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# BWC Readability & Comprehension Test Plan

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## **UT-004 Final**

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# Overview

## What is readability?

Readability is about **making content clear and easy to understand**. In relation to a website, focusing on readability increases the chance that your target audience will read and understand your website content.

**Readability is one area of website accessibility**. For more information on readability, see [WCAG 3.1.2 guideline](#) (external link).

## How important is readability?

In this example, readability cost lives

In 1998, **traffic accidents caused 46 percent of all accidental deaths of infants and children aged 1 to 14** (National Center for Health Statistics, 2000). One study (Johnston et al. 1994) showed that **the single strongest risk factor for injury in a traffic accident is the improper use of child-safety seats**.

Another study (Kahane 1986) showed that, **when correctly used, child safety seats reduce the risk of fatal injury by 71 percent** and hospitalization by 67 percent.

To be effective, however, the **seats must be installed correctly**. Other studies, showed that **79 to 94 percent of car seats are used improperly** (National Highway Traffic Safety Administration 1996, Decina and Knoebel 1997, Lane et al. 2000).

**Public-health specialists** Dr. Mark Wegner and Deborah Girasek (2003) **suspected that poor comprehension of the installation instructions might contribute to this problem**. They considered the readability of the instructions and published their findings in the medical journal Pediatrics.

The authors referred to the National Adult Literacy Study (National Center for Educational Statistics, 1993), which states the **average adult in the U.S. reads at the 7th grade level**. They also cited **experts** in health literacy who **recommend that materials for the public be written at the fifth or sixth-grade reading level** (Doak et al., 1996; Weiss and Coyne, 1997).

Their study found that the **average reading level of the 107 [car seat installation] instructions** they examined was at the **10th grade [level]**, meaning that it was **too difficult for 80 percent adult readers in the U.S.**

When **text exceed the reading ability of readers, they usually stop reading**. The authors did not address the design, completeness, or the organization of the instructions. They did not say that the instructions were badly written.

Armed with the SMOG readability formula, they found the **instructions were written at the wrong grade level.**

(<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.91.4042&rep=rep1&type=pdf>)

## Adult literacy in the US

Approximately **32 million adults in the United States can't read**, according to the U.S. Department of Education and the National Institute of Literacy. The Organization for Economic Cooperation and Development found that **50 percent of U.S. adults can't read a book written at an eighth-grade level.** (From November 1, 2016

[https://www.washingtonpost.com/news/answer-sheet/wp/2016/11/01/hiding-in-plain-sight-the-adult-literacy-crisis/?utm\\_term=.33d211c32d3f](https://www.washingtonpost.com/news/answer-sheet/wp/2016/11/01/hiding-in-plain-sight-the-adult-literacy-crisis/?utm_term=.33d211c32d3f))

The **inability to read makes life significantly harder for individuals**, but also **influences society** at large, according to the Literacy Foundation, which lists these consequences:

For individuals:

- **Limited ability to obtain and understand essential information;**
- Unemployment: The unemployment rate is 2 – 4 times higher among those with little schooling than among those with Bachelor's degrees;
- Lower income;
- Lower-quality jobs;
- Little value is given to education and reading within the family and this often leads to intergenerational transmission of illiteracy;
- Impact on health: **Illiterate individuals have more workplace accidents, take longer to recover** and more often **misuse medication through ignorance of health care resources** and **because they have trouble reading and understanding the relevant information** (warnings, dosage, instructions, etc.).

For society:

- Since **literacy is an essential tool for individuals and states to be competitive** in the new global knowledge economy, **many positions remain vacant for lack of personnel adequately trained to hold them;**
- The **higher the proportion of adults with low literacy proficiency is, the slower the overall long-term GDP growth rate is;**

- The **difficulty understanding societal issues lowers** the level of **community involvement and civic participation**.

(From: [https://www.washingtonpost.com/news/answer-sheet/wp/2016/11/01/hiding-in-plain-sight-the-adult-literacy-crisis/?utm\\_term=.d76399f89be9](https://www.washingtonpost.com/news/answer-sheet/wp/2016/11/01/hiding-in-plain-sight-the-adult-literacy-crisis/?utm_term=.d76399f89be9))

## 2017 U.S. Illiteracy Statistics

2017 U.S. population is 324,459,463.

U.S. Illiteracy Statistics	Data
Percent of U.S. adults who can't read (below a basic level)	14% (465,424,325)
Number of U.S. adults who can't read	32,000,000
Percent of prison inmates who can't read	70%
Percent of high school graduates who can't read	19% (684,000*)

\*About 3.6 million students are expected to graduate from high school in 2017–18, including 3.3 million students from public high schools and 0.3 million students from private high schools  
([https://nces.ed.gov/programs/digest/d16/tables/dt16\\_219.10.asp](https://nces.ed.gov/programs/digest/d16/tables/dt16_219.10.asp)).

Reading Level of U.S. Adults	Percent
Proficient	13% (432,179,731)
Intermediate	44% (1,462,762,164)
Basic	29% (964,093,244)
Below Basic	14% (465,424,325)

Demographics of Adults Who Read Below a Basic Level	Percent of population
Hispanic	13% (60,505,162)
Black	44% (204,786,703)
White	29% (134,973,054)
Other	14% (65,159,406)

Literacy level	Example
Proficient	Using a table, calculate an employee's share of health insurance costs for a year.
Intermediate	Read instructions on a prescription label, and determine what time a person can take the medication.
Basic	Read a pamphlet, and give two reasons a person with no symptoms should be tested for a disease.
Below Basic	Read a set of short instructions, and identify what is permissible to drink before a medical test.

<https://health.gov/communication/literacy/issuebrief/>

## Lower literacy users

The Nielsen Norman Group found that **79 percent of their test users always scanned any new page** they came across (<https://www.nngroup.com/articles/how-users-read-on-the-web/>).

They also found that **lower literacy users have the opposite behavior** (<https://www.nngroup.com/articles/writing-for-lower-literacy-users/>) - Lower literacy is different than illiteracy: **people with lower literacy can read, but they have difficulties doing so.**

### Lower-literacy user characteristics

- Lower-literacy users **can't understand text by glancing at it.** They must **read word for word** and often spend considerable time trying to understand multi-syllabic words.
- Lower-literacy users **focus exclusively on each word** and slowly move their eyes across each line of text. In other words, **they "plow" the text, line by line.** This gives them a narrow field of view and **they therefore miss objects outside the main flow of the text they're reading.**
- Since they don't scan text, **they can't quickly glance at a list of navigation options to select the one they want. They must read each word in each option carefully.** Their only other choice is to **completely skip over substantial amounts of information,** which **they often do when things become too complicated.**

- **They tend to satisfice — accept something as "good enough" — based on very little information because digging deeper requires too much reading, which is both challenging and time consuming.** As soon as **text becomes too dense**, lower-literacy users **start skipping**, usually looking for the next link. In doing so, **they often overlook crucial information.**
- **Having to scroll breaks lower-literacy users' visual concentration** because **they can't** use scanning to **find the place they left off.**
- **Search creates problems** for lower-literacy users for two reasons:
  1. They often **have difficulty spelling the query terms.**
  2. They **have difficulty processing search results**, which typically show weird, out-of-context snippets of text. As a result, lower-literacy users often simply **pick the first link on the list, even if it's not the most appropriate for their needs.**

The Nielsen Norman Group also found that **improving usability for users with disabilities typically increases usability for non-disabled users** as well. Similarly, **improving websites for lower-literacy users can also help higher-literacy users.** People capable of understanding complex information nonetheless preferred more straightforward information.



## Flesch-Kincaid Grade Level scores for current BWC content

The following table displays the reading level of random pieces of content on the current BWC website (12/2017). **The average American is considered to have a readability level equivalent to a 7th/8th grader (12 to 14 years old).**

Text sample	Current URL (12/2017)	Flesch-Kincaid Grade Level
<p>Introduction</p> <p>In compliance with the Federal Trade Commission Children's Online Privacy Protection Rule, BWC will not collect any information from any person under the age of 13. Please do not submit any information to BWC if you are under the age of 13. Contact BWC with any questions.</p>	<p><a href="https://www.bwc.ohio.gov/bwcCommon/forms/froi/default.asp">https://www.bwc.ohio.gov/bwcCommon/forms/froi/default.asp</a></p>	17.4*
<p>BWC's Other States Coverage</p> <p>Do you send employees outside Ohio to work? Do you wonder if you have adequate workers' compensation coverage for them? If so, you may want to look into BWC's Other States Coverage option.</p>	<p><a href="https://www.bwc.ohio.gov/employer/services/OtherStatesCoverage.asp">https://www.bwc.ohio.gov/employer/services/OtherStatesCoverage.asp</a></p>	12.7*
<p>Opioid rule for prescribers</p> <p>Based on Ohio's</p>	<p><a href="https://www.bwc.ohio.gov/provider/brochureware/OpioidEducate/default.asp">https://www.bwc.ohio.gov/provider/brochureware/OpioidEducate/default.asp</a></p>	16*

<p>opioid prescribing guidelines, we developed an opioid prescribing rule that applies to all BWC-certified prescribers. It's designed to help prevent opioid dependence for Ohio's injured workers through its three primary goals.</p>		
<p>Drug-Free Safety Program (DFSP) information BWC's Drug-Free Safety Program (DFSP) offers a premium rebate to eligible employers for implementing a loss-prevention strategy addressing workplace use and misuse of alcohol and other drugs, especially illegal drugs.</p>	<p><a href="https://www.bwc.ohio.gov/employer/programs/dfspinfo/dfspdescription.asp">https://www.bwc.ohio.gov/employer/programs/dfspinfo/dfspdescription.asp</a></p>	<p>15.2*</p>

\*All text on the page was copied and pasted into readability formula form (<https://www.perrymarshall.com/grade/>). Only a portion of the text appears in this table.

## WCAG 2.0

The Web Content Accessibility Guidelines (WCAG) were developed through the W3C process in cooperation with individuals and organizations around the world, with a **goal of providing a single shared standard for web content accessibility that meets the needs of individuals, organizations, and governments internationally.**

The WCAG documents explain how to make web content more accessible to people with disabilities. Web "content" generally refers to the information in a web page or web application, including:

- Natural information such as text, images, and sounds
- Code or markup that defines structure, presentation, etc.

### 3.1.5 Reading level guideline

When text requires reading ability more advanced than the lower secondary education level (9<sup>th</sup> grade level) after removal of proper names and titles, supplemental content, or a version that does not require reading ability more advanced than the lower secondary education level, is available. (Level AAA)

**Content should be written as clearly and simply** as possible:

- To ensure that additional content is available to aid the understanding of difficult or complex text;
- To establish a testable measure indicating when such additional content is required.

This standard helps people with reading disabilities, while also allowing authors to publish difficult or complex web content. Difficult or complex text may be appropriate for most members of the intended audience (that is, most of the people for whom the content has been created). It may be possible to accommodate these users by making the text more readable.

If the text cannot be made more readable, then supplemental content is needed.

**Supplemental content is required when text demands reading ability more advanced than the lower secondary education level—that is, more than nine years of school.** Such text presents severe obstacles to people with reading disabilities and is **considered difficult even for people without disabilities who have completed upper secondary education.**

**Reading disabilities such as dyslexia make it difficult to recognize written or printed words and associate them with the correct sounds.** (American for Disabilities accepted dyslexia as a disability in January 2016.) This is called "decoding" the text. Decoding must be automatic for people to read fluently. The act of decoding text word by word consumes much of the mental energy that most people can use for understanding what they read.

**Make text simple and easy to understand.** For example, **use short and familiar words in sentences. If possible, provide a summary for the content.** This will help those users who may have learning difficulties such as dyslexia.

#### Supplemental information examples

The following examples are **ideas to help explain confusing terms or essential information**, which are WCAG 2.0 compliant:

## Pop-over example

Usually activated by hovering or tapping, **pop-overs add the details that would take up too much room to display permanently**. Pop-overs don't **disrupt the user's task flow** as much as going to a separate page. This makes them great for defining terms in a large amount of content, where the user can call them up if desired.

Per Ohio Revised Code (ORC) 4123.57(D), injured workers who asbestosis may be entitled to a Change of Occupation (COA) jobs (occupations) to decrease further exposure to silica dust,

Cardiovascular disease generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke.

Coal miners' pneumoconiosis, or medically advised to change

Per ORC 4123.57(E), firefighters and police officers who have contracted a cardiovascular and pulmonary disease (as defined in ORC 4123.68) may be entitled to a COA award if they have been medically advised to change their occupation to decrease further exposure to smoke, toxic gases, chemical fumes, and other toxic vapors.

Pop-over definition example

## Notice examples

Special notices **highlight information users need to know to understand what they are reading** or to **alert them to special information or instructions**.

Notes are used to define multiple terms that all have the same meaning.

The **Temporary Total (TT) Compensation** benefit compensates a worker who becomes disabled due to a work-related injury or occupational disease. TT Compensation helps replace lost work income and is usually the first form of compensation that an injured worker in Ohio will receive.

You may qualify for TT Compensation benefits if you're injured and restricted from working for more than seven (7) calendar days and your doctor (or Physician of Record [POR]):

- Restricted you from any kind of work due to your work-related injury.
- Released you to return to work with modified duties, but your employer does not have work available to meet those restrictions.

**Note:** Doctors are also called the "Physician of Record (POR)" or a "treating physician." A Physician of Record (POR) is a BWC-certified medical provider.

This notice explains terms that have the same meaning

"Important" notices are used to alert the user to relevant information.

After 12 weeks of missed work, TT Compensation benefits are paid at an **average weekly-wage (AWW)** rate. This rate is based on your earnings for the 52 weeks prior to the date of your injury. An average of these earnings is calculated, and TT Compensation is paid at 66 <sup>2</sup>/<sub>3</sub> percent (66 <sup>2</sup>/<sub>3</sub>%) of this average.

**Important:** BWC does not pay TT Compensation benefits for the first seven (7) days of an injury until you've been unable to work for 14 or more consecutive days. Once you've missed 14 or more consecutive (calendar) days, BWC will compensate you for the total number of days missed. The first seven (7) days are payable with other compensation benefit types. If you have questions, call your CSS or refer to [Determining the start date for more information](#).

This notice alerts the user to important payment information

## Injured worker overview

The nature of the BWC processes, demographics and the emotional state of injured workers pose specific requirements: (From Web & Mobile Strategy Recommendations, Unicon study, 2013)

- **A worker has no need to access the website unless they are injured. An injured worker may only have one or two claims in their entire working career.** Consequently, **workers will require the same familiarization or guidance on the second injury** as on the first due to the elapsed time between injuries.
- Based on analysis of the **manual classifications of injured workers**, it is reasonable to assume that **many of these jobs do not require advanced education**; these jobs likely include **higher percentage of workers** for whom **English is a second language**. Therefore, **lengthy written documentation** on processes and procedures **will increase the likelihood of support contacts**.
- The **workers may not have a computer**; however, some employers provide computers for employee use at the work site.
- **Workers often will have a cell phone with text messaging** even though they do not have a personal computer. In general cell phones are higher budget priorities than internet or cable TV.
- When a **worker is injured**, it can **represent a serious impact on the worker's life**, especially if the worker is living paycheck to paycheck. These factors **greatly increase stress and anxiety**.
- The **worker is focused on receiving** the correct **compensation as quickly as possible**. In the current website, injured workers must decide where to start and what to do next. If the **worker becomes anxious that they do not understand or fear making a mistake that could delay payment**, the prudent

choice for the injured worker is to **initiate contact for support**. While this approach is **more time consuming** for the worker, **it provides greater assurance of a successful outcome** because the responsibility for navigating the process moves from the worker to customer support personnel, who are much more familiar with the process.

The injured worker focuses on:

- How do I file a claim?
- When will the compensation be in my bank account?
- How much will I be paid?
- How long will I be paid?
- What is the status and history of my claim?

The **current website does not guide the worker this unfamiliar, complex process**. The worker must read the instructions and decide what to do next or where to get the desired information about the process. In addition, **the reading level of the documentation greatly exceeds the target audience**.

Since workers infrequently use the website, they often **forget the username and password**, along with the security question and answer.

**Workers cannot easily locate important claim status and information** that is on the website and the workers **perceive the website to be difficult and unwieldy**.

Worker comments from screener survey

- "Remember the K.I.S.S. principle in writing, just like in the military: Write to the ninth-grade level."
- "It would be great for **forms to be more user friendly and common terminology be used** when giving a determination on claims. This is my first time ever dealing with BWC and although the **terminology you use is somewhat confusing**, whenever I call in to get clarification the representatives have always done a great job explaining things."
- "**Clear instructions on forms** and less paperwork overall, would be helpful."
- "Please **use PLAIN English**, we are not all lawyers nor do we all speak legalese..."
- "**DON'T MAKE STATEMENTS THAT ONLY A LAWYER CAN UNDERSTAND.**"

- “There are **too many acronyms**, when I started my claim I was not sure if I was filling out the correct forms.”
- “**Forms need to be in basic language** some of forms are drafted in Attorney language.”
- “**Use everyday language.**”
- “Easier to understand instructions/directions. **Why the use of a word like “refutation” when there must be a simpler one.**”
- “It needs to be easier to use for the normal person. **Not everyone is a BWC attorney.**”
- “Just use simple language.”
- “The **abbreviation of words I do not understand where to find the actual words.**”

## Employer overview

**Employers** are the most frequent in contacting the call center. **They contact the call center** when it is **too difficult to get the data they need using the website**. Employers indicated that the **website reflects a complex, forms and paper-oriented legacy process** and **it is difficult to use**. **Employers stated** that there are numerous issues, both minor and significant, that indicate that the **requirements and design of the website do not reflect their day-to-day needs**.

### Ramp-up period

There is a **significant ramp-up period to get familiar with the website and processes**. The **form numbering reflects an internal view** rather than an external terminology-based perspective, which also increases the ramp-up effort. Recognizing the complexity of the website and processes, **employers frequently assist workers in filing a claim and navigating the process to ensure prompt processing and payment**.

Turnover causes another ramp-up period that introduces risk and potential rework as action items and deadlines may be overlooked. **Sixty percent of employers have had their policy lapse at least once during their corporate history**. Although turnover and financial issues could play a role, **some employers assert that their early payment is getting lost and they are only notified later, after their policy is in a lapsed state**.

## Push notifications

These issues illustrate the need for using technologies such as email and text messages to push important notifications to multiple contacts, such as acknowledgement of receipt of premium, to mitigate the risk of missed deadlines and its corresponding consequences.

## Multiple policies

The current website presents a **single policy-based view to the employer**. As a result, **employers that have multiple policies or subsidiaries must logon by policy number** and copy/paste information to get an integrated view of their policies and claims across policies. In addition, **employers know employees by name rather than claim number**, so screens and reports should contain both data elements.

Employers frequently contact the call center for:

- Reprinting coverage certificates – they have the need to be able to forward electronic copies of any certification, not just coverage, to multiple, user-specified email addresses. For example, contract truck drivers often need to forward this information on very short notice to potential clients while they are on the highway away from the client.
- Username/password reset
- Process status (receipt of premium payment)
- Updating payroll, policy and demographic information
- Viewing claim information

## Employer comments from screener survey

- “Sometimes the **terminology is confusing.**”
- “Make every effort to **use every day American business English. Avoid double negatives.**”
- “Most of my issues is the wording or not wanting to answer wrong.”
- “Some of the questions that are being asked are understood by accountants and the BWC, but not to those completing the forms. **I don’t want to make a critical mistake and then be blamed for it when the information is not explained as to where or how to obtain the information you’re requesting.**”
- “Just **keep your questions a simple and plain English** as possible.”



- “BWC forms are the **ONLY** ones I have a problem with. The **concepts are over complicated and the explanations are even worse.** “
- “**My education level is post-Master’s degree. I do call BWC to help me figure out BWC things.**”
- “**Please use layman's terms. What is crystal clear to you can be like mud for us.**”

## Purpose of study

In previous UX studies conducted for the BWC website redesign, I noticed that there was a definite readability issue. The previous studies included:

- Worker and employer comments from user interviews
- Usability testing and follow-up questions
- Card sort testing and follow-up questions
- CSR interviews and focus group
- Screener survey statistics and user comments

The primary purpose of this study is to:

- Understand if the proposed content and supplemental information examples will enable users to comprehend information quickly.
- Identify the most confusing and difficult terms and gather recommendations and ideas for improvement.
- Understand some of the reasons users are calling support and tasks they need help with to gather recommendations and ideas for improvement.

## Questions

- What words do **workers** use? Why do they call support? What tasks are they trying to accomplish that they need help with? (Does this align with call stats?)
- Do **workers** understand Filing a claim and Applying for benefits? Do they understand the file a claim process?
- What words do **employers** use? Why do they call support? What tasks are they trying to accomplish that they need help with? (Does this align with call stats?)

- Do employers understand that if they choose not to cover themselves and are hurt on the job, they will not get BWC coverage?
- What kind of aids could we use to help users understand difficult terms?
- Would definitions be helpful? If so, where should they be placed?
- If they don't understand a term or have a question, what do they do?

Other questions for call center reps

- Do you get calls from users asking what something means? If so, what?
- What words do you think they stumble over?
- Do you remember any terms that you were unsure of when you started?
- If they don't understand a term or have a question, what do they do? Do you think they give up?

## Issues

- Some of the top call center calls could indicate readability issues.
- User comments from the studies mentioned above indicate readability issues.
- Screen survey results indicate readability issues.
- Policy IT-09 mandates that new website is compliant with WCAG 2.0 and 508 guidelines. Readability is included in the WCAG guidelines.

## Problem statements and goals

Problem statements	Study goals	User activities	User behaviors
Injured workers and employers have difficulty understanding terminology and directions used on the BWC website and forms. As a result, they contact the call center for help. Calls are expensive and users are not very happy.	Discover the words that users have problems understanding. Collect recommendations for improvements. Find opportunities to improve the forms to minimize instructions. Show users some ideas to clarify terms. Determine the best	Users read text passage and identify words they do not understand. Show examples. View prototype screens.	Note their exact wording. Encourage group discussion to ensure users feel comfortable (most users are ashamed of their low literacy skills). Note any problems viewing screens – can they read text on the dark backgrounds?

	locations for those ideas.		Note any mentions of font colors.
Policy IT-09 mandates that new website is complaint with WCAG 2.0 and 508 guidelines. Since readability is a component of accessibility, the new website content should be complaint with the guidelines.	For this study, run content passages through readability software and prepare results and suggestions for improvement.		

## Approach

To following approach will be taken for this study:

Step	Activity
Recruit injured workers and employers who may have literacy problems in December 2017.	An email screener (survey) will be sent to all injured workers and employers.
<p>Screeener survey results will be analyzed in December 2017.</p> <p>Focus group invitations will be emailed in January 2018</p> <p>Readability questionnaires will be emailed in January 2018.</p>	<p>Survey results will be analyzed.</p> <p>Users who indicate a literacy problem and live close to Columbus, OH will be sent a focus group invitation.</p> <p>Users who indicate a literacy problem and live outside Columbus, OH, OR do not respond to the focus group email, will be sent the readability questionnaire.</p>
Conduct CSR practice focus group in December 2017.	<p>Recruit CSRs for a practice focus group.</p> <p>In the focus group, participants will be asked questions about text passages in a group discussion format. Confusing terms and recommendations will be gathered.</p> <p>Participants will be shown the new website prototype screens and asked their opinions.</p> <p>Participants will fill out a brief survey.</p> <p>Results and recommendations will be produced in a test results report.</p>
Conduct in January 2018:	In the focus groups, participants will be

<ul style="list-style-type: none"> <li>• Two worker focus groups</li> <li>• Two employer focus groups</li> </ul>	<p>asked questions about text passages in a group discussion format. Confusing terms and recommendations will be gathered.</p> <p>Participants will be shown the new website prototype screens and asked their opinions. Participants will fill out a brief survey.</p> <p>Results and recommendations will be produced in a test results report.</p>
<p>Readability questionnaire results will be analyzed in January/February 2018</p>	<p>Questionnaire results will be analyzed and produced in a test results report.</p>

## What is a focus group?

The focus group is an exploratory research method used to help researchers gather in-depth, qualitative information of their participants' attitudes and perceptions relating to concepts, products, services, or programs. There are several other reasons to conduct a focus group:

- To generate innovative ideas.
- To search for questions, vocabulary, and perceptions of users.
- To explore user reactions to content and website prototype.
- To formulate hypotheses that can be tested with quantitative testing or surveys.
- To interpret previously obtained qualitative data.

The main disadvantages of focus groups are:

- There can be disagreements and irrelevant discussion, which distract from the focus of the study.
- They can be hard to control and manage.
- They can be tricky to analyze.
- Some users may find a focus group situation intimidating or off-putting; users may feel under pressure to agree with the dominant view.

Most **people with literacy difficulties feel a great deal of shame and are embarrassed by it** (SEE [Appendix G](#) - Clues for low literacy skills for more information). Although there are disadvantages to using a focus group format, a **group setting and discussion** should allow those **users to feel more at ease** when they see that other people also have difficulties with BWC terminology.

“However, on the flip side, **there may be “safety” in numbers**, as [focus group] **participants feel more open to discuss ideas and can build upon each other’s comments**. Focus groups in this way can be used to generate ideas for new products or concepts or to get some early feedback on the types of questions to ask in surveys or in directed interviews.” <https://measuringu.com/data-collection/>

## Worker & employer focus groups

The focus groups will be carried out with 5 - 8 users of each user type who agree to participate in the discussion. Each session will be recorded. Planning for two worker focus groups and two employer focus groups.

A usability professional will act as the session facilitator. All sessions will be conducted in a meeting room at the OCOSH site. Each session will take about 90 minutes.

Each session will contain the following steps:

Step	Activity
Ice-breaker exercise	Participants will look at the proposed navigation. Workers will see the worker navigation. Employers will see the employer navigation. Then asked if there are any terms they don't understand and gather recommendations. They will also be shown the supplemental information examples for feedback.
Comprehension questions	Comprehension questions will be conducted as group exercises. Facilitator will read content examples and ask participants to identify any terms they do not understand.
Cloze test group discussion	Participants will be asked to identify missing words in a content selection. This will be done as a group discussion.
Prototype	Participants will be shown some of the new prototype screens and asked their opinions.
Survey	Participants will fill out a brief survey.

## Results and metrics

The facilitator creates a test report with the findings including quotes from focus group participants, quantitative and qualitative data and any suggestions and feedback.

Method	Sample size	Hypothesis	Analysis Method	Focus
Focus group	Four focus groups of 8 – 10 Totaling: 32 - 40	Open – guided by questions and goals	Transcription & coding Quantitative	Uncover and explore ideas Gather recommendations

Data that will be gathered:

- Observations about participants when completing the comprehension exercises
- Color, image and font preferences
- Problems experienced, if any
- Comments/recommendations
- Answers to open-ended questions

# Appendix A - Readability & comprehension test screener and emails

## What is a screener?

A screener is a set of questions to help determine who is and isn't the right fit for a study. For this study:

- Those who "pass" this screener and live in or around Columbus, Ohio, will be invited to the focus groups.
- Those who "pass" the screener and live in another part of the state will be sent the Readability & comprehension questionnaire.

## Screener email

This email including the screener link was sent on **5 December 2017** to all injured workers and employers.

Subject line: Want to help us make the new BWC website easier to use?

Email text:

Hello,

Over the past several months, the Ohio Bureau of Workers' Compensation has been working to redesign our website to provide a better user experience. Our goal is to make the new website easy to use and understand. We are looking for some users to participate in a focus group **after the holidays** on the proposed updated design. This testing will consist of showing you several web screens and asking you questions about them. If you are interested in helping us create a better user experience, please fill out the questions below.

We'll follow up with you after the holidays. Thanks for your time and interest.

## Screener survey questions

1. What is your gender?

M

F

2. What is your age?

16-24 years old

25-34 years old

35-44 years old

45-54 years old  
55-64 years old  
Over 65 years old

3. Are you color blind?  
Yes  
No

4. BWC terms are complicated and many people find the words difficult to understand. Do you ever get help from others in filling out forms and reading BWC information?

Always  
Sometimes  
Never

5. How often do you read a newspaper or news website?

Every day  
Every week  
Sometimes  
Never

6. How confident are you in filling out forms yourself?

Always  
Most of the time  
Sometimes  
Never

7. How often do you read magazines or entertainment websites?

Every day  
Every week  
Sometimes  
Never

8. How often do you read for pleasure?

Every day  
Every week  
Sometimes  
Never

9. How often do you have problems understanding what to write in a form?



Always  
Most of the time  
Sometimes  
Never

10. Do you have problems answering the questions in a form?

Always  
Most of the time  
Sometimes  
Never

11. What else would you like us to know?

Text field

12. Would you be willing to participate in additional discussions about your website experiences? If yes, please provide your contact information.

Name  
Email  
Phone

## Appendix B - Readability screener results

The literacy questions were interspersed with “filler” questions to help disguise the true intent of the survey, which was to gage the user’s literacy. Users who perceived the intent were excluded from the study.

### Total injured worker responses – 1,258

The following injured workers qualified for either the focus group or readability and comprehension questionnaire. The workers who do not respond or decline the focus group will also be sent the questionnaire.

# of workers	Qualified for
61	Focus group
187	Survey

### Demographics

#### Gender

0	15
Female	591
Male	652

#### Age range

0	10
18 to 24	7
25 to 34	155
45 to 54	339
55 to 64	484
65 to 74	173
75 or older	25

Question: Are you color blind?

Response	#
N/A	14

No	1221
Yes	23



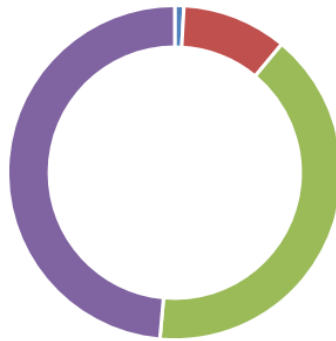
■ N/A ■ No ■ Yes

## Questions that could indicate low literacy

**Question:** BWC terms are complicated and many people find the words difficult to understand. Do you ever get help from others in filling out forms and reading BWC information?

Response	#
N/A	11
Always*	128
Never	508
Sometimes*	611

\* Responses could indicate low literacy

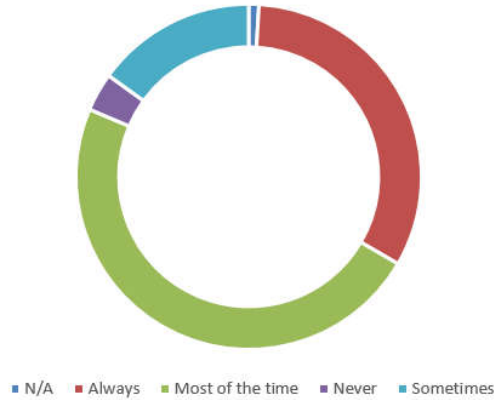


■ N/A ■ Always ■ Never ■ Sometimes

**Question:** How confident are you in filling out forms yourself?

Response	#
N/A	12
Always	408
Most of the time*	603
Never*	45
Sometimes*	189

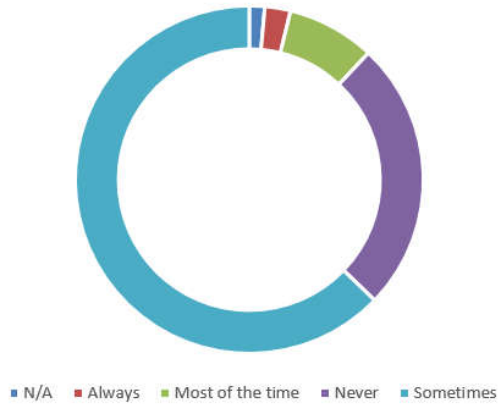
\* Responses could indicate low literacy



**Question:** How often do you have problems understanding what to write in a form?

Response	#
N/A	18
Always*	30
Most of the time*	103
Never	317
Sometimes*	790

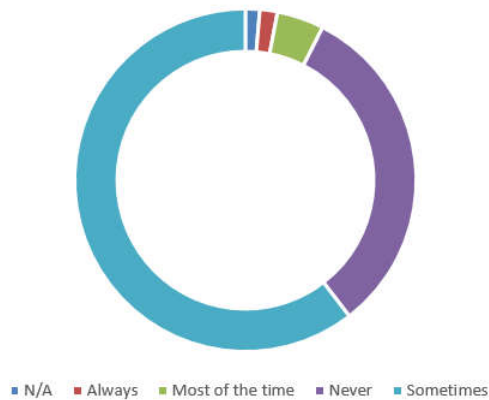
\* Responses could indicate low literacy



**Question:** Do you have problems answering the questions in a form?

Response	#
N/A	17
Always*	21
Most of the time*	56
Never	404
Sometimes*	760

\* Responses could indicate low literacy



## Injured worker comment analysis

224 total comments

167 comments “cleaned” (meaning blank responses, N/As, or gibberish removed), grouped by theme and analyzed

### Worker comment themes

Category	Description	Issue
1	Usability issues: <ul style="list-style-type: none"> <li>• Navigation and findability (including search)</li> <li>• Confusing layout</li> <li>• Buttons and icons are confusing</li> <li>• Cannot view info easily</li> </ul>	Could also indicate readability or accessibility problems
2	Confused and retained lawyer	Could indicate a readability problem
3	Confusing terminology, confusing directions	Could indicate a readability problem
4	Confusing forms, cannot make changes to/in forms, difficult to use and understand, confusing directions	Usability issues but could indicate readability or accessibility problems
5	IW process - What to do by when, slow process, negative about process	Could indicate a readability problem
6	Accessibility issues: Icons are too small, small click targets, cannot see fonts, cannot zoom to see text, cannot see links in text, not (screen) reader friendly	Accessibility problems

**Note:** Readability means lower literacy

### Comment results

Category	Frequency	Proportion*
5	87	145%
1	52	87%
3	24	40%
4	22	37%
2	15	25%
6	14	23%

\*Percent of respondents making a comment within the theme. Most respondents commented on multiple themes so percentages will add up to more than 100%.

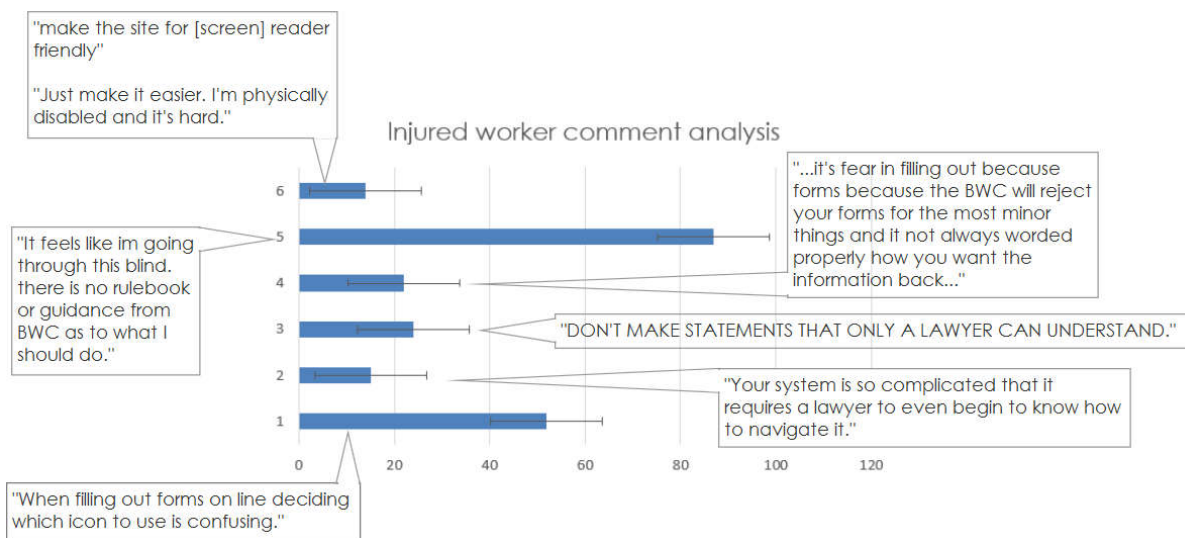
## Confidence interval

Because we almost always sample a fraction of the users from a larger population, there is uncertainty in our estimates. **Confidence intervals are an excellent way of understanding the role of sampling error in the averages and percentages** that are ever-present in user research. Confidence intervals tell you the most likely range of the unknown population average or percentage, such as **the average number of users likely to have these problems.** (<https://measuringu.com/ci-10things/>)

Risk of being wrong	Confidence level	Lower end	Higher end
5%	95%	5.5%	66%

95% confidence level means that **one person in 20 or 582,930 Ohioans will have the same issues as mentioned above.** (Ohio population in November 2017 is 11.66 million.)

To better understand the uncertainty that comes with sampling error, I added confidence intervals to the percentages. In the following graphic, spelling errors were not corrected.



Analysis with confidence intervals and quotes

**The wider the confidence interval you are willing to accept, the more certain you can be that the entire population answers would be within that range.**

(<https://researchbasics.education.uconn.edu/confidence-intervals-and-levels/>)

## Injured worker comments from the screener survey

The following are comments from the readability and comprehension screener survey sent out in December 2017. **Some of the comments reflect readability, accessibility and usability issues.** Grammar and spelling errors were corrected.

- **“Nothing but thank you for caring that people have a hard time with understanding and taking the time to help them have an easier time especially when most of them are not well. Thank you!”**

### Terminology

- **“Remember the K.I.S.S. principle in writing, just like in the military: Write to the ninth-grade level.”**
- **“It would be great for forms to be more user friendly and common terminology be used** when giving a determination on claims. This is my first time ever dealing with BWC and although the **terminology you use is somewhat confusing**, whenever I call in to get clarification the representatives have always done a great job explaining things.”
- **“Pictures are valuable** while trying to describe something.”
- **“Clear instructions on forms** and less paperwork overall, would be helpful.”
- **“Please use PLAIN English**, we are not all lawyers nor do we all speak legalese...”
- **“I understand that some things need to be written to cover yourselves legally, but questions and statements should be written in simple terminology so the average person can clearly understand what is written.”**
- **“DON'T MAKE STATEMENTS THAT ONLY A LAWYER CAN UNDERSTAND.”**
- **“There are too many acronyms**, when I started my claim I was not sure if I was filling out the correct forms.”
- **“Honestly I think it's fear in filling out forms because the BWC will reject your forms for the most minor things and it's not always worded properly how you want the information back to you so found it was safer to let my lawyer handle all forms.”**



- **"Forms need to be in basic language** some of forms are drafted in Attorney language."
- "I had felt that there **were some terms on the site that I did not understand**, and even **asking others who had received benefits what they meant, they did not know either.**"
- **"Use everyday language."**
- "Easier to understand instructions/directions. **Why the use of a word like "refutation" when there must be a simpler one.**"
- "I worked in health care for 30+ years as a lab tech & occasionally I felt the **wording of some of the questions on your forms-was just not clear.** I would then ask the worker's comp person in my office for help."
- "It needs to be easier to use for the normal person. **Not everyone is a BWC attorney.**"
- **"Just use simple language."**
- "The **abbreviation of words I do not understand where to find the actual words.**"

## Usability

- "You should make up a **complete reference guide to informing injured workers that they need from the start... What forms they will need to have submitted and WHEN!** Just for a start...so they aren't at the mercy of lawyers and the bureau!"
- "The last web site design was very helpful, but **it can become difficult for some of us older people to learn where to look for things we need** on the website with it being changed. **We're not as computer savvy as the younger generation.**"
- "The website is too difficult to use. **There is no way to make corrections if you make an error.**"
- **"Make more information, less graphics** available on pages. Put more space between the log in/log out button and the pick list."
- "Smaller BWC site ads vs **bigger boxes for answers.**"
- "Needs to be easier to get to the page you want **without having to zoom in.**"
- "Some time it **won't let you go back and change a mistake.**"

- “Maybe make things more user friendly, not so many buttons with little info, and **make the font easier to read.**”
- “When filling out forms on line **deciding which icon to use is confusing.**”

## Total employer responses – 1,784

The following employers qualified for either the focus group or readability and comprehension survey. The employers who do not respond or decline the focus group will be send the survey.

# of employers	Qualified for
119	Focus group
336	Survey

**Question:** Are you color blind?

Response	#
N/A	23
No	1729
Yes	32



■ N/A ■ No ■ Yes

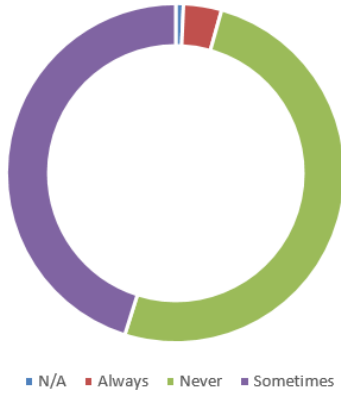
## Questions that could indicate low literacy

**Question:** BWC terms are complicated and many people find the words difficult to understand. Do you ever get help from others in filling out forms and reading BWC information?

Response	#
----------	---

N/A	13
Always*	65
Never	901
Sometimes*	805

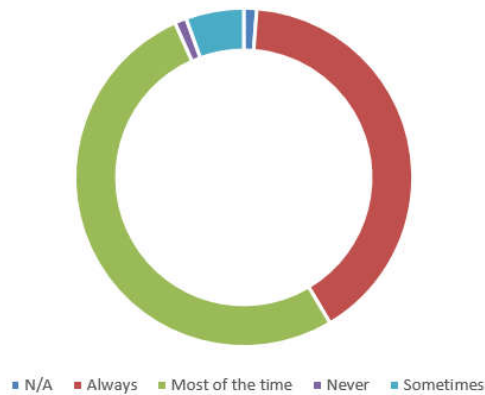
\* Responses could indicate low literacy



**Question:** How confident are you in filling out forms yourself?

Response	#
N/A	22
Always	718
Most of the time*	925
Never*	20
Sometimes*	99

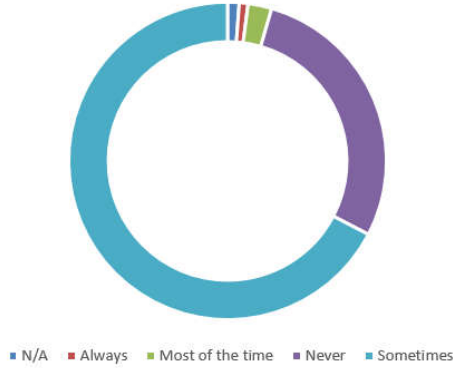
\* Responses could indicate low literacy



**Question:** How often do you have problems understanding what to write in a form?

Response	#
N/A	21
Always*	16
Most of the time*	43
Never	503
Sometimes*	1202

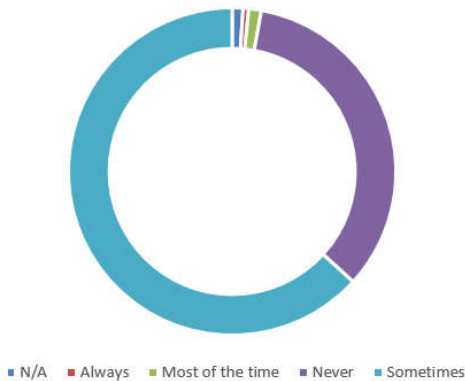
\* Responses could indicate low literacy



**Question:** Do you have problems answering the questions in a form?

Response	#
N/A	19
Always*	10
Most of the time*	22
Never	605
Sometimes*	1128

\* Responses could indicate low literacy



## Employer comment analysis

347 total comments

242 comments “cleaned” (meaning blank responses, N/As, or gibberish were removed), grouped by theme and analyzed

### Employer comment themes

Category	Description	Issue
1	Usability issues: <ul style="list-style-type: none"> <li>• Navigation and findability (including search)</li> <li>• Confusing layout</li> <li>• Buttons and icons are confusing</li> <li>• Cannot view info easily</li> </ul>	Could also indicate readability or accessibility problems
2	Confused and retained accountant or TPA	Could indicate a readability problem
3	Confusing terminology, confusing directions	Could indicate a readability problem
4	Confusing forms, cannot make changes to/in forms, difficult to use and understand, confusing directions	Usability issues but could indicate readability or accessibility problems
5	Employer process - What to do by when, billing process, negative about process	Could indicate a readability problem
6	Accessibility issues: Icons are too small, small click targets, cannot see fonts, cannot zoom to see text, cannot see links in text, not (screen) reader friendly	Accessibility problems

**Note:** Readability means lower literacy

### Comment results

Category	Frequency	Proportion*
1	198	479%
4	78	189%

3	72	174%
5	61	148%
6	11	27%
2	9	22%

\*Percent of respondents making a comment within the theme. Most respondents commented on multiple themes so percentages will add up to more than 100%.

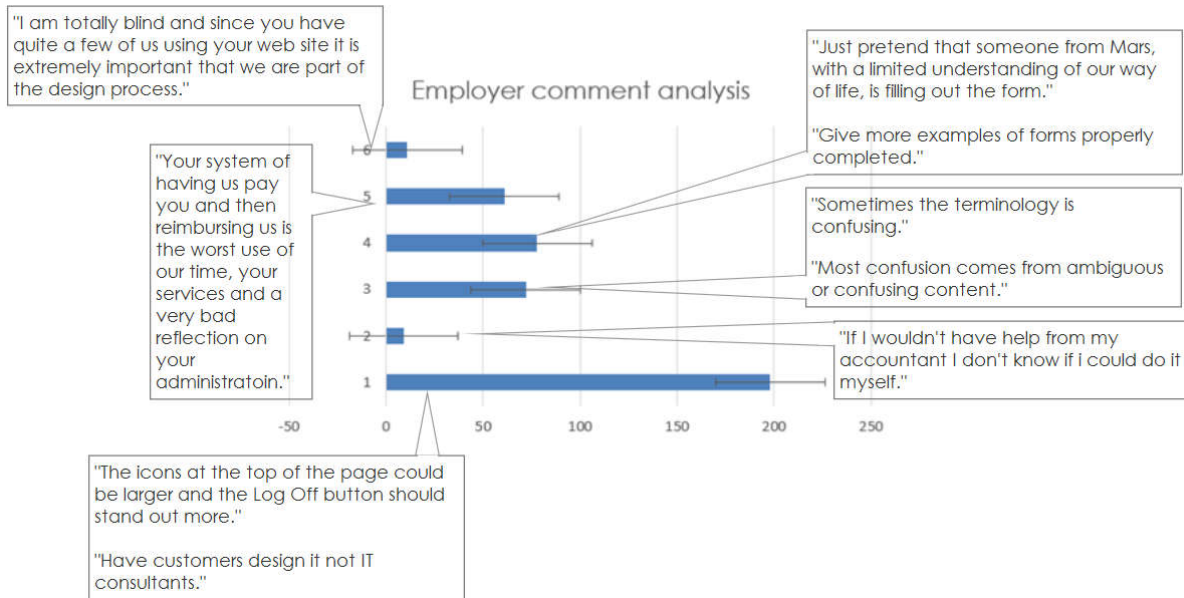
## Confidence interval

Because we almost always sample a fraction of the users from a larger population, there is uncertainty in our estimates. **Confidence intervals are an excellent way of understanding the role of sampling error in the averages and percentages** that are ever-present in user research. Confidence intervals tell you the most likely range of the unknown population average or percentage, such as **the average number of users likely to have these problems.** (<https://measuringu.com/ci-10things/>)

Risk of being wrong	Confidence level	Lower end	Higher end
5%	95%	15%	128%

95% confidence level means that **one person in 20 or 582,930 Ohioans will have the same issues as mentioned above.** (Ohio population in November 2017 is 11.66 million.)

To better understand the uncertainty that comes with sampling error, I added confidence intervals to the percentages. In the following graphic, spelling errors were not corrected.



Analysis with confidence intervals and quotes

**The wider the confidence interval you are willing to accept, the more certain you can be that the entire population answers would be within that range.**

(<https://researchbasics.education.uconn.edu/confidence-intervals-and-levels/>)

## Employer comments from the screener survey

The following are comments from the readability and comprehension screener survey sent out in December 2017. **Some of the comments reflect readability, accessibility and usability issues.** Grammar and spelling errors were corrected.

### Terminology

- "Sometimes the **terminology is confusing.**"
- "Make every effort to **use every day American business English. Avoid double negatives.**"
- "Most of my issues is the wording or not wanting to answer wrong."
- "Some of the questions that are being asked are understood by accountants and the BWC, but not to those completing the forms. **I don't want to make a critical mistake and then be blamed for it when the information is not explained as to where or how to obtain the information you're requesting.** "
- "Just **keep your questions a simple and plain English** as possible."

- **“BWC forms are the ONLY ones I have a problem with. The concepts are over complicated and the explanations are even worse. “**
- **“If I didn't understand something on the form, I could get an answer by calling.”**
- **“The website is not user friendly. It is awkward and difficult to understand and find what is desired.”**
- **“My education level is post-Master's degree. I do call BWC to help me figure out BWC things.”**
- **“Please use layman's terms. What is crystal clear to you can be like mud for us.”**

## Usability

- **“Have customers design it not IT consultants.”**
- **“The icons at the top of the page could be larger and the Log Off button should stand out more.”**
- **“Optional boxes for answers to questions, would be helpful.”**
- **“Some of the questions that are being asked are understood by accountants and the BWC, but not to those completing the forms. I don't want to make a critical mistake and then be blamed for it when the information is not explained as to where or how to obtain the information you're requesting. “**
- **“The website is hard to use and hard for average person to understand.”**
- **“I'm an attorney using the website and I can see how many of the forms would be difficult for a layperson. I also think the site's search engine needs improvement.”**
- **“Sometimes your print is so light or color contrast such (like on "Done" below that it is hard to read.”**



# Appendix C – Readability & comprehension focus group

## Focus group prospects invitation emails

Please indicate in the subject line worker or employer.

Workers will be scheduled on Monday January 22 10 Am and 2 PM

Employers will be scheduled on Monday January 29 10 AM and 2 PM

### First email

Subject: Want to see the new BWC worker/ employer wireframes?

Hi there,

I'm contacting you because you've recently completed a survey regarding the BWC website redesign project. Thanks for your help! We're now ready to show you some wireframe and screenshot concepts of what we've built for the new website.

If you're interested in looking at these wireframes, please reply to this email. I will contact you via email with dates, times and the location.

Thanks for your help!

Paul Flowers

### Second email

Subject: Want to see the new BWC worker/ employer wireframes?

Hi there,

Thanks for your interest in seeing wireframe and screenshot concepts of what we've built for the new BWC website.

We only need about 90 minutes of your time. We're asking users to come to our Ohio Center for Occupational Safety and Health (OCOSH) training center at 13430 Yarmouth Drive in Pickerington.

Please reply with which time slot you prefer.

Date and time slot info (depending if worker/employer)

Thanks for your help!

Paul Flowers

## Readability & comprehension focus groups schedule

The focus groups are scheduled for:

- Workers will be scheduled on Monday January 22 10 AM and 2 PM
- Employers will be scheduled on Monday January 29 10 AM and 2 PM

(I may switch these dates.)

	Date
Worker focus group 1	Monday, January 22 10 AM
Worker focus group 2	Monday, January 22 2 PM
Employer focus group 1	Monday, January 29 10 AM
Employer focus group 2	Monday January 29 2 PM
Readability questionnaire	Sent date Cut-off date

## Appendix D - Focus group script for worker & employers

Thank you for coming today and helping us out.

My name is Theresa Wilkinson and I am a UX consultant helping with the BWC website redesign.

Even though the first phase of the website redesign is going live at the end of January, we are already planning more improvements. The first of these improvements will be to work on making the website content easier to understand. It may take us some time to get all the changes in, but we are working towards the goal of making the website easy to use **and** understand.

What we are going to do:

- I invited you to discuss the website content. I will ask you several questions about content and we will go through some exercises.
- Then I will show you some screens from the new website and get your feedback.

**Your opinions are very important to me. There are no right or wrong answers. Please feel free to express your opinions.**

This conversation will be recorded. This is research only and I will listen to the recording. No names or personal information will be used in my final report.

Some practical issues:

- The discussion will last for about one hour and half.
- I ask you to please switch off your mobile phones.
- Please give everyone the chance to express their opinion during the conversation.
- You can address each other during the discussions, I am here to assist in the discussion.

If you need to take a break, please let me know.

## Focus group exercises

### Ice breaker – Proposed navigation

Display navigation in spreadsheet. Navigation terms what do they mean and suggestions for improvement

I would like to go around the room and tell me a term that you were confused about.

I have been at BWC for ten months and I do not understand how the terms: compensation, benefit, and award mean money.

- What words do you stumble over?
- If you don't understand a word or have a question, what do you do?

\*\*\*\*\*

This exercise is to show them that I too have problems understanding BWC terms and get them talking.

Do they call support when they don't understand something?

What tasks are they trying to accomplish when they do so?

Terms: compensation, benefits, awards, payments

\*\* Employer question: Private blog (not visible to BWC) where they share info and advice about website and process – URL? \*\*

### Pop-over example

Usually activated by hovering or tapping, **pop-overs add the details that would take up too much room to display permanently**. Pop-overs don't **disrupt the user's task flow** as much as going to a separate page. This makes them great for defining terms in a large amount of content, where the user can call them up if desired.

Per Ohio Revised Code (ORC) 4123.57(D), injured workers who asbestosis may be entitled to a Change of Occupation (COA) award if they have been medically advised to change their jobs (occupations) to decrease further exposure to silica dust,

Cardiovascular disease generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke.

coal miners' pneumoconiosis, or medically advised to change

Per ORC 4123.57(E), firefighters and police officers who have contracted a cardiovascular and pulmonary disease (as defined in ORC 4123.68) may be entitled to a COA award if they have been medically advised to change their occupation to decrease further exposure to smoke, toxic gases, chemical fumes, and other toxic vapors.

Pop-over definition example

## Notice examples

Special notices **highlight information users need to know to understand what they are reading** or to **alert them to special information or instructions**.

Notes are used to define multiple terms that all have the same meaning.

The **Temporary Total (TT) Compensation** benefit compensates a worker who becomes disabled due to a work-related injury or occupational disease. TT Compensation helps replace lost work income and is usually the first form of compensation that an injured worker in Ohio will receive.

You may qualify for TT Compensation benefits if you're injured and restricted from working for more than seven (7) calendar days and your doctor (or Physician of Record [POR]):

- Restricted you from any kind of work due to your work-related injury.
- Released you to return to work with modified duties, but your employer does not have work available to meet those restrictions.

**Note:** Doctors are also called the "Physician of Record (POR)" or a "treating physician." A Physician of Record (POR) is a BWC-certified medical provider.

This notice explains terms that have the same meaning

"Important" notices are used to alert the user to relevant information.

After 12 weeks of missed work, TT Compensation benefits are paid at an **average weekly-wage (AWW)** rate. This rate is based on your earnings for the 52 weeks prior to the date of your injury. An average of these earnings is calculated, and TT Compensation is paid at  $66\frac{2}{3}$  percent ( $66\frac{2}{3}\%$ ) of this average.

**Important:** BWC does not pay TT Compensation benefits for the first seven (7) days of an injury until you've been unable to work for 14 or more consecutive days. Once you've missed 14 or more consecutive (calendar) days, BWC will compensate you for the total number of days missed. The first seven (7) days are payable with other compensation benefit types. If you have questions, call your CSS or refer to Determining the start date for more information.

This notice alerts the user to important payment information

## Exercise 1 – Understanding Ohio law

1. Read the **Understanding Ohio law** text below.

2. How easy is this content to understand?

- Very easy
- Easy
- Moderate
- Somewhat hard
- Hard
- Very Hard

3. Write any words that you don't understand on the lines below.

---

---

4. After reading the text, which statement is true:

- All employers must carry workers' compensation insurance for all employees.
- Most employers do not have to carry workers' compensation insurance.
- BWC pays lost wages and medical care costs directly to the employer.
- I don't know.

### **Understanding Ohio law**

Ohio law requires employers to obtain workers' compensation insurance for all employees. Ohio employers are either state-fund or self-insured.

State-fund employers pay an insurance premium to Bureau of Workers' Compensation (BWC). BWC then pays compensation benefits directly to you, the injured worker. A Managed Care Organization (MCO) manages the health care and helps you return to work.

Self-insuring employers pay workers' compensation benefits directly to their employees.

\*\*\*\*\*

The goal of all exercises is to get them talking about what confuses them not see how many questions they answer correctly.

I will use more examples of what confused me when I started. The more I can get them to talk, the more they will tell me.)

## Exercise 2 – Submitting a claim

1. Read the **Submitting a claim** text below.

2. How easy is this content to understand?

- Very easy
- Easy
- Moderate
- Somewhat hard
- Hard
- Very Hard

3. Write any words that you don't understand on the lines below.

---

---

4. After reading the text, which statement is false:

- BWC mails a letter and BWC ID card once it receives the claim.
- MCOs are the same as the employer's health insurance provider.
- The doctor treating the worker's injury files the claim within 24 hours of the doctor visit.
- I don't know.

### Submitting a claim

How do you submit a claim?

The doctor treating your injury

If the doctor treating your injury files the claim, he or she will submit it to the Bureau of Workers' Compensation (BWC) or your Managed Care Organization (MCO) within 24 hours of your doctor visit.

Once BWC receives the claim, the injured worker will receive a notification letter and a BWC ID card in the mail, usually within a few days of the filing.

**Note:** MCOs are companies that specialize in managing medical treatment for work-related injuries. A Managed Care Organization is not the same as your company's health insurance provider.

\*\*\*\*\*

### Exercise 3 – Change of occupation (COA) benefit

1. Read the **Change of occupation (COA) benefit** text below.

2. How easy is this content to understand?

- Very easy
- Easy
- Moderate
- Somewhat hard
- Hard
- Very Hard

3. Write any words that you don't understand on the lines below.

---

---

4. After reading the text, which statement is false:

- Workers exposed to silica dust may be medically advised to change jobs to limit continued exposure.



- Police officers and firefighters diagnosed with lung disease may be medically advised to change jobs.
- All coal miners are medically advised to change jobs.
- I don't know.

### Change of occupation (COA) benefit

Per Ohio Revised Code (ORC) 4123.57(D), injured workers who have contracted silicosis, coal miners' pneumoconiosis, or asbestosis may be entitled to a Change of Occupation (COA) award if they have been medically advised to change jobs (occupations) to decrease further exposure to silica dust, asbestos, or coal dust.

Per ORC 4123.57(E), firefighters and police officers who have contracted a cardiovascular and pulmonary disease (as defined in ORC 4123.68) may be entitled to a COA award if they have been medically advised to change their occupation to decrease further exposure to smoke, toxic gases, chemical fumes, and other toxic vapors.

\*\*\*\*\*

(This one is intentionally hard to get them talking.)

### Exercise 4 – Group discussion – Working but not full duty

1. Read the **Working, but not full duty** text below.

2. How easy is this content to understand?

- Very easy
- Easy
- Moderate
- Somewhat hard
- Hard
- Very Hard

3. Write any words that you don't understand on the lines below.

---



---

## Working, but not full duty

If you can return to work, but not full duty, there are several types of return-to-work options available.

**Important: If your doctor (POR) releases you to return to light duty or full duty work, this does not mean your medical treatment will end.**

The following programs work within restrictions to accommodate your abilities:

- **Transitional work** — This type of work gives you some real job duties for a specified length of time (generally not exceeding two or three months) to help you “ramp up” and progress back to your original job.
- **Modified work** — With this type of work, physical barriers that may keep you from performing your essential job functions are adapted, altered or removed.
- **Light duty** — This is work in which the job requirements are performed at reduced physical capabilities. Job tasks may be temporary or permanent.
- **Alternative work** — This is work you can do if you are permanently restricted from your original job, but have other abilities and can be employed.

Contact your Managed Care Organization (MCO) or BWC claims service specialist for additional information.

\*\*\*\*\*

Ask about examples and if they make the text clearer.

## Exercise 5 – Group discussion – Cloze test

### Example:

Today, I went to the \_\_\_\_\_ and bought some bread and peanut butter. I knew it was going to rain, but I forgot to take my \_\_\_\_\_, and got wet on the way.

**Directions:** In the following paragraph, words were removed and replaced with numbers (1-9). In the corresponding text fields, enter the words you think were removed.

Helping you recover from your work-related **(1)** and getting your life back to **(2)** are our main concerns. Under BWC's health-care system, when you are **(3)** on the job, you can see any **(4)** for the first visit. After that, we encourage you to visit BWC-certified health-care **(5)** for treatment, except **(6)** an emergency. Except in an emergency or the initial visit, you will be **(7)** for paying your medical **(8)** if you have a non-certified provider treat you. If you choose to have a non-certified provider treat you, ask him or her to become BWC certified so you are not **(9)** for paying your medical bills.

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

5 \_\_\_\_\_

6 \_\_\_\_\_

7 \_\_\_\_\_

8 \_\_\_\_\_

9 \_\_\_\_\_

Text:

Helping you recover from your work-related **injuries** and getting your life back to **normal** are our main concerns. Under BWC's health-care system, when you are **hurt** on the job, you can see any **physician** for the first visit. After that, we encourage you to visit BWC-certified health-care **providers** for treatment, except **during** an emergency. Except in an emergency or the initial visit, you will be **responsible** for paying your medical **bills** if you have a non-certified provider treat you. If you choose to have a non-certified provider treat you, ask him or her to become BWC certified so you are not **responsible** for paying your medical bills.

# Appendix E - Demographics & survey

Participant Name:

What is your gender?    M    F

What is your age?        18-24 years old

                                  25-34 years old

                                  35-44 years old

                                  45-54 years old

                                  55-65 years old

If you could change one thing about the prototype what would it be and why?

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---

What do you like best about the prototype?

---

---

What do you like least about the prototype?

---

---

On a rating scale from 1 to 10; how do you rate the prototype?

---

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# Appendix F - Readability & comprehension questionnaire

Hello,

Even though the first phase of the BWC website redesign is going live at the end of January, we are already planning more improvements. The first of these improvements will be to work on making the website content easier to understand. It may take us some time to get all the changes in, but we are working towards the goal of making the website easy to use and understand.

This survey is anonymous. That means no one will know who you are. The reason for this is to encourage you to be honest. There are no right or wrong answers. The information you provide will help us to continue to improve the BWC website.

Survey link

Thanks for your help!

Paul Flowers

## **Survey**

1. When I read BWC information on the website I understand it.

- Yes, I always understand the information.
- Most of the time, I understand the information.
- Sometimes I understand the information.
- I never understand the information.

2. When I don't understand a word on the BWC website, I use the information I have already read to guess its meaning.

- Always
- Most of the time
- Sometimes
- Never

3. When you find BWC information on the website difficult to understand, do you give up or do you contact the call center for help?

- I always give up and contact the call center.

- Most of the time I give up but occasionally contact the call center.
- I sometimes give up but I contact the call center.
- I never give up.

4. I use a dictionary (or website) when I can't understand words.

- Always
- Most of the time
- Sometimes
- Never

5. Please read the following text:

### **Understanding Ohio law**

Ohio law requires employers to obtain workers' compensation insurance for all employees. Ohio employers are either state-funded or self-insured.

State-funded employers pay an insurance premium to Bureau of Workers' Compensation (BWC). BWC then pays compensation benefits directly to you, the injured worker. A Managed Care Organization (MCO) manages the health care and helps you return to work.

Self-insuring employers pay workers' compensation benefits directly to their employees.

a. How easy is this content to understand?

- Very easy
- Easy
- Moderate
- Somewhat hard
- Hard
- Very Hard

b. Please list any words that you don't understand in the text box.

Text box

6. Please read the following text:

### **Change of occupation (COA) benefit**

Per Ohio Revised Code (ORC) 4123.57(D), injured workers who have contracted silicosis, coal miners' pneumoconiosis, or asbestosis may be entitled to a Change of Occupation (COA) award if they have been medically advised to change jobs (occupations) to decrease further exposure to silica dust, asbestos, or coal dust.

Per ORC 4123.57(E), firefighters and police officers who have contracted a cardiovascular and pulmonary disease (as defined in ORC 4123.68) may be entitled to a COA award if they have been medically advised to change their occupation to decrease further exposure to smoke, toxic gases, chemical fumes, and other toxic vapors.

a. How easy is this content to understand?

- Very easy
- Easy
- Moderate
- Somewhat hard
- Hard
- Very Hard

b. Please list any words that you don't understand in the text box.

Text box

7. Please read the following text:

### **Safety and health consultations**

BWC's safety, industrial hygiene and ergonomics specialists can visit your workplace or consult with you by telephone or email to assist in developing effective strategies to reduce the risk of employee injury and illness. We provide all of our consultative services at no additional cost.

- **Industrial safety consultation** – For most workplaces: from factories to farms, grocery stores to government offices, retail to restaurants, municipalities to mining, schools to small businesses and everything in between.
- **Ergonomics consultation** – For all workplaces with manual material handling, lifting, pushing, pulling and carrying tasks, repetitive hand-intensive work, sedentary work, awkward work postures and other physical stressors.
- **Industrial hygiene consultation** – For all workplaces in which airborne contaminants, noise, chemicals and other environmental stressors may result in injury, illness, impairment, or affect the well-being of workers.

Our consultants also can help with:

- Management assessments and advice;
- Training development;
- Program development and documentation;
- Safety culture assessment and behavior change process;
- Safety team/committee development and enhancement.

Finally, our consultants can help you understand the benefits, eligibility requirements and application process for BWC's Safety Grants, and other programs.

a. How easy is this content to understand?

- Very easy
- Easy
- Moderate
- Somewhat hard
- Hard
- Very Hard

b. Please list any words that you don't understand in the text box.

Text box

8. Please read the following text:

### **Submitting a claim**

How do you submit a claim?

The doctor treating your injury

If the doctor treating your injury files the claim, he or she will submit it to the Bureau of Workers' Compensation (BWC) or your Managed Care Organization (MCO) within 24 hours of your doctor visit.

Once BWC receives the claim, the injured worker will receive a notification letter and a BWC ID card in the mail, usually within a few days of the filing.

**Note:** MCOs are companies that specialize in managing medical treatment for work-related injuries. A Managed Care Organization is not the same as your company's health insurance provider.



a. How easy is this content to understand?

- Very easy
- Easy
- Moderate
- Somewhat hard
- Hard
- Very Hard

b. After reading the text, which statement is false?

- BWC mails a letter and BWC ID card once it receives the claim.
- MCOs are the same as the employer's health insurance provider.
- The doctor treating the worker's injury files the claim within 24 hours of the doctor visit.
- I don't know.

9. Please read the following text:

### **Viewing benefits online**

To access your personal claim information, you will first need to create an e-account with a user ID and password. Refer to Accessing Claim Information for instructions on how to do so.

If you are eligible to receive benefits as the result of a workplace injury AND have created an e-account, you can monitor and manage your payment information online.

The following e-account areas allow you (or an authorized party) to view your claim's payment information (benefit compensation) by claim number:

- **Compensation Benefit Summary:** View specific information about your injured worker benefits, such as rates, compensation type, and payment dates.
- **Compensation Payment History:** View your benefit's payment history.
- **Scheduled Compensation Payment:** View your scheduled (upcoming) benefit payments.

a. How easy is this content to understand?

- Very easy
- Easy

- Moderate
- Somewhat hard
- Hard
- Very Hard

b. Please list any words that you don't understand in the text box.

Text box

10. Is there anything else you want us to know?

Text box

## Appendix G - Clues for low literacy skills

Most people with limited literacy skills are masters at concealing it and they are often more articulating in their speech so it is difficult to surmise a problem exists.

Most people with literacy difficulties feel a great deal of shame and are embarrassed by it. In a study of low-literate patients 67% had never told their spouse, 53% had never told their children and 19% had never told anyone about their reading problem.

Many times, the person himself is not always aware that they have limited literacy skills and they overestimate their abilities. Two-thirds to three-fourths of those reading at the very lowest level report in surveys that they read “well” or “very well,” whereas, 93-97% of persons in the second lowest proficiency level described their reading abilities as such. They often arrange their lives in such a way that they read what they can and they have learned to compensate for their problem with many coping strategies.

### Characteristics of low literacy users

- Lift text closer to eyes or move closer to a computer screen
- Point to text with finger while reading
- Eyes wander over page without finding central focus
- Read slowly

When poor readers read text, they:

- Struggle with more than one piece of information at a time
- Skip over difficult words
- Interpret words and visuals literally
- Miss meaning of words
- Miss context of the information
- Get lost in detail rather than focus on key points
- Can't make inferences from information
- Interpret perceptual information slowly

### Communication behaviors of poor readers

- Show signs of nervousness or frustration
- Act confused

- Act aloof or indifferent
- React to complex learning by withdrawing or avoiding the situation
- Problems following simple directions
- Fail to ask questions or asks a lot of questions about information in the written materials
- Incorrectly answer questions about what was read
- Talk out of context about the topic being read or discussed
- Lack of problem-solving skills
- Demonstrate difference between what they hear and what is written

## **Ways poor readers cope with having low literacy skills**

- Check "no" to all questions on the history section to avoid a lot of follow-up questions
- Make excuses for not understanding or reading material given to them
- Do everything they were told without asking questions ("blind trust")
- Sign forms without reading the information
- Take instructions literally
- Listen and watch closely to try to memorize information
- Avoid situations where their reading problems may be noticed
- Insist on reading the information at home or with a spouse present
- Bring surrogate reader or use excuses to ask someone to read the information for them
- Become defensive in an uncomfortable situation
- Keep to the same, familiar routine or services to avoid mistakes

[https://medicine.osu.edu/orgs/ahec/Documents/HL\\_You\\_Cant\\_Tell\\_by\\_Looking.pdf](https://medicine.osu.edu/orgs/ahec/Documents/HL_You_Cant_Tell_by_Looking.pdf)