Implicit Bias: Research and Tools

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- Hello, welcome to today's course, Reducing Implicit Bias: Research and Tools. The presenters for today's course are Katrinna Matthews, Anna Smith, and Leigha Jansen. My name is Carolyn Smaka. I'm a course contributor as well as Joanne Slater. These are the bios of our presenters. You can read more about them on our website. These are our presenter's disclosures. You'll find those on our website as well. These are the learning outcomes for today's course. After this presentation, you will be able to identify unconscious or implicit bias, use three interventions to reduce implicit bias at the organizational level, and describe four attributes of web content accessibility guidelines. So without further ado, let me turn things over to our presenters today.

- Our agenda for today is we're gonna divide this course into thirds. So I'm gonna review implicit bias and the current research. And then I'm gonna turn it over to Katrinna Matthews, and she's gonna look at the interventions at the organizational level. And then Leigha Jansen's gonna finish up with web accessibility. So what is implicit bias? Implicit bias happens at a level below our level of awareness. It's also known as unconscious bias. It's the preference for or against a person, thing, or group held at an unconscious level. It's the attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner. Unconscious bias impacts how we see people, and as a result, also how we interact with people.

But what's really important to understand is that we all have, everyone has, unconscious biases. None of us are immune to implicit bias, and we all have them. The key is really to recognize that and to work to dismantle them. In fact, our brains are hardwired to have biases. Our brains can process 11 million bits of information every second, but our conscious minds can only handle about 40 to 50 bits of information a second. So our brains are sometimes taking cognitive shortcuts that can lead to unconscious or implicit bias with serious consequences for how we perceive and act towards other people. Michigan's Department of Licensing and Regulatory Affairs has adopted a new administrative rule that requires implicit bias training as part of the

knowledge and skills necessary for the licensure or registration of healthcare professionals in the state.

The rule requires new applicants for licensure or registration to have completed two hours of implicit bias training within the five years immediately proceeding issuance of the new license or registration. Those renewing an already existing license are now required to complete one hour of implicit bias training for every year of their license or registration cycle. The annual training curriculum can cover a wide variety of topics related to implicit bias, but must incorporate strategies to reduce disparities and inequities. All professions licensed or registered under the Michigan Public Health Code, except for veterinary medicine, are required to take implicit bias training. Michigan currently licenses more than 400,000 healthcare professionals. Michigan defines implicit bias that it means an attitude or internalized stereotype that affects an individual's perception, action, or decision making in an unconscious manner, and often contributes to unequal treatment of people based on race, ethnicity, nationality, gender, gender identity, sexual orientation, religion, socioeconomic status, age, disability, or other characteristics.

The National Center for Cultural Competence examined the findings from studies that document patients' perspectives of biases and the experience of care, and the implicit biases on beliefs, clinical decision making, and communication on the part of healthcare practitioners. This review started with a PubMed search of articles published between 1990 and 2001 in English. The search terms and number of articles resulting were as follows: one article on implicit bias and provider, 120 articles on implicit bias and patient, two articles on explicit bias and provider, and 120 articles on explicit bias and patient. There was an overlap of the articles listed in these searches, and although the searches with patient yielded more results, the bias was not on the part of the patient, it was largely directed towards the patient.

The literature reveals that implicit and explicit biases take place in diverse health and behavioral healthcare contexts and settings among multiple medical specialties, types of professionals, and students. Health professionals identified in this literature were non-Hispanic white, Asian, African-American, and Hispanic Latino. There were no American Indian or Native American or Alaskan Native American healthcare practitioners or professionals noted in the literature. The research was conducted in all regions of the United States, and the sample sizes varied. However, studies were primarily conducted in an urban setting with little mention of rural settings or tribal communities. The literature reviewed can broadly be grouped categorically by studies that directly measure unconscious bias and its impact on care, directly measure unconscious bias and its relationship to conscious bias, suggest differences in treatment that are related to bias, but do not actually measure that construct, describe approaches to address bias among healthcare practitioners, delineate whether and how bias impacts communication in healthcare settings, and how an underlying cause to disparities in healthcare.

and critique the concept of practitioner bias as a cause or a contributing factor to health disparities. Most of the literature focused on provider or practitioner bias rather than bias on the part of the patient. Only a few studies address conscious or explicit bias, whereas most focused on unconscious or implicit bias among the diverse array of healthcare practitioners and professionals. Given that all humans are hardwired for bias, as I said in the beginning, the body of research revealed many areas of bias that impact health and healthcare. There are several characteristics and socioeconomic identities that arouse bias among healthcare practitioners and health professionals. Some of those that they found were age, disability, education, English language proficiency and fluency, ethnicity, health status, disease or diagnosis, especially AIDS/HIV, insurance, obesity, race, socioeconomic status, sexual orientation, gender identity, skin tone, substance abuse, and social contact, the amount of contact that practitioners have with patient populations.

So some of the key themes from the literature are that limited English proficiency and the ability to communicate effectively in English are a major source of bias. African-Americans and Latinos perceive the care they receive as lower, and that there is a rapidly growing literature on the negative attitudes and conscious bias related to obese patients. One of the major studies that they looked at was the Henry J. Kaiser Family Foundation Study in 1999. They found that limited English proficiency and the ability to communicate effectively in English are a major source of biases and have a negative impact on healthcare for many patients and their families. They conducted a national random sample of a telephone study of whites, African-Americans, and Latinos to look at their views on how often the healthcare system treats people unfairly.

Latinos responded that people are treated unfairly very often and somewhat often based on how well a person speaks English. Unfortunately, more recent studies have continued to document this as an ongoing problem within healthcare. Another question that the Kaiser study probed was whether African-Americans received the same quality of healthcare as whites. A majority of whites thought that the quality of care was the same, whereas a majority of African-Americans responded almost the exact opposite way. Unfortunately, some of these perceptions and experiences of care have not changed since 1999. Some additional literature findings are that African-Americans, Hispanics, and Asians were more likely than whites to agree that they would receive better medical care if they belonged to a different race or ethnicity, that medical staff judged them unfairly or treated them unfairly with respect based on their race or ethnicity.

And medical staff judged them on how well they spoke English. These researchers also found that African-Americans believed they are treated with disrespect and in an unfair manner because of how they speak English. So something to add, many of these studies rely on patient report of their experience of care or interactions with healthcare

staff. One critique we could have of these studies is that they're less than the gold standard of evidence because they're based simply on patient perspectives, but it's also important to acknowledge that a patient's perception is his or her reality. And in order to combat biases, we must seek to understand and be responsive to the worldviews and experiences across diverse patient population groups.

So bias among practitioners. Most practitioner bias is implicit and is influenced by multiple factors, including exposure over time to negative images and messages about certain groups of people. Individuals who perceive more provider discrimination have higher unmet needs for healthcare utilization. Those who have negative experiences within healthcare settings will be less likely to continue to seek healthcare services, even when they report a recognized need for care. Those who perceive more provider discrimination are also more likely to have poor health. There's a rapidly growing body of literature on the negative attitudes and conscious bias, which is different than unconscious bias, this is in your active brain, about providing care to obese patients across healthcare disciplines, nursing, medicine, dentistry, et cetera.

A confidential survey was completed by family practice physicians about extremely obese patients, and respondents indicated that these patients lacked discipline and were not motivated to lose weight. And a cross section of military family physicians was surveyed and determined attitudes in practice regarding obesity, and they said 56% did not find counseling obese patients to be professionally satisfying. And 18% thought obese patients were sad and 25% of obese patients lacked self-control. So these are all explicit or conscious biases that they're finding.

So at this time, we're gonna have a knowledge check. See if you've been listening so far. What state is requiring implicit bias training as part of the knowledge and skills necessary for the licensure or registration of healthcare professionals? So is it Mexico, Puerto Rico, Michigan, or Canada? So I'll give you guys a second to think about that.

And the answer is Michigan. So at this time, I'm gonna turn this over to Katrinna Matthews, who's gonna take our discussion into interventions at the organizational level.

- All right, so let's shift gears from what implicit bias is and the research on implicit bias and how it plays out in our day-to-day lives and in healthcare, and let's discuss what we can do about it. So I'm gonna spend some time discussing macro-level interventions that when used consistently, can help to transform organizations and the members of those organizations into being more intentional about providing quality, equitable, and inclusive healthcare. There are many ways to strategize and intervene. Intervention starts at the micro level with yourself, and recognizing that you have implicit bias, that we all have implicit bias. And then it goes from the micro level to the macro level, which is recognizing that organizations have practices and policies that help to perpetuate our personal implicit bias, and that those practices and policies ultimately become the fabric of the organization, and they ultimately intervene with how we actually function in our day-to-day interactions with our patients.

So, when we think about interventions at the macro level, the interventions that I wanna focus on in this particular presentation is educate about implicit biases, set employee expectations, promote dialogue, implement HR practices that disrupt implicit bias, and using accessibility principles. So when we think about these interventions, as we go through them, I want you to think about them, and we're gonna go through them one by one. And I want you to also think about ways that you can actually implement these things into your organization. So starting with educate employees about implicit bias. Education is the key. So education leads to increased awareness. As that old saying goes, "When we know better, we do better." So educating employees about implicit bias raises awareness, and it helps to keep people mindful of their stereotyping behaviors and perceptions.

So we can't work on something that we do not recognize as a problem. Therefore, trainings such as these help to create our knowledge base, help to expand that knowledge base, and help to raise awareness. Organizations must be committed to ensuring that all employees are educated on implicit bias and that all employees are a part of DEI initiatives. Education has to be at all levels of the organization. And sometimes, when we think about dismantling implicit bias within organizations, we fail at the education piece because the education is not spread across all levels. So it is imperative that if this is an intervention for your organization, which it should be, is that education is at all levels of the organization, from C-suite executives to upper management and administration to entry level employees and all others in between.

Not a single person can be excluded. Everyone that is a part of this organization needs to be educated. They need to have their awareness, there needs to be awareness raising. So everyone must be part of this educational effort. Setting expectations. This is very important. With this intervention, there is a need for every organization to have clear expectations that articulate the organization's commitment to DEI. An important aspect of fostering a culture that understands implicit bias and recognizes the need and importance of DEI also includes that the organization's commitment to DEI or diversity is in their diversity statement, or that they have a diversity statement that's actually written into the organization's core values and or their mission. So this is extremely helpful because employees come in the door having a clear understanding of what the organization expects and what the organizational values include.

This also makes sure that there's no confusion as it relates to the aligning of values. So this helps to attract and retain employees whose values align with the values of the organization. So oftentimes, you'll be in situations where maybe your values or your core beliefs do not align with the values of the organization in which you're working for. But if the organization has set clear expectations that if there's a diversity statement or their commitment to diversity, equity, inclusion is actually embedded within the

organization's mission, then there is no misunderstanding because it's there for you upfront and center, and you can make the call for yourself whether or not this organization's values align with your values. So promoting dialogue.

Clear and open dialogue is a must. Promoting dialogue helps to create a culture that promotes open expression and discussion about bias. In order for organizations to dismantle implicit bias, there must be a willingness to actually promote dialogue about bias. So, I have a colleague that refers to this particular intervention or strategy as courageous conversations. It takes courage to have these type of conversations because they are hard, and oftentimes, these types of discussions bring attention to our personal beliefs and actions. And of course, when we have unwarranted attention on ourselves, what happens? It makes us feel very, very uncomfortable, which ultimately makes us vulnerable. So, anytime that we're talking about biases and we're talking about our personal beliefs and how those beliefs drive our actions, it puts us in a place of vulnerability.

It makes us uncomfortable. It makes us feel very squeezed. And being vulnerable is difficult, especially in the workplace. But if we are to truly take ownership of personal bias and the bias within our organizations, we must be willing to be vulnerable and to have open dialogue. Open dialogue not only educates and builds trust among employees, but it also reinforces the organization's values. In addition to reinforcing the organization's values and building trust, when we allow ourselves to be vulnerable, when we allow ourselves to have these courageous conversations about things that sometimes we just do not talk about in the workplace because we feel like, eh, that's not conversation for work, so therefore I'm not gonna talk about that, not necessarily realizing how these things impact our interactions with our patients, and ultimately impacts the quality of care that the patient receives, as well as equitable access to the care.

In addition to all of those things, if we're able to promote open dialogue within our workspaces within our organization, it also increases our emotional intelligence. It allows us to have a better understanding of what motivates others, and then it also gives us this space, a safe space where we can improve our understanding, where we can take things to a different level because now, we're more emotionally intelligent and aware of things that maybe we were not aware of, and therefore, we're able to not only do this on a personal level, but we're able to think about our policies and our procedures within our organizations, and it helps us to move those policies and procedures in a direction that does not perpetuate implicit bias.

So, promoting dialogue within your organization is a critical strategy for dismantling implicit bias within your overall organization. So we've talked about education and understanding that education is the key. We've talked about promoting open dialogue within our organizations and being willing to be vulnerable and being vulnerable and willing to discuss these hard topics, and we've talked about setting expectations. Now I want us to focus on HR practices, HR practices that specifically are aimed at disrupting implicit bias. So when we're thinking about implicit bias, and we're going through this list of interventions, I want you to think about your organization. Think about the organization in which you work and serve patients. And I want you to think about the organizational makeup.

How diverse is the provider pool? Is the provider pool knowledgeable of things, such as social determinants of health? And how social determinants of health actually impact their particular patient populations? But more importantly, is the provider pool that you work with, as it relates to social determinants of health, do they realize and are they aware of how implicit bias is worked into social determinants of health and how we serve our patients? So, thinking about those things as we talk about HR practices, these are some things that we can do that will help to dismantle bias within our organization and help us to have an organization that is diverse, to have a diverse

provider pool, to have a provider pool that recognizes the implicit biases that are embedded within social determinants of health, that is knowledgeable with social determinants of health and the actual impact that those determinants have on particular patient populations.

So the first one is reworking job descriptions. So really thinking about when you're hiring, and this is at all levels, actually reworking those job descriptions in a way in which they speak to diverse applicants. Conducting blind resume reviews. So when you are looking at a potential candidate's resume, you're looking at their cover letter, you're looking at any of the support and documentation that your organization requests, removing all identifying information, removing anything that gives you any information about any of those bias factors like gender, race, culture, removing those things, and really just looking at that resume, cover letter, or whatever the supporting documentation is, just looking at it for what it is and not associating, oh, you see this name, so you associate that with male or female, or you associate X, Y and Z with race.

So actually removing those things and conducting blind resume reviews. Conducting a skills test. So when we think about HR practices, we can look at the resume, and there are certain things on that resume that prompt us to call that person in for an interview. And oftentimes, they'll come in for these interviews and we'll fall into the trap of just the various types of biases, like infinity bias and all these different biases when we meet that person that clouds our judgment and allows us to tend to hire candidates that are more like us or to hire candidates that align more like the other individuals within the organization, and it really limits diversity. Instead, have a skills test that strictly looks at the applicant's skills.

The next is standardized interviews. So this is having the exact same interview for every applicant for that particular position. So each position would have a standardized interview, and the same interview questions will be asked of each applicant that is

applying for that position, the same questions will be asked in the same order. So then, everybody gets the exact same interview. So then there's no bias built in the interviewing process because the questions are the same. And then, set diversity goals. So think about areas in which your organization can grow as it relates to having a more diverse provider pool and actually set goals for achieving diversity. And so, as you start to hire, or as you start to promote from within, think about ways in which you can actually achieve those diversity goals, achieve diversity by setting diversity goals.

And so, not going into it blindly and actually setting a diversity goal. So these are just some of the things that you can do at an HR level within an organization to help disrupt implicit bias. So, one of the primary goals of dismantling implicit bias in healthcare is ultimately to achieve health equity. So Johns Hopkins Alliance for a Healthier World defines health equity as the absence of avoidable, unfair differences among groups of people whether those groups are defined socially, economically, demographically, or geographically, or by other means of stratification. So, as we think about our organizations and what we can do in those organizations to make sure that we are providing equitable healthcare to everyone that our organization encounters, these are some of the things that we must put in place and that we must make sure that we have solid strategies around.

So one is commitment to understanding the problem. So, it can't just be individuals within the organization that understand the problem and that they have a commitment to understanding what's happening in the world around them, what's happening within the organization. The organization has to have a commitment to understanding the problem. There must be a community-wide effort. So, the organization must move beyond the walls of the organization and must be willing to get out in the community and partner with the community and build those networks within the community. It has to be a strategic priority that is leader-driven. So, as I said earlier, how education needs

to be across the organization, this priority for DEI must start at the top and be across the organization as well, but it has to come from the top down.

Must be leader-driven. Structure and processes must support equity. So as you are listening to this training and you're thinking about your organization and you're thinking about the different things that you can do to help dismantle implicit bias within your organization, also think about your policies and your processes because you can plan to do all these things, but if you don't have policies and processes that actually support these things, then you're not gonna be able to achieve an organization that is free of implicit bias and that is actually able to promote health equity. Addressing social determinants of health. Confronting institutional racism. Training goes back to education, making sure that there's education and training across the board.

Paying employees a living wage. So, this ties in with the social determinants of health and the implicit biases that we know are associated with social determinants of health, and part of that is income. So paying your employees in your organization a living wage, improving access in underserved communities, that aligns very well with the community-wide effort. So if you can network across organizations and network outside of your community, it will help in improving access in underserved communities. And then using a diverse pool of suppliers and contractors, and again, investing in the community. So if you can do those things within the organization or set up processes within your organization that help you to invest in the community to have a diverse pool of suppliers and contractors that is leader-driven, then you will start to see a dismantling of the implicit biases within your healthcare organization or within your organization, and you will see greater achievement of health equity amongst your patients.

So I'd like to do a knowledge check. I know that was a lot of information, so I just wanna check to make sure that you were listening. So what is one way an HR

department can help disrupt implicit bias? Ignore it, set diversity goals, tell employees to be non-biased, or D, none of the above. If you chose B, set diversity goals, then you are correct. At this time, I'm gonna turn it over to my colleague to discuss moving from implicit bias interventions to web accessibility.

- Thank you, Dr. Matthews. I'm excited to be here today to talk about something that we don't always consider when it comes to health equity and equitable hiring practices, and that is that we need to think about web accessibility or digital accessibility. We need to consider the tools that we use in our workplaces and care facilities, and how our employees and how our customers, patients, and clients access information utilizing those tools. So, I'm excited to introduce, to many of you, what is something new, and that is web accessibility. So, what is web accessibility? It's often identified as A11Y, which is derived from the 11 letters in the word accessibility, starting with the A and ending with the Y, and the 11, or the one one in between.

So, let's move from what A11Y means to what it really is. And more importantly, accessibility or A11Y is about inclusion, and creating for this case, an inclusive web experience. Depending on which source you use, there are numbers that vary anywhere between 10 and 20% of the world population demonstrates a disability that can interfere with the ability to see, to hear, or navigate on a device during an online experience. Some of these disabilities can include vision, hearing, deaf, blind, mobility, cognition, seizures, sorry, seizures, psychological or psychiatric, and compound disabilities. And it's also important to remember that disabilities can be temporary. For example, a broken arm impairs mobility for a temporary period of time. When it comes to talking about accessibility or A11Y, it's important to remember and think about the power of the web.

Tim Berners-Lee, who is best known as the inventor of the World Wide Web and is director of the World Wide Web Consortium or W3C, stated the following, "The power

of the web is in its universality. Access for and by everyone regardless of their abilities." And during a global pandemic, this became even more prevalent for the population with the need to connect with people with healthcare, with services using digital technology. It's also important to recognize that the World Wide Web Consortium supports guidelines for web content accessibility, AKA WCAG, which we'll talk more about as we move ahead. Signed into law July 26th, 1990 by George H.W. Bush was the Americans with Disabilities Act. Take a moment and read the core definition of the ADA.

Services offering public accommodation include the World Wide Web or the internet. The number of ADA Title III where Title III prohibits discrimination on the basis of disability in the activities in places of public accommodation. The number of Title III lawsuits filed in the United States increased by 320% since 2013. In 2020, there were more than 2,500 lawsuits filed in federal court related to web accessibility, California and New York lead the nation in those filings. Usablenet.com reports that there are currently almost 100 digital lawsuits filed per week in federal court and in the state of California. There is risk if you do not address digital accessibility as an organization. But more importantly than the risk, accessibility ensures involvement of a diverse audience to the greatest extent possible.

Many of us are familiar with accessibility in the physical sense. Think of things like curb cuts, wheelchair ramps, elevators and stairs, braille buttons on ATMs, doors that are wide enough for wheelchair access, automated doors, things like that that able-bodied people use as well. The point being that awareness of accessibility benefits everyone. So, shift your mindset from physical experiences to digital experiences for persons with a disability. Take a moment and consider the physical experience accommodations that you have encountered in your own workplace. And then think about the potential digital experiences that may need accommodations for a disability. So what is web

accessibility, when we get down to it, and how do we design a web experience that is accessible to the greatest possible audience?

What it means is that we're designing products from the beginning that people with disabilities can equally perceive, understand, navigate, and interact. So when you log in to check Facebook, can you navigate that website if you are someone with a mobility impairment? If you are someone who is deaf, can you watch a video and there are captions available? There are many examples that we're gonna dig deeper into that are examples of things that can be done in order to improve digital accessibility. Web accessibility principles were introduced in 1999 with four basic principles that evolved into four design principles and guidelines. These guidelines have been enhanced to include mobile accessibility over time, as well as to include cognitive disabilities.

So, let's take a deeper look at these accessibility principles, which are the idea that web content must be perceivable, operable, understandable, and robust for all users. Perceivable means that it makes it easier for users to see and hear content. If content is operable, that means that it's easier to use a keyboard and other inputs, such as a screen reader or an augmentative alternative communication, AAC device. Understandable means that we have web experiences that help a user avoid and correct mistakes. And when a web experience is robust, it means that compatibility is maximized with both current and future tools, including web browsers. So, let's take a deeper look at these guidelines in terms of applied practices and what it really means to design an accessible digital experience for users.

The first is that, again, that the experience is perceivable. And examples of perceivable include things like captioning and transcription for the deaf, as well as those who may have cognitive challenges and also, non-native speakers of the language. Alt text is something that is added to images that a screen reader will recognize and read for those users who may have low vision. Adequate color contrast or the contrast between

the foreground, the text, and the background colors is for those who have low vision and or color vision deficits. And remembering that those with color vision deficits won't easily differentiate color in text, especially if there's meaning conveyed by color. So we wanna avoid conveying meaning simply by the use of color.

Ah, let's talk about making things operable. So, if we're making things operable, we're making it easier for a user to use a keyboard, or a mouse, or other inputs. So adding context to links is very important. It means that you're using something more than just saying, click here. If I just see click here, I don't know for what or what will open. So add context to your links so that the user knows by clicking here, they will open a PowerPoint deck or they will open a new page that shows an image. Semantic markup is important because what that does is it is the proper use of things like page titles, headings, or levels of headings to convey structure.

That semantic markup is often used by screen readers in order to navigate and read important information for someone who may have low vision. It's also important to have text that will reflow when the screen size changes. So, think about if you are on a mobile phone and you are reading through text, it's important that that text reflows so that the user doesn't have to scroll from left to right or up and down unnecessarily. There's a big difference between reading text on a desktop versus mobile. Finally, you wanna make sure that there isn't any content that flickers or is floating because the last thing we wanna do is induce any type of seizure. And finally, a visible keyboard focus is important to give someone an idea of where they're at on the screen for those who navigate only using a keyboard or other external device.

All of those things make it easier for a user to use a keyboard or other input and navigate a page by using something other than a mouse. If we're gonna make content understandable, it's important that we programmatically identify the language, that informs a screen reader to use the correct accent. If we have consistent navigation and

behaviors across pages, that aids all users in navigating a website and knowing what to expect in terms of behavior when they click in different areas. Labels and instructions are important for users because that provides details regarding the type of information to input in a field as well as the format. If you think about things like zip codes and email addresses, there's a specific format that goes with that.

And if we prefill those text fields with a font that shows the user this is exactly the format that you should use or the type of information that should go in this field, what that does is it prevents that user from making an error because our job is to make sure that we give a user the best experience possible by detecting errors, preventing errors, and if they do make a mistake, by providing suggestions that helps the user get it right. If we can help them avoid making mistakes, and then if they do make a mistake, help them correct their mistake, it's going to be a more understandable experience. Finally, we wanna make sure that it is a robust experience.

And what that means is that the programming behind the scenes, the html, the JavaScript, use best practices and accessibility to support assistive technology, such as screen readers, mouth sticks, voice recognition, braille key keyboards. We also wanna make sure that we're supporting accessibility across browser. All of those tools should work regardless of the browser that the user chooses. So whether you're using Chrome, you're using Safari, or Firefox, accessibility tools and practices should work across browsers. Again, the simple way to remember that is to remember the acronym POUR. We wanna make sure that our content is perceivable, making it easy as possible for our users to see and hear content, operable, meaning that we're gonna make it as easy as possible for a user to use a keyboard or other inputs to navigate a webpage.

We wanna make sure that the content is understandable and help our users avoid and correct mistakes. And finally, we want to make sure that our content, our web content,

is robust. It maximizes compatibility with current and future user tools. Let's put this into practice with a case study. And I'm gonna let you take a moment to read about Alan. Alan has some challenges when it comes to using something like MyChart to manage his appointments with his healthcare practitioners and to go in and look at perhaps test results or prescriptions within his chart. So, after reading that, let's think about how we can improve this experience, this web-based experience, for Alan by applying accessibility principles. So what has Alan learned how to do?

He has learned how to use screen magnification to enlarge his text within the web browser so that he can see it. These tools work well on many different websites and they work with all browsers. When he is using MyChart, he also enjoys the reflow of text when he enlarges it, it should support up to 200% magnification. And when that happens, the text reflows in order to alleviate the need for him to scroll back and forth to read that enlarged content. If you've ever used a CAPTCHA option where you have to verify yourself as a user, those are always visual. So, alternative CAPTCHA options include audio. So you ask it to play back a piece of audio instead of having to identify an image.

And that helps a lot of us from getting frustrated when the distortion of that text occurs when he enlarges it. He also uses a special mouse that's easier to control his hand with tremors. So, he's using a different device other than a standard mouse in order to navigate the web. And again, having a robust experience means that those external agents will work well with the website, regardless of what that agent might be. So in review, what do these different tools, how do they fit into our principles or guidelines, or POUR guidelines, perceivable, operable, understandable, and robust? By using a screen magnification tool, the content becomes perceivable for Alan. He also uses an alternative mouse, which actually applies to both operable and robust.

By using a format for navigation that is consistent and predictable, it makes it easier for Alan to navigate the webpage when the headings are in the same place, the navigation is the same on all the pages. When the titles, headings, and labels are descriptive for Alan, it makes it more understandable. And when he does make mistakes with an input, if there are helpful error messages as well as success messages, that also makes the experience more understandable for someone like Alan. And we've done everything we can to make content easier to see and hear, and making sure that it is readable and understandable for him using the tools described. Within an organization, accessibility education is critical for awareness and fostering a culture of inclusion, of change, and advocacy.

And it begins with an overview of accessibility, such as this, increased awareness is a great place to start. If you start with the basics, you'll discover that within an organization, there are accessibility champions who will naturally lead the initiative, but it's important to have awareness throughout the organization with regards to the importance of accessibility. Accessibility truly is a shared responsibility across the organization. It is not the responsibility of a single person or department, nor is accessibility a single, one-time task. Accessibility is an ongoing initiative. If you think about how much the web has changed with the advent of mobile devices, that's just one example of how things continually change and there is a need to address accessibility as an ongoing initiative within an organization.

Accessibility ensures the inclusion of a diverse audience to the greatest extent possible. Going back, again, and talking about some of the things that Dr. Matthews presented, it's critical for us to include accessibility as part of equitable care, as part of our hiring practice. And I encourage all of you to have those courageous conversations in order to drive change to do exactly what the statement on the slide says, to ensure that we are including as diverse of an audience as possible to the greatest extent possible when we are considering the tools, the digital tools that we use every day

within our organizations. And that applies to not only patients and clients and customers, it also applies to employees.

So making sure that, again, thinking about 10 to 20% of the population presents with some sort of disability, that you're also providing accessible digital experiences for your employees, as well as your clients and patients. So as we get towards the end here, let's work together on a reflection activity. Think about these questions and share and discuss with other learners. How have you experienced web accessibility in your own professional workplace? And what is one action, based on what we've learned today, you could suggest to improve accessibility for your patients or your clients? Take a moment and you can pause the recording if you would like in order to add a comment. All right, well, let's move on to a knowledge check for this section on digital accessibility or A11Y.

What percentage of the population experiences a disability that interferes with the ability to see, hear, or navigate on a device during an online or digital experience? I'll let you take a moment to take a look at those answers and make your choice. And 10 to 20% is the correct answer. So think about that, in every group of 10 people or 10 patients that you see, one to two of those people are going to need some kind of accommodation in order to use your tools, your digital tools, to the greatest extent possible. And with that, I am going to turn it over for conclusions and wrap up.

- [Anna] Thanks, Dr. Jansen. At this point, we have a few final things just to wrap up. One of the final activities that I wanted to do has to do with this image that I have here on the screen. It's an idea that we haven't talked about in this class yet, and I think is really important when we talk and think about implicit bias and its role in diversity, equity, and inclusion training, and it's the idea of belonging. And belonging is the idea that when you have diversity and equity and inclusion, and you are including the work of implicit bias training into all of those concepts, then you truly do have belonging.

Cornell defines belonging as the feeling of security and support when there is a sense of acceptance, inclusion, and identity for a member of a certain group.

It is when an individual can bring their authentic self to work. People of all races, ethnicities, disabilities, genders, and abilities will all feel that they belong, and that really is the true goal of implicit bias training to get all healthcare practitioners, and really all people, to be their authentic selves and to be able to bring their authentic selves to the clinic that they work in, and that your clients, your patients, can also bring their authentic selves when they come to see you. And so, this graphic that I've got here on the screen really does show that in a real visual representation. And when you look at the square in the upper left, it shows reality. We've got one person that can clearly see the sunset, whereas we have one person, they can barely see the sunset.

And the last person can't see it at all. All they can see is a fence. And so, if we wanna use equality where we're going to give everyone an equal solution to try to boost everybody up, they all get a little step stool. The one person who can see the sunset can see it even better. The person who could barely see it was just right at the edge of that fence, they can see it now so they can see the sun. But the person who couldn't, they still can't see it. So, even though they all received an equal solution, it still didn't fix the problem. So then we look at equity, and we've talked a lot about equity today, and you can see that it's not an equal solution.

The person that didn't really need any additional help doesn't have a step stool at all. But the person who needed just a little bit of help, they got a small step stool, and the person that couldn't see it all, now, they have a larger step stool and now everybody can see the sunset. But what belonging really is about is removing the fence entirely, and so that everybody can see, not only the sunset, but also, they can see the ocean. They get to see the whole view that was before blocked. And I think when we work to have implicit bias training and implicit bias work in our work settings, in our home

settings, and everywhere, we really get to that state of belonging, and that really is the goal, hopefully, in all of these trainings that you guys sit in on.

And so, that really is the final activity and the end of of our session today. We do have some resources. Dr. Jansen gave us some accessibility resources that if you wanna take your learning just a little bit farther, you can go through and click on any of these resources and learn more. Dr. Matthews and I went through and we also included some implicit bias resources. The top one is The EveryONE Project, which is a comprehensive implicit bias training program for healthcare providers, and it is a really great resource that I encourage you to click on and learn more about. There's also Project Implicit, which allows you to take an implicit association test and you can learn what your implicit biases may be.

And it really is the first step to combating your own implicit biases. There are two great videos, "How to Outsmart Your Own Unconscious Bias" and "We All Have Implicit Biases. So What Can We Do About It?" I encourage you to watch both of those. And there are also a couple books here as well on "Diversity Beyond Lip Service: A Coaching Guide for Changing Bias" and "Blind Spot: Hidden Biases of Good People." These are also our references that we've put together for today, so feel free to look at any of those that you are interested in. Ask us questions, share your experiences, and we really hope that this ends up being an interactive presentation that you feel that you can learn more about implicit bias. Thanks for attending.