>> CLAUDIA FRIEDEL: Hello, everyone, this is Claudia Friedel, thank you for joining us for our third Disability and Health Program call. Today we have Lesa Lorusso on the call and she will update us on the annual meeting and expo, she will be talking about the designing of accessibility needs for accessibility needs patients. Lesa is a designer and has education in healthcare design and maintains consultancy and design thinking workshops while pursuing a Ph.D. from the UF College in Design and Production Planning. We're glad to have Lesa on our call to hear more about her experience attending the APHA conference.

Everyone is on mute, as questions come up, please type them into your chat box and Bryan will read them out loud after the presentation for Lesa to answer.

Thanks again for joining us, and you should all be able to see Lesa's presentation on your screen.

And I will pass it over to her.

>> LESA LORUSSO: Hi, everybody.

>> CLAUDIA FRIEDEL: Thank you, Lesa.

>> LESA LORUSSO: Hello! Thank you. I am going to, like Claudia said, just share my experience and some of the information from the annual APHA meeting in Atlanta. So, just a quick overview, I'll kind of give you some background information on what APHA is and what sort of things that it offers.

And my PowerPoint has links and sort of -- APHA's great because they have a lot of resources online, so I'll touch on some things and then usually at the bottom of every slide, it says, you know, for more information, click here. So you can get quite a wealth -- you can even go into their website and get notes, if presenters provided their notes and some have actual recordings of their presentations.

So just know that going into it, there's much more information that you can dig into if you want.
So, I, like Claudia said, I'm a Ph.D. candidate at the University of Florida so I'm in the School of Design and Construction Planning and I'm working on my MBA and research and trying to do a project to help veterans with dementia, trying to reduce aggravation and aggression through the interior environment and I'm interested in the environment’s impact on health and accessibility and I'm very thankful to have been a part of this particular process.

So, I was able to go to this conference and attend and present, which was a wonderful experience.

And so, here we go.

So, the conference was November 4-8, last year, in Atlanta. And the theme was “Creating the Healthiest Nation: Climate Changes in Health”.

So, basically what is the annual meeting? So, it was interesting when I was digging in, the APHA, the American Public Health Association, their annual meeting started in Cincinnati in 1873, so there's this great long history, and honestly, I've never been to a conference quite so large; it was overwhelming and amazing! [Chuckles].

So, last year it was in Atlanta. It was at the Georgia World Congress Center, if you know where that is, right down where they had the Olympics next to the big CNN Building. So it was at the Georgia World Congress Center but also spilled out into the adjacent Omni Hotel and it felt like all of Atlanta was kind of swarmed with APHA people and it was exciting. What it does is brings together more than 12,000, it felt like way more than 12,000 this year, public health professionals, researchers, students, colleagues from all across the U.S. There were physicians there, there were people from industry.

And, really, the whole purpose was for everybody to network, connect, share experiences, educate each other. It was a very, just a wonderful experience.

So, like I was mentioning in the beginning, APHA has a great digital archive of all past conferences, so I have that link there. You can click on it, I don't know if you get a copy of this. Otherwise, just go to APHA's website, you can Google them, and go right to all of their archives for previous conferences and get all kinds of information.

APHA in general, how can you get connected? They have a whole lot of opportunities, which is really exciting, and they have what are called APHA communities and the communities include these categories you see here on the right. They have affiliates, member sections, student assembly, SPIGs, which are special interest groups and we'll talk about that in greater detail, forums, and caucuses. So APHA members come from all areas of public health, so, I mean, look at me. I'm interior design in the built environment but I'm touching on impacting public health and there I was, so there was quite a wide range of participants, which was great.

They work with both people within and outside government organizations, educational institutions all over the country.

The issues that APHA covers include nearly anything affecting personal and environmental health, federal and state funding for health programs, pollution control, chronic and infectious diseases, smoke-free society, professional public health
education, and tools just to really help people in general live healthier lives.

So I went as a student, and there were health professionals, and people with a general interest. It was really pretty amazing.

So, these special primary interest groups and sections, those are what I'm going to zoom into. They call it a member perk, so if you're a member, you can participate in these specific areas.

The disability section started as a special primary interest group, so that's kind of a place to start, and then when they get more momentum and I think it's a certain amount of members within a special primary interest group, then they can become a section, so then it becomes sort of a larger entity.

So, APHA defines these special primary interest groups as an open group of self-selected APHA members sharing a common occupational discipline or program with interest and they have no primary affiliation, so they're kind of on their own. They're independent and they first established as a membership option in 1978 and when you click on the website, the special primary interest groups that show right now are in pharmacy and veterinary public health. But if you want to create one and get more information, Caitlin Sarlo shows up on the website and there's a direct phone number for her to get some more info.

So, we are part of the disability sections and the sections are really the primary professional units of the association. Right now, APHA has 31 primary sections. They represent major public health disciplines or public health programs.

And, really, their purpose is to provide an avenue to develop scientific program content and policy papers in their areas of interest. You know, it might be fields of practice, if it's a clinical section; professional and social networking, career development, and networking. And that was definitely the case with the disability section. There's a lot of mentoring going on.

So, you can see here, these are all the 31 sections. And I updated them. This table was from a previous presentation and I went through and made sure everything was current. And there was a couple that had slight changes of names.

You can see disability is one of them and, again, down at the bottom, for more information, Holly, I don't know how to say her last name, Grosholz [chuckles], if you go to the website and click on her name, it will give you a direct line to connect with her. All right, so the disability section is what we're all interested in. It's a great picture there!

So, disability is a national public health issue needing special attention. We can all help make our world a better place for individuals with disabilities.

So, if you're a member of this disability section, you're involved with policies and actions, with the overall goal for equalization of opportunities for people with disabilities. So, these could be the promotion of equity in healthcare, health outcomes, social change, somehow to promote socioeconomic integration. The project that I did that I presented on was really focused on promoting equalization
of accessibility in terms of physical access to the built environment to public health. So that's just my little niche there, but there's a wide variety of ways that you can contribute.

It says, you know, people from within disability section come from a wide variety of backgrounds, including social, rehabilitative services, medical, health professions, social sciences. And the people within the group, you know, they're teachers, they're researchers, clinicians, public policy servants, and there's information down on the bottom.

And Bryan and I were there and attended on Monday night, they had a disability section get-together where we went to the Shepherd Center which I have more information on later, and it was a great opportunity to network and get to meet face-to-face everybody who is in this disability section, and it really is just as diverse as they're saying here. You know, we all sat at round tables and were able to eat dinner together. I sat at a table with several students and just, you know, from a wide variety of backgrounds, some were in policies, some were -- some had more of an EPI background and other people had becomes in rehabilitative services, that was really interesting to hear what they were doing for their research.

So, the overall mission for the disability section program -- I'm sorry, disability section, it says to raise awareness and promote actions related to public health issues that affect the health, functional, social, and environmental aspects of a disability. These include the causes and prevention of impairments and disabilities, especially secondary conditions, health promotion and rehabilitation, barriers and facilitators, both physical and social that affect the participation of people with disabilities in all aspects of society and advocacy for public policies for individuals with disabilities.

So, when we were at the dinner, just as an example, the keynote speaker had a company that is piloting and implementing this app for your phone that will basically help in driver education and it's an app that parents can use when they help teach their children to drive.

It's a really interesting thing that helps promote safe driving, not using your phone while you're driving. The app had all sorts of -- basically the parent had to log in to the app, to log in a certain amount of time and they're working with the person that they're helping to learn to drive.

You know, and the impetus for it was to -- was presented in a way at the Shepherd Center, a lot of people receiving care at the Shepherd Center are there because of spinal cord injuries due to car accidents, and it was really interesting to see a technological intervention really to try to work on the preventive side of the issue, so it was really, really interesting.

Oops, I didn't realize these were each coming in in little [chuckles].... So, one of the things I wanted to share were these -- I think there's ten, there we go -- so this is just a spotlight into one of the poster sessions and I spotlighted this one because Bryan Russell showed up and he had a board there for increasing access to school physical activity programs for children with disabilities, which is right at the heart of what our group is doing here in North Florida.
And you can read through the different information on those boards.

And if you go to this link at the bottom, you can actually go into each board. They didn't have photos of the boards, but they had abstracts and backgrounds, so you can see where people were coming from and contact them.

So, here's Bryan's board. So, Bryan Russell and Keshia Reid, they're both from the Florida Department of Health, and I'll just read -- I'll read their abstract so you can get an interesting background into what they were reporting on.

In Florida, statewide efforts to improve physical activity and reduce childhood obesity have shifted to focus on promoting physical activity during the school day. The Comprehensive School Physical Activity Program has served as a guiding framework for these efforts. Informed by existing science and recommendations, this is recognized nationally as an effective approach by which schools and districts use all opportunities for students to be physically active. To ensure these opportunities are accessible to all student population, the Florida Disability and Health Programs, and that's where our authors come in, is collaborating with two exceptional student education schools to support the development, implementation, and evaluation of CSPAP inclusive of students with disabilities.

So, the goal is to accelerate disability inclusion in school, physical activity programs, and lay the groundwork from incorporating inclusive language in each component. The process is used and they assess, develop a plan, train the school staff and implementation are discussed, data related staff perceptions, barriers encountered during development and training were reported, and then the findings were going to be used for a larger inclusive school wellness effort to demonstrate the means by which current health promotion programs can be adapted to improve health and wellness for people with disabilities.

So, really working on overall increasing physical activity. And I believe a reduction in diabetes, but I'll let Bryan say more later.

So, then what happens throughout is you can go, if you go on to the website, you can actually search it by section. So, you can search -- when I went to the conference, I had the app on my phone and what I did was I searched by disability section. So it gives me a schedule for everyday showing me what happens -- what was happening each day for specifically the disability section. So that was a really interesting way for me to navigate my way around the conference, and so I went to -- I targeted presentations specifically for that, because I knew I'd be presenting back to all of you. And I was trying to find things that would be of interest to those of you who weren't able to go.

But you can see just a smattering here, there were business meetings in the morning and business meetings during the day and a student mentoring session, and then in the afternoon on Monday they had some great presentations.

And I circled the one at the bottom, because that's the one that I am going to zoom into and give you information on what the people presented and it focused on health, economic, and social disparities among people with disabilities.
And then I basically just gave you a rundown of the schedule. So let me go back. And then, so that -- then this one was Tuesday and at 10:30 on Wednesday was where I presented [laughs], I circled that one.

So, here we go. So, the disability section, so health, economic, and social disparities among people with disabilities, on Monday, November 6th, I'm going to zoom in for you and give you information on all four of these presentations.

So, what I really liked about APHA, and maybe other conferences do this and I'm just not a well-seasoned conference presenter yet, but I've been to a few and they haven't been as well organized as APHA was; I really liked how APHA did their presentations. So, they organized each of their presentations into these sections. So, at the top, 3370, health, economic, and social disparities among people with disabilities, and then you had four people. Now, they're not presenting as a panel, but all four presenters are up sitting next to each other and then each person goes up and presents one at a time and sits down.

So, as a presenter, I was significantly less nervous [laughs] because I didn't feel like I was alone up there, and it made it very conversational, which was fantastic. I think everybody was more relaxed and the audience was very collaborative and asked a lot of questions. And it was like that in all of the presentations I went into, so....

So, I think that was a really neat thing that they did. And they all have a moderator which was good, and that moderator keeps tabs of time, and sometimes the moderator in conferences is just this invisible people sitting in the audience with little cards that say two minutes, three minutes. This moderator was actually at the front, introduced everybody, and just gave it a nicer feel.

So the moderator was Dara Baldwin and she was a senior public policy analyst with the National Disability Rights Network in D.C. And everybody had sort of short timing for their presentation and then there was a great Q&A afterwards where we all just stayed up at the front and the whole audience just kind of asked questions round robin to everybody that was up at the front.

The first one was health status and health risks among high school students with disabilities. Next one was influence of race, ethnicity and sex on food selectivity among children with intellectual disabilities. Next one is effects of neighborhood socioeconomic status on changes in quality of life among stroke survivors. And the last one was analysis of behavior risk factors socioeconomic conditions and diabetes among people living with disabilities by veteran status.

And you can see a wide range of what we're talking about. Some people are reporting on children, children with intellectual disabilities. And then we have high school-aged people. And then we have stroke survivors. And then we have at the bottom, people living with diabetes. So those are an older -- the veteran’s status at the end were an older age group of people. So it was really a nice continuum to sit there and listen to.

So, the first one was this great group from Oregon Health and Science University and they presented here, so their background of putting on a substantial body of research
has demonstrated health disparities people with and without disabilities. Identifying and monitoring the disparities among youth with disabilities is crucial for addressing problems early in life and reducing long-term impacts of health risks. But, so here’s the gap, inclusion of disability identifiers and state-level youth health surveys has been inconsistent.

So, what they did, so the Oregon Healthy Teens survey, they had an anonymous and voluntary survey they gave to 8th and 11th graders across the state of Oregon to monitor the health and well-being of the teens.

In 2015, the survey for 11th graders included the six disability identifiers from the American Community Survey. So they conducted survey-weighted cross-tabulations and regression analyses comparing health status, health behaviors, and health risks as teens with and without disabilities.

In the end, what they found were that for the teens with disabilities were significantly more likely to report poor physical and mental health status, unmet needs for physical and mental healthcare, engagement and risk behaviors such as smoking and alcohol use, and other health risks including obesity, bullying and abuse and this is really a springboard for further research, because they were talking about now wanting to dig more deeply into the whys of, you know, why is that? Is it more because of access? Is it more of just a lack of, you know, communication and knowing what's out there?

And they presented another project at the end with regard to veterans.

So, their conclusions say that the data reflects continued health risks among youth with disabilities with patterns similar to those reported in Oregon in previous decades. Their findings confirm that health disparities are present early in life for people with childhood onset disabilities and highlight the ongoing need for interventions to protect and improve the physical and mental health of teens with disabilities.

The next one was a team from Tufts University in Chicago and the E.K. Shiver Center and they were working with kids, mostly working with kids with autism, and they were looking at, you know, what is the impact or influence of race, ethnicity, and gender on food selectivity for this population.

So, they started with their background that selective eating is linked to more nutrient intake and might put children at increased risk for chronic disease as adults. Research suggests that children with developmental disabilities are more food selective than at this point three developing children and race and ethnicity and sex wasn't looked at and if your race and ethnicity and gender, are there different food selectivity for kids with intellectual disabilities.

So, their methods, food selectivity in a diverse community-based convenient sample of children aged 3-8, parents reported race, ethnicity and completed a food frequency questionnaire, sort of a journal, and food refusal, percentage of foods refused compared to those offered, and then three day food diaries, so they had a food repertoire, number of foods unique eaten and had a total of 56 kids -- of the 56 children with intellectual disabilities, 34% had autism, so, you know, a majority had ASD.
So food refusal averaged about 30.8%. And didn't differ among non-Hispanic, white, non-Hispanic, black, Hispanic, white, and other.

Food refusal did differ by gender, so after accounting for the occurrence of autism, boys refused significantly more than girls. And the food repertoire averaged 20.6 unique foods and didn't -- and wasn't different, and the food is similar in girls with intellectual diseases with or without autism spectrum disorder, however boys with intellectual disabilities and autism had a much narrower repertoire of food than boys with intellectual disabilities only. So, they did find some differences.

So, sex but not race, ethnicity, differences in food differences were observed but it was a convenient sample and it would be interesting to see them do this again with a larger population of participants, a broader range.

Boys showed greater level of food refusal and boys who also had autism had narrower food repertoires. Cultural differences and parent feeding practices by race or ethnicity or in response to child's gender should be explored as potential explanations for these findings.

So, you know, again, another springboard study and they want to sort of go deeper and ultimately they were talking about, you know, wanting to use their findings to help in training and frameworks to help -- ultimately, you know, they're trying to prevent chronic disease so how can they, if they can find the reasons behind some of the food selectivity, then maybe they can prevent, you know, chronic diseases later in life, poor nutrition or diabetes and other related chronic problems.

So then we start to get with an older population here, so we have a team from the University of Michigan, University of Alabama Birmingham, and then University of South Florida, and one woman didn't have a university affiliation provided. I met some of these people at dinner and it was interesting to talk to them and hear about their research.

So, they're looking at -- within a quality of life among stroke survivors, so what effects do neighborhood socioeconomics have on quality of life for people who survive stroke? So, stroke is the leading cause of serious long-term disability in the United States, just in general. And the number of stroke survivors is projected to rise probably due to, in part, due to the aging population.

So, quality of life may be compromised in survivors living in low socioeconomic status environments in comparison to higher socioeconomic status environments, so higher SES environments may include things like sidewalks or transit or low traffic volume. Investigation of strokes and SES on the physical health related quality of life is needed, so that's their gap here that they're exploring.

So, participants from the regions was the study that they did, for geographic and racial differences in stroke study completed, baseline quality of life using the SF12. Stroke survivors and non-stroke controls were asked questions again at 6-12 and then 18 months post-stroke using the caring for adults recovering from the effects of stroke project. Areas and level of income, well, education and employment at the census chalk level were combined to represent their neighborhood socioeconomic status. Regression was used to predict quality of life change scores.
So the results, it says compared to non-stroke controls, stroke survivors reported greater declines in quality of life, from 6-12 to 18 months post-stroke living in low socioeconomic status neighborhoods.

Those who lived in low SES neighborhoods had a greater decline from 6-12 to 18 months compared to those who had lived in mid to high SES neighborhoods. So, their conclusions were that neighborhood socioeconomic status might influence the relationship between stroke and quality of life.

The results suggest the importance of evaluating an interaction between environments, so they're talking really physical environments or the urban layout and the design of the accessibility architecturally even and underlying impairment.

Future research should identify specific characteristics of low socioeconomic status neighborhoods that contribute to the specific quality of life declines among stroke survivors.

That's really interesting. We have a group at the DCP, Design Construction and Planning and it's a group of researchers, students, faculty members, groups, who look specifically at the impact of the built environment on health for elders, and this is exactly the type of work that they're interested in doing; you know, looking at the impact of the built environment, urban, you know, what sorts of things are provided for people, sidewalks, transit accessibility, traffic volume, these sorts of things, and how they impact quality of life, so.... That one was interesting.

And the last one is the group again from the Oregon Health and Science University, it looks like my tabbing got a little off here. So, this one, we're looking at veterans. So, we're looking at an analysis of behavioral risks, socioeconomics, and diabetes for the veteran population for people with disabilities. So, again, this is an older group.

So, to date, behavioral risk factors and socioeconomic conditions associated with diabetes have been well described. Diabetes disproportionally affect minority groups and socioeconomic disadvantaged and diabetes is highly prevalent among people with disabilities.

So the purpose of this study is to examine the combination of disability status and veteran status in relation to diabetes, so what they did is they analyzed nationally representative cross-sectional data from the 2014 behavioral risk factor surveillance system and they employed logistic regression analysis to estimate the association between disability, veteran status, and diabetes, while controlling for socioeconomic characteristics like income, education, race, ethnicity, behavioral risk factors like physical activity and obesity and the presence of diabetes.

So after adjusting for sociodemographic and behavioral risk factors, people living with disabilities who were not veterans were at higher odds of diabetes. So, you can see the percentages there. Veterans without disabilities also had increased odds of disabilities. So, the highest risk of disabilities as seen among veterans with disabilities, just to clarify. So, the findings suggest that the combination of disability and veteran status together carries an increased risk for diabetes.
Cross-sectional data didn't allow them to understand the temporal relationship between the onset of diabetes and it found a further examination of the relationship between veteran's status, disability and developing diabetes and there may also be a need for targeted intervention to improve the health of this especially high-risk population.

So this one I was really interested in because of my personal background right now in working with the veteran population, specifically veterans with disabilities.

So, I want to dig in now and give you a little bit more information on the Shepherd Center. So, Monday night, as I mentioned earlier, we, Bryan and I, and everybody who is in the disability section, they bused us from the Georgia World Congress Center to the Shepherd Center and I was very excited to go as a designer to look at the architecture of the facility.

We had a great tour and got to see behind the scenes of some really cool technological advances that they're doing here at the Shepherd Center. So, it's in Atlanta and it's a private non-profit hospital located in Atlanta. It's more of a rehabilitation facility more than, you know, it doesn't have an ER sort of thing, but it's a -- so it's one of the nation's leading hospitals specializing in medical treatment, research for people specifically with spinal cord injuries, brain injuries, multiple sclerosis, and other pain and neurological conditions. They employ over 1600 people so there are 152 bed rehab facility and 10 bed ICU, and it's a relatively small facility but it's one of the top ten rehab hospitals in the U.S. They had 902 inpatient admissions in 2016, 575 day program admissions, and over 7,000 outpatients.

What was really cool to see is that everybody who worked here that we met was very passionate. They employ quite a lot of people who themselves have enjoyed care at the Shepherd Center and come back, so some of the people that actually run the program are in wheelchairs themselves and have just a personal connection to what's going on and the process. And they were really interested in being at the cutting edge of technology.

The quick background behind the Shepherd Center is that a young man who is in his 20's back in the '70s, he was body surfing, he had gone on a vacation after he graduated from Georgia and he had a -- when he was body surfing, he was crushed under the waves and sustained a severe trauma. And his parents, the Shepherds, worked really hard to find him the cure that he needed and ultimately created the Shepherd Center. So it's a very sort of family environment and it really continues to permeate throughout the organization.

We got a tour. And one of the most amazing things we saw was -- in here this is the occupational therapy area and this young man that is at the walker has a spinal cord injury and he is wearing an Indego Exo-skeleton, that's the way it's spelled, not like the color, and he's wearing this, it's hard to see because of the pants he has on, it sounded like Robocop when it started to work, you heard [making whirling sound] and he trained with this and the FDA does require for this device that he has a therapist with him, you can see the young man behind him, and he has an iPad hanging around his neck, so the iPad is talking via Bluetooth to the Exo-skeleton and he really is just there for safety. But the young man there is doing all the work. And so the machine learned his gait and his walk, he trains with it, and if he gives just a slight move of his -- if he goes forward,
the machine takes a step forward, so it was really amazing to watch this young man walk up and down.

It was created by a team of Vanderbilt engineers and it is being marketed now and sold for both therapy and personal use. So it's really was just incredibly exciting to see. And if you look down at the image below, you can see more images from their occupational therapy area and the wide range of things that they have available. This was another thing that was fantastic. They had all of these wheelchairs, very cool sport wheelchairs. So, this area down below the Shepherd Center is basically kind of like a YMCA, it's a gym for people who are receiving care at the Shepherd Center and have been cleared to be able to, you know, get active again.

And then also it's open to the community, it's very inclusive, there are people with ranges of abilities going in and out. And they just had all these really cool cutting edge equipment for people with disabilities.

If you look at the top picture, the camouflage is a hunting share, it had a rifle mount and there was a chair for road racing and there was one for cycling and the chair in the bottom in white is a golfing chair, so that was really cool. The person fits and it's hydraulic to lift the person up so they can swing a club and play golf. It was just really, really neat.

So, what I was there to do was to present on a project that I did with my colleague, Julie Emminger, and we worked on this with -- it was a collaboration -- let me say it right. Do I have it in here? No [chuckles] -- it's a collaboration with the Florida Department of Health with the UF Disability Services Group and it was funded by CDC. So, there we go, collaborative effort funded by the CDC, the USDHP and then us and the Florida Department of Health.

So, what we did was we looked at barriers to accessibility for healthcare -- community-based healthcare clinics in Central Florida and looking at architectures and accessibility in terms of actually getting to and using the different sites. And we were really focusing on the accessibility needs of patients.

So, what we did for our methods is that we had three different things. We did -- we used a checklist put out by the Americans with Disabilities Act which is a set of guidelines and not laws, but most facilities do a pretty good job of following ADA, but it's not always the best solution, which we know as designers, you can put a grab bar up and meet the guidelines, but not truly meet the need, and so we were trying to dig deeper into that. So, we had this checklist. We also did a face-to-face design thinking workshop which was a creative brainstorming workshop with staff and we invited patients -- we only had one that came -- it was mostly staff.

And then we did do some traditional patient surveys that went out. So, it was a mixed method approach. We were looking at trying to identify gaps from multiple perspectives and so that's why we did the three different methods. And we wanted to look at how could we as designers of the built environment enhance maybe scalable solutions to increase accessibility?

So, overall findings, each facility met 90% of the minimum ADA standards, but there
was still, like we said, most places did a pretty good job as the ADA but there were still some needs. The majority of patients surveyed indicated, you know, overall positive ratings for their physical access experience, but we zoomed into that 10%; so what, you know, of the problems, what were they and how can we make them better? And we found some easily achievable design solutions.

So, we looked at four sites, two in Gainesville, one in Orlando, and one in Melbourne. The overall question was how might we design better clinics to enhance accessibility for their patients and caregivers?

This was the checklist that we used.

So, 10% of the places that we assessed needed improvements and the improvements needed were inaccessible entrances, lack of properly-placed signage, obstructions to clear floor space and reach, lack of van accessible parking, tripping hazards, and opening, closing, and securing of doors. So, of the places where they failed, they were typically pretty easy to remedy. We looked at three tiers, so tier one being the least expensive, tier two being moderately expensive, and tier three being more of a significant renovation and most of what we found was in that tier one range, maybe moving some signage, minor door hardware. Minor components.

So, if you look at the solutions, 75% overall of non-compliant issues could be addressed with that tier one.

The survey that we did was a ten-item questionnaire with the five point Likert-type questions and there was satisfaction, and most people felt like they were in the excellent or satisfied.

The areas that needed improvement or dissatisfied was parking and entering the building, opening doors, movements throughout circulation spaces, check in/check out, interior spaces, waiting areas, interior and restrooms.

And here are a couple of slides on the survey itself and you can see the results on the specific areas related to doorways, moving around within the waiting area, using the restrooms, and accessibility of exam rooms, especially for the elder populations. Exam rooms are hard, because it's not just the patients, the patient and their caregiver, because the caregiver may also have a walker and it's a lot more to think about in terms of layout.

And then design thinking and these were creative workshops where we sat with and worked with the physicians, with staff, with the social workers, and asked them sort of the same questions, trying to get to what do people desire? What's truly feasible? And what's fiscally viable and that is what's called human centered design.

So some of the things that we found, for instance, here is a stakeholder mapping, it looks like spaghetti on the wall and this is complex, and the healthcare system in general, but the connection and interactions between stakeholders varies and it makes it hard to streamline the process and it makes it that much harder to design an environment that's going to work great for everybody.
Most complex relationships are internal between staff and support organizations. And the social worker, right there in the middle, was one of the most intense and over utilized positions within the whole system. So that gave us an insight to where that social worker’s office was and who she had direct access to, these sorts of things, in terms of the design and built environment.

Then we did this Post-It exercise where everybody puts down, you know, what are the gaps that you see. So this is their personal perspective of the needs. And then we grouped them into areas of affinity after everybody’s put them down.

And physical space was one that had a lot of needs. So when we’re looking at it, you know, some of the problems here, the exam rooms were too small, they needed to have more of a homey feel. The exam rooms were not relaxing, which especially for the elder population, if you’re working with a population that has dementia or a mild cognitive impairment, there may be, you know, anxiety takes a whole new level.

Small walkways and hallways, small office space for staff, better music in the lobby contributes to the homier feel. Parking lots were small. Doors were hard to open. Needing more technology for education and training. So this was, you know, training the caregivers. Needing testing stations for the patients. And equipment areas and samples.

So, overall, when we looked at the design, lots of them were tier ones. So if you look here at the right, you know, it’s things like paper towel dispensers, you know, and how do you address that better?

You know, you could put a loose paper towel holder at the bottom or move the dispenser itself. They were inexpensive fixes.

Or furniture layout, lighting and music and things like that in the seating area. Oftentimes they were designed in a way that the only available space for a person in a wheelchair was basically right in the way for people coming in and out. So right in the direct path of travel.

So, you know, this is all loose furniture, so it would be inexpensive and easy to move. I think the trick would be to go back and see if it stayed where you put it, but you can have that -- you can have a big impact and a small cost.

Okay, so the conclusions were that with an increased emphasis on creating environments that employed principles of universal design, it's critical for hospital and clinic managers to understand the accessibility and means of all patients. So going beyond the ADA.

In the meantime, with little to no financial investments, solutions can promote greater independence for people with disabilities, you know, with an invaluable return on investment.

Further research into the impact of accessibility of the built environment on healthcare for people with disabilities can include qualitative feedback from the medical staff who have an intimate understanding of the system and space, producing thorough results.
through mixed methods, which we did, helps to align the human-centered philosophy that is really at the center of universal design.

So that is the end [laughs].

Bryan, did you have anything that you wanted to add?

>> BRYAN RUSSELL: Hey, Lesa, great, wonderful presentation. Nothing really, other than I think overall the APHA conference was excellent. The workshops that I attended were very timely, a lot of good information. Met with other Disability and Health Program states. We shared a lot of good advice, good experience. Looked at some different promising practices. And really excited about the feedback I received from our poster presentation.

And I'm very excited about the process we're already making with those two schools as well.

But, yeah, overall, I think APHA was very well this year. I look forward to hopefully going next year.

>> CLAUDIA FRIEDEL: Wonderful. Thank you so much, Lesa, for your presentation and for representing us, along with Bryan, at the APHA conference.

Does anybody have any questions? Did anything pop up question-wise on the chat bar, Bryan?

>> BRYAN RUSSELL: Yeah, no questions on the chat bar.

>> CLAUDIA FRIEDEL: Okay. Do we want to unmute the line for a minute to see if anybody has anything that came up?

>> BRYAN RUSSELL: Okay. I'm unmuting everybody right now.

[Background noise].

>> CLAUDIA FRIEDEL: Does anybody have any questions for Lesa or Bryan?

[No response].

>> CLAUDIA FRIEDEL: Okay, well, hearing none, here is -- we have Lesa's e-mail on the screen, so if anything comes up afterwards, please feel free to give her an e-mail, or myself or Bryan.

We are very thankful for everyone joining us today and for Lesa presenting. And we hope everyone has a wonderful weekend!

So, I think we'll wrap it up now then.
LESA LORUSSO: Okay. Thanks, everybody!

BRYAN RUSSELL: Thanks so much.

CLAUDIA FRIEDEL: Thank you, everyone. Bye-bye.

BRYAN RUSSELL: Bye.

[Concludes at 10:54 a.m. EST].

Recommendations and findings for providing PWD with accessible services:

- Ensure that already existing health promotion efforts are made to be inclusive of PWD.
- Going beyond ADA to ensure that the built environment of healthcare facilities are accessible and inviting to PWD.
- Continual research about PWD in order to become more informed about health information specific to PWD.