Plain Language and Beyond: Developing Health Resources for People with Intellectual and Developmental Disabilities

Presenters: Molly Lynch, Dr. Linda Squiers, and Dr. Sidney Holt

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ASHLEY CLARK-PURNELL: So hello, everyone and welcome. Again, my name is Ashley Clark-Purnell. And I serve as the technical assistance training lead for the Center on Knowledge Translation for Disability and Rehabilitation Research, or KTDRR, which is housed at the American Institutes for Research.

So I am a brown-skinned woman with long brown hair. And I'm wearing a short sleeve purple blouse. And I have white earbuds in my ears.

So before I introduce our presenters, I would like to take this opportunity to thank our funder, which is the National Institute on Disability, Independent Living, and Rehabilitation Research, or NIDILRR, a center within the Administration for Community Living in the Department of Health and Human Services. I also want to take this opportunity to thank the members of the KTDRR team for their help in putting this webcast together.

So our presentation for today, beyond plain language, creating health resources for people with intellectual and developmental disabilities, comes from the team at RTI International, communication practice area. So we will have Molly Lynch, who is the director of audience engagement research program, and Sidney Holt, who is a health communications scientist, presenting for us. So with that, I will hand it over to you, Molly.

MOLLY LYNCH: Great, thank you so much. And thank you for that wonderful introduction, Ashley. My name is Molly Lynch. And I am a white woman in my mid-40s with light brown hair below my shoulders. And I'm wearing a black and white striped dress. And I have a blue screen behind me that says RTI. We can go to the next slide.

OK, so we are really excited to talk to you today about a tool that we developed for the CDC with our partner Communicate Health. And as I talk about it, I'll let a few things. This tool is publicly available. It's evidence-based. And really any type of organization or individual can

access and use it. And it's really designed to move beyond traditional plain language principles and really be tailored specifically to help people develop materials that are understandable for people with intellectual and developmental disabilities, especially those who may have extreme low literacy.

So on the webinar today, our objectives are for you to learn more about the unique communication needs of people with an intellectual or developmental disability, learn about this tool, this tool I'll link to it in a minute. It's CDC's tool for creating products for this audience. And finally, we'll do some practice. So there'll be some interactive portions of the session today where we'll apply some of the principles from the tool. So we'll look forward to that.

OK, so before we jump into the tool itself, we think it is really important to define and talk about our audience for the materials that we developed and more about this tool. So Sidney and I are both communication scientists. And we think it is absolutely critical to put the audience at the center of any material that you're developing. Any communication product really needs to start with the audience. So that's where we'll start today.

I did want to just go over a few points about our audience. So adults with an intellectual or developmental disability who also have extreme low literacy can be a really diverse audience. And so before you start creating communication products for this audience, it's important to understand who you're writing for and how their information needs and preferences may differ from those of other audiences.

So we have a slide here that just defines what intellectual and developmental disabilities may encompass. So we have here it says, the conditions that limit a person's ability to learn new or complex information, apply new skills, and function at an expected level in daily life. And this is really important to take into consideration when you're developing an educational material or communication product.

I do want to underscore that communication abilities among people with an intellectual or developmental disability can really vary quite widely. And so, today, we are focusing these best practices on people with an intellectual or developmental disability who also have extreme low literacy. And so what do we mean by extreme low literacy?

For the purposes of our project and our work where we develop this tool, we categorized extreme low literacy into three different literacy categories. So at the top of the category may be folks who can read basic books with pictures, but it can also include people who are really only identifying sight words when they're reading. And it can also include people who are really identifying common signs or pictures only as they're reviewing materials.

So the question becomes, can plain language principles meet the needs of this audience? And the short answer is plain language writing principles are always important to keep in mind, but they really may not meet the unique communication needs of this audience. So as we think about plain language writing principles in general, some of those top principles include highlighting and emphasizing the main message so the reader can quickly access the key takeaway, writing an everyday language, defining unfamiliar words, avoiding abbreviations and acronyms, using active voice and not passive voice, so making your material really actionable, and using shorter words and shorter sentences.

So if you're using these principles, you're probably doing a pretty good job of getting to plain language. So how do we build upon and move beyond these basic principles to really meet the needs of this audience? We can go to the next slide.

OK, so these are key principles that, through our research and in talking to families, these really were the kind of additional principles to keep in mind when you're developing materials for this audience. So the first one is to focus on a single behavioral recommendation. And often in health communication and public health, we like to bundle behaviors. So we may say exercise more and eat healthy. But for this audience, it's really important to just focus on a single behavioral recommendation and make the entire material about that.

You are going to also want to cut anything that is not essential. And you're going to include only one idea or behavioral step per page or screen. And we'll show you some examples of what this might look like when we apply all of these principles.

You're going to want to write short, straightforward sentences with common, literal words. And you're going to want to use images, but you're going to want to keep the images literal and realistic. So images are incredibly important for people who are-- reading materials and who have extreme low literacy. So as you can imagine, the pictures become very important to interpreting what the message is. And you're going to use alternative formats that may not be used for other audiences, such as social stories, videos, and interactive materials to give these step-by-step instructions on how to perform that behavioral recommendation.

OK, so we've talked a lot about the audience, and we've talked about how traditional plain language principles might not meet the needs of this audience. So now, we're going to get into this tool that we hope is helpful for you to access and utilize and share and to create materials for this audience. So in the tool, you'll find guidelines that help develop communication products specifically for adults who have an intellectual or developmental disability and extreme low literacy and their caregivers. They can often be used together to talk about a health behavior or a protective action that you might take. And the tool-- we'll go through it in a moment, but-- it contains 27 scored items. These will be yes/no questions. And they correspond to evidence-based best practices for communicating clearly with this audience. And they revolve around these four areas or domains.

One is about behavior, the behavior you're recommending that people take to be healthier or to protect themselves. There's a section on sentences, words, and numbers, how to do text layout, and also how to incorporate visuals.

So as I've mentioned in some of the previous slide, this tool is evidence-based. So we spent over two years, almost three years, collecting evidence for these principles that will show you in a minute. And it began with a review of the literature, an environmental scan for existing best practices of which there were not a lot. So we really kind of sought to fill that gap. And we did a lot of contacting of key stakeholders and families and where the family was supporting somebody with an intellectual or developmental disability and extreme low literacy and talking together with a family member and that person to understand the communication needs and how we could best address those.

And then in a subsequent year-- go to the next slide-- we thought to expand the evidence-based a bit more. And we conducted an interview-administered survey of 100 caregivers who support people with IDD and extreme low literacy where we really tested this tool. And we showed two versions to that person, a version of a material that applied the principle and then a version that did not. And we asked which was more understandable. And we compiled all of that evidence to develop the tool that we'll show you today.

OK, so I think there were some questions in the chat about what these formats might look like. So we'll go into that. We think it's always helpful to see the end product before we get into the weeds of this tool.

So some of formats that make that may work well for adults with an intellectual or developmental disability and extreme low literacy we found through talking to families were--one is social stories. And we'll showcase a social story in a minute, but really this is a narrative description of a particular situation. And it often includes specific information about what to expect in that situation and why. And so it's a great format to take somebody through the steps of a protective behavior to help them understand and anticipate why that behavior is needed.

We also have videos and animated videos. We'll show you an example of that today. But as you can imagine, videos are very helpful for people who have extreme low literacy, as it takes the burden off of having to read a lot of text. And we also did some interactive activities where the caregiver or support person can really work together to do some activities within the material that helps kind of keep people's attention and really get that key takeaway.

And finally, posters, when we're talking to families, they also told us that posters were really helpful as reminders, so if you have a behavior that's performed over and over again. And we were working in the pandemic. And so, often, an example would be put your mask on before you leave the house. And families found that helpful to put that on the door as a reminder, so we've added posters here as well.

So now, we would really like to show you what some of these materials look like. And the first will be a social story. And so I will show some images on the screen. I will talk through the images and read the text as we go through the social story. So this is an illustrated social story.

And we start with Anthony. He's in his house, and he looks a little bit sick. And he's sort of waving from the window.

We go to the next page, and we find Anthony is sick in bed. It says, I have COVID-19. I feel sick. I cough a lot.

We go to the next page, and Anthony is on a Zoom call with his doctor. It says, my doctor says I need to stay home for five days.

I stay in my room. I don't want my dad to get sick. I call my teacher. I tell her I am staying home. I don't want my teacher or friends to get sick.

Then we have a picture, an image, of Anthony. He's still in bed, and he's wearing a mask. And his father's entering the room, and his father's also wearing a mask. It says, my dad brings me breakfast. We wear our masks. I always wear my mask when I'm with other people.

We see Anthony is now up and around the house. And it says, I wear a mask when I go to the bathroom. I always wear my mask when I leave my room.

We next go to a picture of Anthony inside his house. And he's looking out the window and waving to a friend on the street. It says, I stay home for five days. I don't go to my day program. I don't go out to see my friends.

Next, we see Anthony is walking around outside, but he's wearing a mask. It says, I feel better after a few days. Now, I can see my friends again.

I wear a mask for a few more days. I don't want my friends to get sick. And then we wrap up with a stay safe from COVID message with the other recommendations that we developed individual materials for so we could focus on one behavior at a time.

And next, we'll show you a video. And this is just to give everybody an idea of what the images are. This will be a picture of our character Sam. And he is coming up to a sink, and he is going to wash his hands.

[VIDEO PLAYBACK]

- Stay safe from COVID-19. Wash your hands so you do not get sick. First, turn the water on. Then get your hands wet. Put soap all over your hands. Rub your hands together.

Sing the Happy Birthday song twice. Put your hands under the water. Rub your hands together until the soap is gone. Turn the water off, then dry your hands.

Now, you're all done. Always wash your hands when you come home. Always wash your hands before you eat. Always wash your hands after you use the bathroom. Stay safe from COVID-19. Wash your hands so you do not get sick.

[END VIDEO PLAYBACK]

MOLLY LYNCH: Great. So those were just two examples of the type of materials. And we have a whole suite of resources that were developed for COVID-19 on the CDC website where we developed these materials on different topic areas in multiple formats.

So now, we'll talk about the tool that we developed so that really anybody, any organization as we mentioned, any individual, can access it and use this link that we'll put it into the chat here. So if anybody would like to follow along as we're going through the tool, you can find a link to the tool in the chat.

And I will just say that CDC has a full Clear Communication Index web page. We worked with CDC to develop the Clear Communication Index many years ago. And this is an add-on to develop products for adults with intellectual disabilities and extreme low literacy. And we have the direct link on this slide as well. So you can find many plain language resources there along with these two tools.

So this is our product development tool, the tool I have been referring to today. And this is just a screenshot of the cover page and then the first page that lists the table of contents. So the tool is broken into two parts.

The first part is a user guide. And it really provides kind of step-by-step instructions to create the materials like the ones that we just showed. And the user guide will give you a description of how to apply each of those 27 items in the tool and also gives a lot of great examples of what to do, what not to do. So that is what you'll find in the user guide.

And then the second part is a score sheet. So you can use that to really score the items and see if you've developed a product, how well it follows these best practices. So that's just an overview of the tool. And now, I will turn it over to my colleague Sidney Holt to talk through these principles more closely.

SIDNEY HOLT: Thanks, Molly. And hello, everyone. My name is Sidney, and I'll be taking us through the rest of today's presentation. I'm a white woman in my mid-30s. I have dark brown hair, and I am wearing a green top.

As Molly mentioned earlier, the communication best practices in this tool are broken into five domains. And the first domain is all about behavior. And the items in this domain start on page 12 of the user guide if you want to follow along.

So this slide includes a screenshot of the items in the behavior domain. And the items in this domain convey that a product should only include one focused behavioral recommendation, and it should be stated more than one time. And this is because you don't want to overwhelm this audience with too much information. And repetition is really important for helping this audience understand and remember the behavioral recommendation.

The items in this domain also convey that you should provide step-by-step instructions on how to perform the behavior and each idea or behavioral step should be presented on a separate page. And this is because many people with IDD and ELL learn best when they're presented information a little at a time. So by breaking a behavior down into simple steps, you can help this audience avoid becoming overwhelmed or missing key ideas.

Other items in this domain focus on using both text and visuals to illustrate each behavioral step or action and using a single main character to demonstrate the behavioral steps. People with IDD who have extreme low literacy may sometimes skip over text that isn't paired with pictures. And including pictures that feature just one main character helps provide continuity between the steps and tell a story.

So now, we have a few practice questions. We'll have practice for a few of our domains today just so that you can get an opportunity to apply these principles. And we will start off with practice scoring on item one.

So we've got a product on the screen here that has three scenes with our character Alice and her friend Sam. And in the first scene, Alice is waving to the camera. And the text says, there are lots of ways to keep your body healthy.

In the next scene, Alice is eating an apple inside her house. And the text says, try an apple at snack time. And in the final scene, Alice is walking outside with her friend Sam. And the text says, go for a walk with a friend.

So the question here is, does this product include only one focused behavioral recommendation, yes or no? And we've got a poll question that we are going to put up.

All right, so the majority of you, 85%, said no. This product does not include only one focused behavioral recommendation. And you would be right. This product focuses on two types of behaviors, eating healthy foods and exercising. And while both of those fall under this broader umbrella of keeping your body healthy, if you were creating products about these behaviors, you would want to focus on them in separate products.

All right, next, we will practice scoring a product on item three. And this time, the product is about hand washing. And there are four scenes.

So in the first scene, our character Sam is turning on the water. And the text says, I turn on the water. I get my hands wet.

In the next scene, our character Izzy is adding soap to her hands. And the text says, I put soap all over my hands. In the third scene, our character Winnie is washing her hands. And the text says, I put my hands under the water. I rub my hands together until the soap is gone.

And in the final scene, our character Daniel is drying his hands. And the text says, then I dry my hands. I am all done.

So the question here is, does this product show how to perform the behavioral recommendation by breaking it down into a series of single steps or actions, yes or no? And we'll put the poll up.

All right, so it looks like about 3/4 of you, 73%, said yes. This product shows how to break the recommendation down into steps. And that is correct. We've got step-by-step how to wash your hands from turning on the water through drying your hands.

OK, for this next question, we have three versions of a product on staying safe in the sun with our character Lucas. And version A has text that says, put sunscreen on your legs. Put sunscreen on your arms. Rub the sunscreen into your skin. Put your sunglasses on. Put your hat on. Now, you're ready to go.

And then version B has images that are actually showing Lucas putting sunscreen on his legs and arms, rubbing it into his arms, putting on his sunglasses, and then putting on his hat. And version C includes the text from version A and the images from version B. So the question here is, which version, version A, B, or C follows the item five principle, which is all about using both text and visuals to illustrate each step? So we'll put that poll on the screen.

All right, so 99% of you all said version C, which is correct. This version does a great job of having both an illustration and text that walks through all of the different steps for staying safe in the sun.

All right, we have one more practice item for this behavior domain. And for this one, we're going back to the same handwashing product that we talked about a minute ago. And this has our characters Sam, Izzy, Winnie, and Daniel showing the different handwashing steps.

And this time, we are practicing scoring on item six. So does this product use one single main character to demonstrate all of the behavioral steps, yes or no? We can put up the poll.

All right, so 97% of you said no. This product does not use a single main character. And that's correct. This product actually is not one that we would have developed. It has a different character performing each handwashing step.

And that can cause confusion for this audience. When we tested a version like this, I remember somebody said that the person they support may pick the image that looked the most like them and think that they only needed to perform that step. So that's just anecdotal, but it is important to have a single character for continuity and to improve understanding.

All right, so now we'll go to the sentences domain and talk about some best practices related to sentences. These start on page 15 of the user guide if you want to follow along. And this slide includes a screenshot of the items in the sentences domain.

So these items focus on keeping sentences short, straightforward, and more conversational, so that they are easier for this audience to understand. And one way to do this is by using active voice when writing for this audience. Also, you want to make sure each sentence focuses on just one key point and try to keep sentences to 10 words or fewer to minimize cognitive load.

You also want to choose headers that are informative statements. And so that means that they state facts or suggest what to do, for example, wash your hands to stay healthy. And for people with IDD who have extreme low literacy, these types of headers research has found to be more effective than headers that pose a question, which are commonly used for other audiences.

It's also important to choose a single tense and stick with it because switching between tenses across sentences can cause confusion. And as the writer of a material, you may not even realize you're doing it.

All right, we'll move right into the third domain, which is words and numbers. And this domain starts on page 17 of the user guide. So this screenshot includes items and the words and numbers domain. And these items focus on always using words that this audience understands.

And if you really need to use a jargon term, you should clearly define it using familiar words to this audience. You should also use the same words for the same concepts throughout a product, as both consistency and repetition are really helpful for aiding understanding.

In terms of numbers, you should use whole numbers and avoid expressing numbers in a complex way, such as with fractions or with decimals. And you should also write numbers as numerals. Because they look more distinctive, and they're easier to identify in text than numbers that are written out.

And another tip here is just to make sure that numbers are needed in the first place. And if they are, it's important to test them with your audience and make sure that they're actually helpful. When we were creating products on staying a safe distance apart, we originally were testing products that say stay 5 feet apart.

But that was not a useful metric when we tested with this audience. And so we instead used visuals to show in the grocery store when you went and they had where to stand that was 5 feet apart. And we just said stay a safe distance apart.

All right, so we do have another round of practice questions related to words and numbers. So the first we'll practice on is item 12. And this item in the tool asks, does the product always use words the primary audience understands? And one strategy here is to use sight words, which Molly mentioned earlier. And these are common words that readers may learn to recognize on sight as opposed to sounding out the letters.

And so the question we have for you is, which of the following is a sight word, doctor, nurse, or pharmacist? And we can put up the poll. All right, so it looks like most of you all said doctor. And that is correct. Nurse and pharmacist aren't as commonly used as the word doctor. And so that would be our sight word.

All right, now, we're going to practice scoring a product on item 15. So we have a scene here with our character Daniel. He is sitting on a yellow couch and is showing signs of a fever. He's got flushed cheeks and is sweating and has a thermometer in his mouth. And the text says, stay home if you have a fever of 100.4 degrees or more.

So the question is, if the product conveys a quantity or length of time, are whole numbers used, yes or no? We'll put the poll up. OK, so the majority of you said no. And that is correct because

whole numbers aren't used. Because we've got a decimal when talking about the temperature, so 100.4 degrees.

And you might notice the way that this question is worded. It says, if the product conveys a quantity or a length of time. So we do have, in the score sheet, opportunities to select a not applicable response that won't detract from the score because some products won't include numbers in them.

All right, next, we'll practice scoring on item 16. So we have on the screen a scene with our character Izzy. She's at the doctor's office with her sister and is standing in line and is at the front of the line at the checkout counter. And the text says, sometimes people need two shots. If I need two shots, I go back another day.

So this item asks, are all numbers shown as numerals rather than spelled out, yes or no? All right, and it looks like most of you said yes. And that is correct. The number two is mentioned twice in this text. And both times, it is shown as a numeral rather than written out.

OK. So now, we'll go to our fourth domain, which has best practices around text layout. And the items in this domain start on page 19 of the user guide. And so on the slide here, we have a screenshot of the items and the text layout domain.

And this domain includes items that are focused on ways to format a product to make it easier for this audience to read, like left-aligning the text and also choosing a single style for text formatting and image placement across all pages of a product. So you may have noticed that with the social story that Molly went through that every page was formatted the same way with the image on top and the text left-aligned on the bottom.

Another key takeaway here is that it's important that each sentence finishes on the same page that it starts. Not being able to read the full sentence at once and having to flip back and forth between pages increases cognitive load.

Other ways to make a product easier for this audience to read are to use a single sans-serif font, use a 14-point font size or larger, and avoiding italicized and underlined words. And it's best to avoid any type of special text styling and products for this audience. But if you really do need to emphasize a specific word, bolding is the best choice.

All right, and then the fifth and final domain has best practices for using visuals. And in the audience research we conducted, we found that it's really important to develop products that include both text and visuals that support one another. And so this domain provides parameters

on how to include visuals in a way that are helpful and easy for this audience to understand. And the items in this domain start on page 21 in the user guide.

So this slide includes a screenshot of the items in the visual domain. And the items in this domain convey that you should limit visuals to one per page or screen, and visuals should have one to two lines of text below the visual to describe what's happening in the visual. In general, people with IDD who have extreme low literacy can take things very literally and have a harder time understanding abstract symbols or symbols that lack realistic context.

So another key takeaway for this audience is that it's important to make sure that images look as close as possible to real life. And this can include making sure that, when you're illustrating a person, you include at least minimal facial features such as eyes, mouth, and nose since a featureless face can be very abstract.

So for our last practice session, we've got a couple of scoring questions related to visuals. First, we'll start by scoring an illustration on item 27. Here, we've got a simple illustration of a woman with eyes, nose, and mouth and a teal shirt. And she's frowning. And then there's an illustration of a thermometer showing a high temperature beside her head.

So in this image, are at least minimal facial features included, yes or no? All right, our first 100%, everybody said yes. And that is correct.

All right, and we've got one more scoring practice. This is the same illustration. And the question now is, are all visuals literal images of the item or action rather than abstract symbols, yes or no?

All right, so we have about 60% of people said yes, that all visuals are literal images. And about 40% said no. So actually, the correct answer here is no.

The image is trying to convey that the woman is sick with a fever, but it's doing so in an abstract way. So while we've got the thermometer that's by the woman's head showing a high temperature, it's just kind of floating there, which could be confusing. And she also doesn't look physically sick. She's frowning, but there's no indicator on her face that she's not feeling well. So it would be better to show the thermometer in her mouth and indicate that she has a fever with something like flushed cheeks or some sweat on her head, something like that.

All right, so that is the end of our presentation today. And thank you all for joining. It's been great to present this to you all today. And I think now we have some time for questions.

ASHLEY CLARK-PURNELL: Yes. Thank you, Sidney. We have had quite a bit of activity going on in the chat. So this is Ashley speaking. And I know Molly has answered quite a few questions

in the chat. So if you haven't had your question answered or you don't hear it, just let us know. And we can flag it for you.

But one of the first questions we have is, are there any online automated plain language checkers? I know that there are websites where you can upload a passage of text, and the website will tell the reading level of that text and sometimes assign a grade level. Is that an acceptable way to assess plain language or not?

MOLLY LYNCH: Oh, thank you, Ashley. And thank you for the person who put this question, who submitted this question. Because this is a really important-- I don't know how we would-- it's a great question to pose because there are these readability formulas. And they will scan your documents. And they can tell you much about the grade level and other aspects, other indicators from your writing.

But Sidney, I don't know if you'd be able to go back to those plain language principles, the six plain language principles. Those readability formulas will give you a good kind of baseline understanding. But what they can't do-- and sorry, one more back. Yes.

What they can't do is-- sorry, I guess they do have some limitations. So the first one, this is probably if you take one thing away from plain language writing. Clearly highlighting and emphasizing your main message is probably the number one thing you can do.

We live in a society now where people are scanning. They may just see the top part of your page. If you can't clearly highlight your main message and give your reader something to take away quickly, the rest of writing in everyday language and having short sentences may not matter at all. So a readability formula would not be able to tell you if you have clearly stated your main message and you've put it somewhere that the reader can easily take away.

And then sometimes the way readability formulas are calculated is on syllables and word length. So for instance, data would score lower than information because it's fewer syllables. But information may be a clearer word somebody could understand as opposed to data. So hopefully, that gives you some context around readability formulas. They can be helpful, but they probably won't get you as close to plain language as you might want to be.

ASHLEY CLARK-PURNELL: Great. Thank you for that, Molly. We do have one that Jamie put into the chat again. Could you give some recommendations on creating surveys for individuals with IDD?

MOLLY LYNCH: And Sidney, feel free to jump in. That might be slightly outside of the scope. Many of these principles could be applied to surveys. In fact, we did our interview administered survey.

The approach that we took is that we used dyad. So we engaged both the person with an intellectual and developmental disability and their primary support person. And we did interviews over Zoom.

And when we did that, we made sure that the support person was being supportive and not talking, not dominating the discussion, that we could really elicit responses from the person with an intellectual disability. So that was one strategy. And Sidney, I'll just ask if you have anything to add.

SIDNEY HOLT: Yeah, I'll just add that we set the expectation up front that we would first ask any questions of the person with the disability so that the support person knew to wait and let us talk through things with the person with the disability first. We also just made sure to be wary of how much time we were asking people to be on a Zoom line. And so we limited the duration of those, and we added opportunities for breaks as well. And that was helpful.

ASHLEY CLARK-PURNELL: Great, thank you. So we have another question. It's do you have any advice for a state developmental disabilities council that is looking to increase buy-in commitment from other government agencies to produce plain language information for people with IDD?

MOLLY LYNCH: All right, we thought this was a great question, too. And we hope that this guide, this user guide, will, A, be beneficial in helping to make the case. There's a lot of great kind of text in there that has some rationale for developing materials for this audience in particular.

But one thing I would point to is that there is direct evidence. There's published literature that people with intellectual and developmental disabilities may bear more of a health burden in emergencies and crises than the general population. So COVID was a really poignant example of where there were greater hospitalizations and more severe illness for this audience.

So that, on one hand, can be a helpful rationale. And then we hope that the user guide as a tool, now that it's published and is accessible to the general public, will be helpful in presenting that rationale as well. So hopefully, those two points are helpful.

ASHLEY CLARK-PURNELL: Yes, thank you. We do have a question in here. It's been mentioned that this is evidence-based. Can you please let us know where you find related research?

MOLLY LYNCH: Absolutely. And we have a published manuscript that's kind of summarizing this research that we did, including the survey. And if I can dig it up before the session ends, I'll put it in the chat.

ASHLEY CLARK-PURNELL: OK. Well, here is another question. In my work at the ADA Center, we can't avoid acronyms and complex language. Any tips to share? And this is from Mary.

MOLLY LYNCH: Sidney, were you going to--

SIDNEY HOLT: Yeah. If there is a complex word that you have to include in your material, sometimes that is unavoidable. But if there's a way you can define it in simple terms and then use that simple definition after the first introduction of the technical word, that would be our recommendation for how to go about that.

ASHLEY CLARK-PURNELL: Great, thank you.

MOLLY LYNCH: Thank you, Matt, for putting the article in there.

ASHLEY CLARK-PURNELL: This is a very active chat. We have so many resources going in here. So Mary asked another question. Is a glossary too hard to understand?

MOLLY LYNCH: I would imagine a glossary might be difficult for this audience in particular. I would think it would be better to describe a term, if you absolutely can't avoid using an acronym or a term that's more like jargon, just defining it right there where the person can read it in the context of the material.

ASHLEY CLARK-PURNELL: Great.

MOLLY LYNCH: But great question.

ASHLEY CLARK-PURNELL: Yeah. I know we're wrapping up on the presentation, so I'll try to squeeze in a couple of more questions since they keep coming in. Do you see any application of your tool to communicating with people who have other disabilities, for example, who are blind or deaf?

MOLLY LYNCH: I'll start. But Sidney, please weigh in. I would say that the families we talked to the person with an intellectual or developmental disability often had multiple disabilities. So we

strove to make the materials as accessible as possible. But we also developed materials that were specific to each of those audiences that you mentioned.

So when we develop materials, as we mentioned I think earlier in the presentation, we always like to define the audience and put them at the really center of the process for developing materials. And so we would want to tailor materials for each audience, but we did try to make these materials as accessible broadly and universally as possible.

ASHLEY CLARK-PURNELL: Yes. And to that point, we did have a comment in the chat from Tim who said, as a person who has a developmental disability, I'm a visual learner and need things in front of me to understand how you guys do things like these presentations. Thank you very much for the presentation. So your work is definitely appreciated.

Let's see, so much going on in the chat. We have one more question which we'll have time for. So if you had to design a bilingual sign in a public hospital and the source language says pediatrics, would you use the same technical term in the target language? Or would you go to something more clear to the public, like children's care? If the target text is not technical as a source text, do you think that the target text will be considered inferior?

SIDNEY HOLT: I think you would want to use the children's care term in English. And then you would want to go through a cocreation process with your Spanish language experts to see what the best term would be in Spanish. Because a direct translation of children's care may not be the most widely used term in Spanish.

I don't even know that you would want to use pediatrics in English. I think you'd want to go children's care on that one, too. But Molly, I'll let you weigh in there.

MOLLY LYNCH: Yes, thank you. That's a very specific question. I can appreciate. It's probably very practical and is very impactful in real life, so we always appreciate those examples.

We always fall back on, as Sidney was mentioning, is testing and making sure the terms that we use are really resonating with the audience. So it would be interesting to see if you asked parents who are using the hospital. Maybe they are very familiar-- it's almost like a sight word--with pediatrics. And maybe that's what resonates with them.

Or maybe it might be the first time you're attending the hospital and looking for pediatric, and children's care would be much more kind of understandable language. So in that case, if it's possible, if it's feasible, it would be great to of test with your target audience. So hopefully, that's helpful, but really appreciate the question.

ASHLEY CLARK-PURNELL: Yes. Well, I really appreciate both of you, Molly and Sidney, coming in and presenting today. We had a wonderful discussion going here. We had a wonderful discussion going in the chat.

If you would please, for our attendees, complete the evaluation, we'd love to hear your feedback. And as it is the top of the hour, I will don't want to hold the presenters up any longer. But thank you, everyone.