees with disabilities.	Crudden, McBroom 1999 Johnson 1998
	8.2. Commitment to Fair Treatment					• Employers must avoid unfair treatment practices including disparate opportunities for advancement, weak or unacceptable responses to accommodation requests or more negative performance evaluations.	Klimoski, Donahue 1997
	8.3. Emotional Support		• Rheumatoid arthritis • Musculoskeletal disorders • Finger amputation • Lacerations	• Synthetic fabrics manufacturing • Food processing and packaging • Residential nursing care • Thrift clothing retail	• People with rheumatoid arthritis ranked employer support as the most important factor enabling work continuation.	• A supervisor's efforts to address the emotional consequences of injury by conveying a positive attitude or expressing empathy or support are important. • All supervisors must have a deep and accurate understanding of employees' disabilities. • Supervisor must have zero tolerance for a hostile climate, and must do whatever is	Mancuso et al., 2000 Crockatt et al., 2009 Shaw et al., 2003 Yelin 2007 Klimoski, Donahue 1997 Dong et al., 2012 Shaw et al., 2003 Detaille et al., 2003

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
8. Employer Supports (Cont'd)	8.4. Emotional Support (Cont'd)					possible to promote a supportive and tolerant micro-climate. • Supervisor should be able to buffer or mediate interpersonal conflict when it arises in the work group.	
	8.5. Provision of Career Planning and Development Tools			• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry			Erickson et al., 2014
	8.6. Provision of Additional Supervision or Training		• Multiple chemical sensitivity • Rheumatoid arthritis • Musculoskeletal disorders • Auditory impairment	• Healthcare • Food services • Retail industry		• Advice on how to cope at work can be especially helpful for people with rheumatoid arthritis. • Providing training on how to approach one's supervisor to request accommodation can have an impact on job success and satisfaction for an employee with a disability. • It is helpful to provide a sample of correct and incorrect work so Deaf employees can	Hyland, Rutigliano 2013 Lee 1996 Scullion 2000 Detaille et al., 2003 Wheeler-Scruggs 2002 Daly, Bound 1996 Hansen 1999

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
8. Employer Supports (Cont'd)	**8.6. Provision of Additional Supervision or Training (Cont'd)**					self-monitor the work and reduce the need for correction.	
	8.7. Provision of Access to Mental Health Supports		• Multiple chemical sensitivity			• Employers can provide access to personal adjustment counseling, treatment for anxiety and depression, or referrals to support groups and advocacy organizations.	Koch et al., 2007
	8.8. Provision of Extended Health Benefits		• Inflammatory arthritis • Osteoarthritis	• Business • Finance • Administration • Healthcare • Teaching • Sciences • Arts • Sales • Services • Trades • Transportation • Equipment operation • University Faculty • Legal profession • Health and Welfare • Education and Research • Finance and Records	• Only 25.1% of study respondents reported not needing extended health benefits like medication and physical therapy.		Gignac et al., 2014

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
8. Employer Supports (Cont'd)	**8.8. Provision of Extended Health Benefits (Cont'd)**			• Legal profession • Manufacturing • Entertainment industry • Retail industry • Construction			
	8.9. Adjusting Timelines for Promotion Decisions		• Wheelchair users with physical disabilities • Visual impairments • Auditory impairments	• University faculty		• Members of committees on promotions should be provided with education around reasonable accommodation for employees with disabilities.	Steinberg et al., 2002
	8.10. Adjusting Standards of Performance Appraisal		• Visual impairments	• Legal profession • Technology sector			Smith 2002
9. Personal Assistance Services			• Mobility and dexterity impairments • Cerebral palsy • Osteogenesis imperfecta • Spina bifida • Visual impairments • Auditory impairments • Wheelchair users with physical disabilities • Paraplegia • Carpal tunnel syndrome • Traumatic brain injury	• University Faculty • Healthcare • Hospitality Retail industry	• People with disabilities who have implemented Personal Assistance Services (PAS) accommodations found that their work ability increased from being substantially limited to not limited at all.	• Examples include personal attendant or service animal • Employees can be responsible for recruiting and training personal assistants, but compensation for personal assistants can be provided by the employer. • Provision of clerical or secretarial assistance • Provision of readers	Barcus, Targett 2003 Vedeler, Schreuer 2011 Crudden, McBroom 1999 Barcus, Targett 2003 Zolna et al., 2007 Stoddard 2006

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
9. Personal Assistance Services (Cont'd)			• Musculoskeletal disorders			and note-takers • Provision of drivers • Provision of sign language interpreters • Help from security guards • Provision of job coach • Employers should establish policies for arranging for personal assistance services. • Personal assistants can be shared between multiple employees.	Solovieva, Walls 2013 Solovieva et al., 2010 Solovieva et al., 2011 Hernandez et al., 2009 Stoddard, Kraus 2006 Daly, Bound 1996
10. Transportation Accommodations	10.1. Accessible Parking	• Public transport system may not be flexible enough to permit an employee to arrive to work on time.	• Reduced mobility • Cerebral palsy • Osteogenesis imperfecta • Spina bifida			• Accessible parking should be located near the workplace entrance.	Jakobsen, Svendsen 2013 Vedeler, Schreuer 2011

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
	10.2. Provision of Car Service or Other Transportation	• Traveling and commuting	• Rheumatoid arthritis • Musculoskeletal disorders				Mancuso et al., 2000 Martz 2007 Daly, Bound 1996 Allaire et al., 2003
	10.3. Reassessing Promotion Requirements for Extensive Travel		• Wheelchair users with physical disabilities	• University Faculty		• Promotion committee members should be provided with education around reasonable accommodation for employees with disabilities.	Steinberg et al., 2002
11. Inclusive Recruitment and Hiring Practices	11.1. Inclusiveness and Accessibility of Job Advertisements			• Healthcare • Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry		• Employers can state in job advertisements that they positively welcome applications from candidates with disabilities. • Employers should regularly review the accessibility of their online recruitment website.	Scullion 2000 Erickson et al., 2014
	11.2. Accessibility of Application and Interview Process			• Healthcare • Manual industries • Professional industries • Service industry • Sales	• Less than 2% of organizations implementing a training process for HR staff and supervisors found it to be	• Employers should provide advanced notice to applicants regarding job application process accommodations. • Employers must	Scullion 2000 Erickson et al., 2014

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
11. Inclusive Recruitment and Hiring Practices (Cont'd)	11.2. Accessibility of Application and Interview Process (Cont'd)			• Transportation • Health industry	ineffective.	consider the accessibility of the interview venue and make alternative arrangements as required. • HR staff and supervisors should be trained on effective interviewing of people with disabilities • Brief staff, including the receptionist, in advance of interviews involving candidates with disabilities. • Pre-employment screenings should be evaluated for bias.	
	11.3. Commitment to Recruitment of People with Disabilities	• Lack of qualified applicants	• Severe disabilities • Auditory impairments	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry • University faculty • Financial industry	• Only 12% of organizations studied rated setting explicit goals for recruitment of people with disabilities as being ineffective. • Only 12% of organizations rated senior management commitment to disability recruitment as ineffective.	• Support for the equal recruitment and retention of persons with disabilities should be clearly stated in the mission statements of organizations. • Senior management should commit to recruitment of people with disabilities, and discuss the ways to overcome organizational barriers in management training.	Erickson et al., 2014 Hyland, Rutigliano 2013 Steinberg et al., 2002 Younes 2001 Maier et al., 2012 Hearne 1991

Appendix F: Findings Table

Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
11. Inclusive Recruitment and Hiring Practices (Cont'd)	**11.3. Commitment to Recruitment of People with Disabilities (Cont'd)**				• At the Just One Break Job Fair in New York City, 50-75 companies hired 12% of attendees.	• Best practices include establishment of training and hiring programs for people with disabilities, or participating in job fairs that seek talent directly from the disability community.	
12. Supported Employment and Job Carving		• Individuals with a combination of severe intellectual disability and physical disabilities were least likely to obtain supported employment.	• Significant disabilities • Severe disabilities • Spinal cord injury	• Retail cashier • Retail bookkeeper • Small Business Development Centre receptionist • Marketing and product support operations	• Supported employment can reduce the impact of disability during work time.	• When creating supported employment, employers are encouraged to consider how job restructuring might improve the productivity of their business. • Employers can consider job duties that the company may be paying other workers overtime to complete. • Employers may think of tasks that could be performed by several different employees in the business, but could be consolidated and more efficiently completed by one employee. • Employers can leverage the skills	Wehman 1999 Inge et al., 1998 Nietupski, Hamre-Nietupski 2000

Appendix F: Findings Table

Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
12. Supported Employment and Job Carving (Cont'd)						and expertise of employment specialists, who have a variety of roles (planner, community resource expert, consultant and technician). • Recommendations for job carving are (1) Target Several Candidates with a Range of Skills and Support Needs, (2) Develop an "Ideal Job Match Hypothesis" to Guide Job Development, (3) Target Businesses that Might Match Hypotheses, (4) Obtain Employer Acknowledgment of Benefits of Carving, (5) Observe and Interview Operations Staff to Identify Duties, (6) Match Duties to Candidates, (7) Develop and Present Hiring Proposal	
13. Partnerships	**13.1. Partnerships with Rehabilitation**		• Multiple sclerosis • Low back pain		• Interviewees consulted in a study recognized	• During worksite visits from rehabilitation professionals, it is	Brooke et al., 1998

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
13. Partnerships (Cont'd)	and Medical Professionals				the importance of supervisors to interact with medical providers, especially to design optimal work restrictions.	important that the employee is supported to drive the agenda, rather than the vocational rehabilitation professional advocating for the person. • High-quality communication (without acronyms and jargon) is needed to establish these mutually-beneficial partnerships.	Doogan, Playford 2014 Shaw et al., 2003 Coole et al., 2010
	13.2. Partnerships with Vocational Service Agencies	• Employers and coworkers are sometimes too stretched themselves to give extra support.	• Auditory impairments • Visual impairments • Neurological disabilities • Functional and/or activity limitations • Multiple disabilities • Traumatic brain injury	• Financial industry • Tele-communications • Staffing • Healthcare • Office management • Police patrollers • Furniture delivery	• The Telenor tele-communications company in Norway found this type of partnership led to greater workplace satisfaction and reductions in sick leave rates.	• Employers can use resources made available from vocational rehabilitation organizations when planning accommodations.	Younes 2001 Hagner et al., 1995 Kalef et al., 2014 Unger 2007 Wall et al., 1998
	13.3 Consultant Services for Supervisors Training Co-Workers as Mentors		• Severe disabilities • Physical disabilities • Traumatic brain injury	• Entertainment industry			Weiner, Zivolich 1998

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
13. Partnerships (Cont'd)	13.4. Partnerships with Employment and Community Organizations	• One of the biggest barriers faced by individuals with musculo-skeletal disorders is the ignorance of others regarding their condition.	• Musculoskeletal disorders • Cerebral palsy • Spinal cord injury • Traumatic brain injury	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry	• Only 12% or less of organizations studied rated this practice as being ineffective. .	• Employers can use resources made available from community organizations when planning accommodations. • Charities such as Arthritis Care run arthritis awareness course that can be delivered in the workplace and may to educate a workforce about musculoskeletal disorders. • Employers who are concerned about implementing accommodations can obtain support from employment specialists who can (a) identify and arrange for the purchase of assistive technology, (b) find funding for assistive technology, and (c) guarantee that work will be done while the new employee waits for assistive technology, or learns to use it.	Younes 2001 Erickson et al., 2014 Summers 2014 Inge et al., 2000

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
	13.5. Learning from Employers Experienced in Hiring People with Disabilities					• A credible source of information for inexperienced employers with regard to the success of workers with disabilities may be those employers experienced in hiring them. • Joining trade or industry associations could be helpful for employers in developing training or information materials with the assistance of experienced employers, agencies and professionals in the fields of disability and rehabilitation	Lee 1996
14. Workplace Culture	**14.1. Improve Organizational Attitudes Toward People with Disabilities**		• Auditory impairments • Visual impairments • Neurological disabilities • Functional and/or activity limitations • Multiple disabilities • Reduced mobility	• Tele-communications		• HR professionals, particularly as a member of the top management team, can play a central role in promoting the corporate culture. • HR professionals have a number of tools to affect the shared values and assumptions that constitute culture, including initiation	Brooke et al., 1998 Jakobsen, Svendsen 2013 James et al., 2006 Kalef et al., 2014 Klimoski, Donahue 1997 Gewurtz, Kirsh 2009

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
14. Workplace Culture (Cont'd)	14.1. Improve Organizational Attitudes Toward People with Disabilities (Cont'd)					and institutionalization of corporate climate measures, identification of "best practices", aligning of performance measurement and compensation systems. • In larger companies creation of a Disabilities Advisory Panel would be valuable. Such a panel might be used to shape policy and practices. • It is important to attend to existing perceptions of persons with disabilities, as well as diversity issues within organizational culture. • Such issues could be addressed through education and training targeted at increasing awareness of the contributions persons with disabilities can make in the workplace, and how the needs of	Storey, Certo 1996

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
14. Workplace Culture (Cont'd)	**14.1. Improve Organizational Attitudes Toward People with Disabilities (Cont'd)**					persons with disabilities could be met through reasonable accommodations.	
	14.2. Disability Education and Training for Employees Without Disabilities	• Attitudes and stereotypes • Fear of uncertainty • Colleagues are skeptical of non-traditional approaches to work tasks. • Lack of supervisor knowledge about accommodat-ions to make. • Negative expectations of managers about people with disabilities and their performance levels and skills. • One of the biggest barriers faced	• Visual impairments • Auditory impairments • Musculoskeletal disorders • Paraplegia • Carpal tunnel syndrome • Traumatic brain injury	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry • Financial industry	• Less than 2% of organizations implementing sensitivity training found it to be ineffective.	• Encourage employees with disabilities to teach coworkers about the specifics of their disability. • Employers should undergo training on the legal requirements of disability non-discrimination and accommodation. • Managers should undergo training to feel confident and comfortable in their skills in dealing with people with disabilities. • Employers can include disability awareness and sensitivity as a topic in training for managers and supervisors. • Line managers need to take responsibility	Klimoski, Donahue 1997 Younes 2001 Hansen 1999 Zolna et al., 2007 Golub 2006 Neal-Boylan et al., 2012 Scullion 2000 Erickson et al., 2014 Summers 2014 Solovieva et al., 2011

Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
14. Workplace Culture (Cont'd)	14.2. Disability Education and Training for Employees Without Disabilities (Cont'd)	by individuals with MSDs is the ignorance of others regarding their condition.				for becoming more aware for the conditions their employees are living with, and how it can have an impact on their role. • Charities such as Arthritis Care offer arthritis awareness course that can be delivered in the workplace and be used to educate the staff of a workplace about musculoskeletal disorders.	
	14.3. Promote social interactions through strategic chat time	• People who are blind or have low vision are at a social disadvantage because they are unable to communicate non-verbally.	• Visual impairments			• Employees might be given specific information about the particular disability of a newly hired employee and their roles in facilitating integration.	Naraine, Fels 2013
	14.4. Create Disability-Focused Employee Network		• Severe disabilities	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry			Erickson et al., 2014 Hyland, Rutigliano 2013

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
14. Workplace Culture (Cont'd)	14.5. Set Explicit Organizational Goals Related to Retention or Advancement of Employees with Disabilities			• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry			Erickson et al., 2014
	14.6. Include Disability in Diversity Policies and Programs		• Severe disabilities			• Employers need to establish policy frameworks which clearly detail not only what can and should be done, but also make clear who is responsible and accountable for implementing their requirements. • Employers must take the necessary actions to make sure these frameworks are implemented. • By ensuring that people with disabilities are included and explicitly noted in diversity policies and programs, employers can raise awareness and promote inclusion within their organization.	Hyland, Rutigliano 2013 James et al., 2006

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
15. Vocational Rehabilitation for Injured Workers	**15.1. Enable Gradual Return to Work**		• Multiple sclerosis • Brain injury		• Can help to prevent fatigue and resulting anxiety among employees with multiple sclerosis. • Studied individuals with brain injuries who made a successful return to work had help for about 8 months on average, which was significantly longer than the duration of help available to those who failed at work.	• Return to work after head injury must be gradual, with a long period of in-vivo training. • A return should be made 6-18 months post-injury • Return to work should be to the previous employer, familiar work or other structured occupation (e.g. training, voluntary work) • Easier conditions of work, and other support, needs to be arranged up front • This may need to continue for at least 3 months, and probably much longer • There needs to be awareness from the outset of the possibility that a permanent change to a lower level of work could be the outcome.	Doogan, Playford 2014 Johnson 1998
	15.2. Modified Work	• Return to work accommodat-ions are more difficult when	• Upper extremity disorders • Back injuries • Musculoskeletal	• Federal civilian workers • Hospital workers • Industrial workers	• Studies rated high in methodological quality show that employees with	• Employers should let employees know if there is a modified work option available after an injury.	Shaw et al., 2001 Krause et al., 1998

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
15. Vocational Rehabilitation for Injured Workers (Cont'd)	**15.2. Modified Work (Cont'd)**	dealing with injuries that do not have a clear pathology or recovery pattern, such as electrical injury.	injuries • Traumatic brain injury • Injuries of specific body sites • Electrical injuries involving acute burns	• Armed services workers	access to modified work return to work after a disabling injury about twice as often as employees without access to any form of modified duty. • The number of lost work days per disabling injury was also cut in half when companies implemented modified work programs.	• One study showed that only 20% of over 4,000 disability insurance beneficiaries eligible for a work trial program had any knowledge of it, but those who knew about the program were twice as likely to return to work. • Process elements that facilitate the effective provision of workplace accommodations include: (1) finding a "just right" fit between workers' abilities and assigned tasks and duties (2) establishing effective lines of communication between relevant stakeholders; (3) prompt response to needs; (4) having a knowledgeable individual in a position of power to advocate on workers' behalf.	Stergiou-Kita et al., 2014
	15.4. Strength Training		• Upper-limb chronic pain	• Abattoir	• Specific strength training at the	• To help workers in highly physical roles	Sundstrup et al., 2014

Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
15. Vocational Rehabilitation for Injured Workers (Cont'd)	**15.4. Strength Training (Cont'd)**				workplace prevented deterioration of work ability among abattoir workers with chronic pain and work disability.	to reduce chronic pain, the employer is recommended to introduce strength training as opposed to ergonomics training.	
16. Communication	**16.1. Determine Communication Style**		• Auditory impairments	• Food services • Retail industry • Customer service • Resource librarians • Garment pressers • Teachers • Registered psychologists • Project managers	• Hearing impaired respondents reported using many adaptations, for instance, using e-mail versus using the telephone or organizing work communications with others that are face-to-face so that a person with hearing loss can rely on the best possible opportunity for understanding and communicating with others at work.	• The first step in accommodating a person who is Deaf is to determine his or her communication style--they may use lip-reading and speech, visual communication like American Sign Language (ASL), or computer-assisted translators.	Hansen 1999 Shaw et al., 2013
	16.2. Mutual Accommodation Model		• Visual impairments			• Mutual accommodation is a situation in which the employer, employee	Golub 2006

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
16. Communication (Cont'd)	**16.2. Mutual Accommodation Model (Cont'd)**					and other staff members are comfortable talking about different ways to accomplish tasks. • Employees discuss different perspectives by acknowledging their own differences while respecting and valuing differences in others. • Mutual accommodation permits people to talk about differences.	
	16.3. Encourage Disclosure of Disability		• Auditory impairments	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry • Customer service • Resource librarians • Garment pressers • Teachers • Registered psychologists • Project managers		• Data collected from disability disclosure can be used to investigate attitudinal gaps, benchmark against external norms, and explore the unique needs and challenges of employees with disabilities. • Staff surveys can be used to collect this data. • Employees with hearing loss can disclose their hearing needs and ask others to adapt work processes (e.g.	Hyland, Rutigliano 2013 James et al., 2006 Erickson et al., 2014 Shaw et al., 2013

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
16. Communication (Cont'd)	**16.4. Encourage Disclosure of Disability (Cont'd)**					taking minutes or learning ways to support communication through use of signals).	
	16.5. Encourage Open Communication About Fit Between Workers' Skills and Abilities and Required Tasks	• Possible conflicts or disagreement among the workers related to return to work and adjustments or accommodat-ions.	• Reduced mobility			• Employers should encourage people with reduced mobility to share their perspective on their limitations, and the kinds of tasks they can do. • Develop mechanisms to facilitate communication, discussion and co-ordination between the worker and the various organizational actors who can contribute to the rehabilitation process (e.g. human resources specialists, safety practitioners, occupational health personnel and union representatives).	Jakobsen, Svendsen 2013 Klimoski, Donahue 1997 James et al., 2006 Dong et al., 2012
	16.6. Make All Written Communication Accessible to Employees with Disabilities		• Visual impairments • Auditory impairments • Traumatic brain injury			• Ask ahead of time if the materials or information presented in the meeting would be accessible to everyone.	Golub 2006 Solovieva et al., 2011

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
17. Accommodation Process	**17.1. Universal Accommodation**	• One of the biggest barriers faced by individuals with MSDs is the ignorance of others regarding their condition.	• Auditory impairments • Visual impairments • Mobility impairments • Musculoskeletal disorders			• The finding that many employees without disabilities receive accommodations suggests disability accommodations should be framed in the context of accommodations for all employees. • Everyone in the workplace should get an assessment.	Schur et al., 2014 Summers 2014
	17.2. Establish a Centralized Accommodation Fund			• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry	• Less than 2% of organizations studied that implemented this practice reported it as not effective. Over half of organizations reported that the practice is very effective.		Erickson et al., 2014
	17.3. Designate an Office or Individual to Address Accommodation Issues			• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry	• Less than 2% of organizations implementing this practice reported it as not effective. • Over half of organizations reported that the practice is very effective.		Erickson et al., 2014

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
17. Accommodation Process (Cont'd)	**17.4. Implement a Formal Decision-Making and Implementation Process for Provision of Accommodations**		• Upper extremity disorders	• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry • U.S. Federal civilian workers	• Less than 2% of the organizations studied that implemented this practice reported it as not effective. • Over half of organizations reported that the practice is very effective.		Erickson et al., 2014 Shaw, Feuerstein 2004
	17.5. Use Worksite Walkthrough Checklist to Identify Accommodations Corresponding to Individual Needs		• Upper extremity disorders	• U.S. Federal civilian workers			Shaw, Feuerstein 2004
	17.6. Review Accommodations with Employees Annually			• Healthcare			Scullion 2000
	17.7. Follow-Up After Work Injury		• Musculoskeletal disorders • Finger amputation • Lacerations	• Synthetic fabrics manufacturing • Food processing and packaging • Residential nursing care • Thrift clothing retail		• Supervisor's efforts to keep in touch with injured workers after an injury, and monitor symptoms while on restricted or modified duty are important.	Shaw et al., 2003
	17.8. Provide a Comprehensive		• Reduced mobility				Jakobsen, Svendsen 2013

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Accommodation or Policy		Barriers Described	Examples of Relevant Disabilities	Examples of Relevant Industries & Occupations	Evidence of Effectiveness	Best Practices for Implementation	Relevant Articles
17. Accommodation Process (Cont'd)	**Overview of Work Responsibilities**						Klimoski, Donahue 1997
	17.9. Enhance Managers' Knowledge of Bureaucratic Procedures and Rules Related to Return to Work		• Reduced mobility				Jakobsen, Svendsen 2013
	17.10. Include Progress Toward Retention or Advancement Goals for Employees with Disabilities in the Performance Appraisals of Senior Management	• Lack of senior management commitment to disability as part of diversity.		• Professional industries • Service industry • Sales • Transportation • Health industry			Erickson et al., 2014
	17.11. Require Subcontractors to Adhere to Non-discrimination Requirements			• Manual industries • Professional industries • Service industry • Sales • Transportation • Health industry	• Less than 12% of organizations studied that used this practice reported it as being ineffective. • The largest proportion of organizations (37.9%) reported it as very effective.		Erickson et al., 2014

Appendix G: Reasonable Accommodation Online Resources

This table outlines the most pertinent resources identified through the Grey Literature review. Some items are included in the 'Findings' section of this report, while other novel items are included for comprehensiveness.

(***** Denotes resources found most helpful in the current review.)

Website	Description	Key Resources	Resource Link	Description
Business Takes Action www.businesstakesaction.ca	A Canadian Manufacturers & Exporters initiative. It aims to provide the tools and resources that employers require to remove the physical and attitudinal barriers associated with hiring people with disabilities.	Employer Resources	www.businesstakesaction.ca/en/employer-resources/employer-resources.html	These resources provide employers with information on disability, accessible hardware and software, and information on the roles and responsibilities of various stakeholders (e.g. employer, employee, unions) in the accommodation process in addition to other links to support providers and employment networks.
Canadian Human Rights Commission http://www.chrc-ccdp.ca/eng	The Canadian Human Rights Commission was created to administer the *Canadian Human Rights Act*. It also ensures compliance with the *Employment Equity Act*. The Commission operates independently from government when administering these two acts of Parliament.	A place for all: a guide to creating an inclusive workplace (2006) *	http://www.chrc-ccdp.ca/sites/default/files/aplaceforall_1.pdf	This guide sets out detailed elements of a model employer policy and procedures on workplace accommodation.
Ontario Chamber of Commerce – Accessibility Resource Library http://www.occ.ca/programs/accessibility-works/resources/	Ontario Chamber of Commerce provides resources to support employers to comply with the AODA. The site includes templates to develop policies and procedures that meet accessibility requirements for AODA as well as links to other resources on accommodations.	Accessible customer service: Barriers and Solutions	http://www.occ.ca/wp-content/uploads/2014/08/Barriers-and-Solutions-chart.pdf	This document describes potential practices for accessible customer service (practices could be used to accommodate employees with disabilities).
Conference Board of Canada http://www.conferenceboard.ca/	The Conference Board of Canada is dedicated to building a better future for Canadians by making our economy and society more dynamic and competitive.	Employers' Toolkit: Making Ontario Workplaces Accessible to People with Disabilities (2012) *	http://www.conferenceboard.ca/e-library/abstract.aspx?did=5258	Comprehensive resource with a focus on compliance with AODA. Includes information, templates, tools, business profiles and additional resources to support employers develop effective accommodation plans for employees with disabilities.

Website	Description	Key Resources	Resource Link	Description
Job Accommodation Network http://askjan.org	Leading U.S. source of guidance on workplace accommodations and disability employment issues.	Searchable Online Accommodation Resource (SOAR) *	http://askjan.org/soar/index.htm	Easy to use and comprehensive system allows users to obtain accommodation ideas by impairment type and occupation. An extensive list of specific products and assistive technologies are also suggested for various impairment types including hearing, vision and motor impairments.
Job Accommodation Network http://askjan.org	Leading U.S. source of guidance on workplace accommodations and disability employment issues.	Universal Design and Assistive Technology as Workplace Accommodations: An Exploratory White Paper on Implementation and Outcomes (2007)	https://askjan.org/topics/tech.htm	Provides a step by step process for choosing universal design and assistive technology for employees with disabilities.
Canadian Hearing Society www.chs.ca	Canadian Hearing Society aims to improve the independence of people who are deaf and/ or hard of hearing, and to promote the prevention of hearing loss.	Breaking the Sound Barriers: Employing People who are Deaf, Deafened or Hard of Hearing *	http://www.chs.ca/sites/default/files/uploads/breaking_the_sound_barriers.pdf	This guide for employers includes information on communication with employees who are deaf and/or hard of hearing, recruiting and introducing new employees to the workplace, concrete workplace accommodation suggestions and 5 steps to a successful accommodation (including employer and employee responsibilities).
Canadian National Institute for the Blind (CNIB) www.cnib.ca	CNIB provides career and employment services for individuals who are blind or partially sighted. CNIB also offers a full spectrum of accessibility expertise and support for employers	Creating an Accessible Workplace: Quick Tips for Employers *	www.**cnib**.ca/en/.../Creating_an_Accessible_Workplace_**Employers**.doc	Quick tips for accommodations from recruitment, interviewing and retention. Also includes examples of low and high tech accommodations.
Business Disability Forum Library http://businessdisabilityforum.org.uk/advice-and-publications/publications/	The UK Business Disability Forum library intends to be a unique source of accurate, authoritative and up-to-date information on business and disability.	FOR MEMBERS ONLY - PUBLICATIONS AVAILABLE FOR PURCHASE		The briefings, toolkits and line manager guides cover aspects of bringing organizations and people with disabilities together from recruitment and retention to reasonable accommodations and Disabled Employee Networks. They provide practical advice to help organizations recruit and retain disabled people and serve disabled customers.
The Conference Board www.conference-board.org	The Conference Board is a global, independent business membership and research association working in the public	Leveling the playing field: Attracting, engaging, and advancing people with	http://hcexchange.conference-board.org/publications/publicationde	This document details the steps companies can take to encourage the hiring and engagement of employees with disabilities.

Website	Description	Key Resources	Resource Link	Description
	interest. Conference Board of Canada is an affiliated but separate organization	disabilities (2013)	tail.cfm?publicationid=2430	
Employer Assistance and Resource Network (EARN) www.askearn.org	EARN provides resources for employers to assist with recruitment, hiring, retention and advancement of employees with disabilities.	Opening the doors of small business to employees with disabilities: Critical concerns and strategies for success (2014) *	http://hcexchange.conference-board.org/publications/publicationdetail.cfm?publicationid=2822	This report describes criteria for reasonable accommodations and examples of flexible work options. Although this guide is intended for small business, the research, strategies and resources may be applicable to medium or large enterprises. In this report small business is defined as a company with 500 or fewer employees.
Employer Assistance and Resource Network (EARN) www.askearn.org	The Employer Assistance and Resource Network (EARN) provides resources for employers to assist with recruitment, hiring, retention and advancement of employees with disabilities.	Accommodation in the workplace: Resource Guide	http://www.onevoicenetwork.ca/wp-content/uploads/2010/09/EARN-Ottawa-Employer-Accommodation-Guide.pdf	Describes types of reasonable accommodations (job restructuring, leave, modified schedule, modified workplace policies, reassignment and other accommodations)
National Educational Association of Disabled Students (NEADS) http://www.neads.ca/en/	Since its founding in 1986, the National Educational Association of Disabled Students (NEADS), has had the mandate to support full access to education and employment for post-secondary students and graduates with disabilities across Canada.	Access to success: A guide for employers (2003)	http://www.neads.ca/en/about/projects/student_leadership/access_to_success/access_to_success.pdf	This guide provides examples from large employers (i.e. GE, BMO) who have fostered inclusion and accommodations in the workplace
Treasury Board of Canada http://www.tbs-sct.gc.ca/chro-dprh/index-eng.asp	Through diversity and employment equity (in addition to other responsibilities), the Office of the Chief Human Resources Officer supports public servants in achieving a high-quality workforce and workplace.	Creating a welcoming workplace for employees with disabilities	http://www.tbs-sct.gc.ca/pubs_pol/hrpubs/tb_852/cwwedtb-eng.asp	Online resource provides concrete suggestions to accommodate, communicate with, welcome and consult with people with specific impairments (i.e. visual, hearing, physical, intellectual and hidden)
Canadian Council on Rehabilitation and Work (CCRW) http://www.ccrw.org/about/	CCRW's mission is to promote and support meaningful and equitable employment of people with disabilities.	Accommodation Examples	http://www.ccrw.org/resources/accommodation-examples/	Examples of assistive technologies and how they are used are posted to the website.

Website	Description	Key Resources	Resource Link	Description
World Health Organization (WHO) www.who.int	WHO is the directing and coordinating authority for health within the United Nations system	International Perspectives on Spinal Cord Injury (2013)	http://apps.who.int/iris/bitstream/10665/94190/1/9789241564663_eng.pdf?ua=1	Includes references and resources on workplace accommodations and a brief overview of accommodation principles and practices for individuals with spinal cord injuries.
Cornell University - Employment and Disability Institute (EDI) Collection www.edi.cornell.edu	EDI is a resource on employment and disability information for employers and other stakeholders.	HR Tips *	http://www.hrtips.org/index.cfm	This site contains articles, checklists, a glossary, and links to useful disability resources to help human resource professionals develop accommodations for employees with specific impairments.
Cornell University - Employment and Disability Institute (EDI) Collection www.edi.cornell.edu	EDI is a resource on employment and disability information for businesses, US policy makers, educational institutions, unions and service providers.	DigitalCommons@ILR	http://digitalcommons.ilr.cornell.edu/edi/	A searchable online repository of scholarly papers and brochures on employment and disability. Brochures provide practical information on employing and accommodating people with specific impairments which is also provided at hrtips.org.
US Business Leadership Network (USBLN) www.usbln.org	The USBLN is a national non-profit that aims to help business drive performance by leveraging disability inclusion in the workplace, supply chain, and marketplace. The USBLN is a collective of approximately 50 Business Leadership Network affiliates across the US, representing more than 5,000 businesses.	Publications	www.usbln.org/publications.html	Documents include: Leading practices on disability inclusion; Guides to support specific accommodation strategies for students with disabilities in the workplace (i.e. mentoring, advisory councils, internship programs); Workplace inclusion assessment tool

Appendix H: Top 4 Website Resources

1. Job Accommodation Network (JAN)

URL: http://askjan.org

Description: The Job Accommodation Network (JAN) is a leading source of free, expert guidance on workplace accommodations and disability employment issues. JAN is one of the most comprehensive job accommodation resources available online. "From Fortune 500 companies to entrepreneurs, JAN has served customers across the United States and around the world for more than 25 years." This site is the most comprehensive accommodation website found in the current review.

What is offered?
Below is a list of some of the key resources available on the JAN website:
- Searchable Online Accommodation Resource (SOAR)
    - http://askjan.org/soar/index.htm
    - The SOAR system allows users to obtain accommodation ideas by impairment type. A wide range of impairment types are listed from A-Z. Information about the impairment (e.g. prevalence, description, symptoms) is provided to educate users. Users can then select specific limitations that corresponds with the individual needing an accommodation (e.g. Individual has difficulty reaching and bending). An extensive list of specific products and assistive technologies are also suggested for various impairment types including hearing, vision and motor impairments.
    - This information is also available through JAN's Effective Accommodation Practices (EAP) Series documents
- Interactive Process guidelines and suggestions
    - http://askjan.org/topics/interactive.htm
    - Includes a step by step guide on the interactive process for employers and employees with disabilities to work together to develop accommodations in the workplace.
- Accommodation ideas by occupation or industry
    - http://askjan.org/media/occind.htm
    - Includes ideas for occupations in arts and entertainment, education, finance, manufacturing, personal services (i.e. foodservice, housekeeping), legal services, retail, STEM (science, technology, engineering and math)
- Consultants are also available by live chat and can give accommodation ideas but cannot speak to any Canadian laws.

Who owns the site?
This site is a service of the Office of Disability Employment Policy, US Department of Labor. Contact: email: odep@dol.gov phone: 1-866-ODEP-DOL (633-7365)

2. JobAccess

URL: http://jobaccess.gov.au/home

Description: The JobAccess website "is designed to provide information written specifically for employers, job seekers and employees with disability, co-workers of people with disability and Australian Government employment service providers. It has a comprehensive range of information about different disabilities and workplace solutions and adjustments. The website has step by step guides and checklists on recruitment, job searching, adjusting a workplace, employer incentives, understanding rights and responsibilities at work and much more." A unique feature of this site is that users can search for specific workplace tools or products (e.g. accounting software, crane, lawn mower) that may be required for use by employees with disabilities. The use of the product or tool is described as well as how it may pose challenges for use by people with disabilities. Alternatives or accommodations to support accessibility for employees with disabilities to use these products or tools is described.

What is offered?
Below is a list of some of the key resources available on the JobAccess website:
- Workplace Adjustment Tool
    - http://jobaccess.gov.au/work_place_adjustment_tool
    - The Workplace Adjustment Tool lets users search for ideas on how to make a workplace more accessible for people with disabilities. Users can search for accessibility and accommodation ideas based on job requirements, impairment type, and type of workplace product or tool to be used, assistive device or a particular Australian supplier.
    - Searching for information based on specific job requirements appears to be the most efficient way of find information on appropriate accommodations. Information on specific impairments and their symptoms may also be useful.
- Step by step suggestions for employers on:
    - How to modify the workplace
    - How to provide a safe work environment
    - How to provide a flexible workplace
    - Accessibility
- Case studies and success stories of people with various disabilities in the workplace. Stories include examples of accommodations made and the business benefits of employing people with disabilities.

Who owns the site?
This site is an Australian Government initiative regularly updated by the JobAccess Advisers and the Australian Government Department of Social Services editorial team.
Online enquiry form: http://jobaccess.gov.au/Advice/AdviserService Phone: 1800 464 800

3. Employer Assistance and Resource Network (EARN)

URL: http://www.askearn.org/

Description: The Employer Assistance and Resource Network (EARN) provides resources for employers to assist with recruitment, hiring, retention and advancement of employees with disabilities. This site provides general information to employers to assist them in the process of employing people with disabilities from recruitment to retention and advancement. Users are referred to the Job Accommodation Network for specific information on accommodations. Information available online assists employers to comply with the ADA.

What is offered?
Below is a list of some of the key resources available on the EARN website:
- General considerations for reasonable accommodation practices
    - http://www.askearn.org/refdesk/Supervision_Management/Accommodations
    - Provides examples of reasonable accommodation (e.g. job restructuring, modifying work schedules).
    - Information on making reasonable accommodations including basic guidelines, and the process of receiving, responding and implementing accommodations.
- Links to webinars and other learning events
    - http://www.askearn.org/m-events.cfm
- Employer best practices and case studies
    - Available from the home page: http://www.askearn.org/
- Publications on a variety of topics on work and disability
    - Available from the home page: http://www.askearn.org/
    - Some publications with information on accommodations include:
        - Opening the Doors of Small Business to Employees with Disabilities: Critical Concerns and Strategies for Success
            - http://www.askearn.org/docs/SmallBusiness-OpeningDoors.pdf
        - Business Strategies that Work: A Framework for Disability Inclusion
            - http://www.askearn.org/docs/BusinessStrategiesThatWork.pdf

Who owns the site?
This site is a service of the Employer T/A Center, which is funded by the U.S. Department of Labor's Office of Disability Employment Policy under a cooperative agreement with the Viscardi Center. The Viscardi Center is a network of non-profit organizations that provides a lifespan of services for children and adults with disabilities. http://www.viscardicenter.org/
Contact for the Office of Disability Employment Policy: email: odep@dol.gov phone: 1-866-ODEP-DOL (633-7365)

4. Cornell University – Employment and Disability Institute

URL: www.edi.cornell.edu

Description: The Employment and Disability Institute (EDI) aims to advance knowledge, policies and practices to enhance opportunities of people with disabilities. EDI is a resource on employment and disability information for businesses, policy makers (US) federal and state agencies, educational institutions, unions and service providers. EDI provides research, technical assistance, training, scholarly reports, and training publications to support the employment contributions of people with disabilities and ensure community inclusion. EDI offers a wealth of information and research on employment and disability issues and outcomes in the context of the ADA. The HR Tips website appears to be EDI's best option for employers to quickly and easily seek out information and ideas on reasonable accommodations for people with specific impairments.

What is offered?
Below is a list of some of the key resources available through EDI:
- HR Tips
  - http://www.hrtips.org/index.cfm
  - This site, operated by EDI, contains articles, checklists, a glossary, and links to useful disability resources to help human resource (HR) professionals' accordance with the ADA.
  - Articles include information on accommodations of 19 different impairments including arthritis, blind/visually impaired, deaf/hard of hearing, epilepsy, multiple sclerosis, musculoskeletal disorders, and spinal cord injury/mobility.
    - Information on accommodations for specific impairments includes an explanation of the impairment and its symptoms, how to accommodate people with the impairment, as well as considerations in the hiring process, solving common work issues and employee retention.
    - Information is based on previous research and ADA requirements.
- DigitalCommons@ILR.
  - http://digitalcommons.ilr.cornell.edu/edi/.
  - A searchable online repository of scholarly papers and brochures on employment and disability. A search for "accommodation" using "disability" as a key word yields nearly 300 papers.
  - Brochures provide practical information on employing and accommodating people with specific impairments which is also provided at hrtips.org.

Who owns the site?
This site belongs to Cornell University, ILR School, Employment and Disability Institute. Contact email: ilr_edi@cornell.edu Phone: 607-255-7727