

ADVOCACY CHATS

EPISODE 5: WHEELCHAIR DAMAGE IN AIR TRAVEL

00:02

hello, my name is Lee Page and I'm the Senior Associate Advocacy Director at PVA Paralyzed Veterans of America. Our focus this fall has been on the 35th anniversary of the air carrier access act a law that was passed back in 1986 which governs accessibility requirements and air travel.

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This law predates the ADA the Americans with Disabilities 1990 which governs all of the modes of transportation with access requirements.

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The main difference between the two laws is that the ADA requires an accessible path of travel

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with standards of access designed for people with disabilities to ride in their wheelchair.

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On a designated accessible space.

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In the covered mode of transportation meaning like on a city bus or on the over the road coach like Greyhound or subway car or like commuter rail or Amtrak as heavy rail.

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In compliance for this is the Department of Transportation and Department of Justice and a private right of action for an individual to go to court to ensure those rights are in compliance.

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Differently, the Air Carrier Access Act relies on the Department of Transportation to issue regulations instructing air carriers how to provide access in accordance with the law.

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What the Air Carrier Access Act provides the law requires the airlines provide passengers with disabilities

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timely assistance in boarding and deplaning and the priority option to stow a manual wheelchair in the coat closet or have it seat strapped when available.

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Also, you have priority seating in class of service at which you purchase your ticket and then also if you're on a twin aisle aircraft.

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You have

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You have an accessible lavatory and then an onboard wheelchair that would allow you to go back to the lavatory with the flight attendant's assistance.

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Despite these requirements, we still find that passengers with disabilities are being injured in the boarding process due to basically ill prepared staff and the fact that

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aisle chairs

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don't meet a specific accessible design standard there's no standard of access to these aisle chairs.

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or lack of standards for the interior of the airplane so there's no path of travel for access.

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Basically, once you get to your destination what makes it worse, is on the planing you find that your wheelchair has sustained damage

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during the flight, especially power wheelchairs that have complex seating arrangements

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and sometimes

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once those have occurred more damage which really

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puts the person with a disability in jeopardy when it comes to their independence and rehabilitation.

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So, today I'm joined with PVA Member Peter Axelson, he is the Founder and Director of Beneficial Designs, which is his own company.

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He's also the Chair of the Assisted Technology for Air Travel Committee with RESNA and RESNA is the Rehab Engineering Society of North America.



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And Beneficial Designs performs testing to determine if specific wheelchairs or scooters are safe durable and reliable for the end user or people with disabilities.

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So they can use them on daily basis.

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So Peter, can you tell us more about Beneficial Designs.

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How it interacts with RESNA on testing wheelchairs and what that really means.

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For the wheelchair user.

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Peter Axelson

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Thank you Lee for allowing me to talk about this with you today.

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As a veteran

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I'm paralyzed from the waist down myself in a wheelchair, this is a really

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important topic.

user avatar

Peter Axelson

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And at

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Beneficial Designs we test manual and powered wheelchairs sort of like a consumer report test lab kind of.

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situation where, just like cars are tested for function and safety. We test all wheelchairs for strength and durability, to make sure they're not going to break in some way that could injure the user.

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We conduct static stability testing to make sure that the stability of the Chair meets the users need.

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And we measure all the dimensions of the wheelchair, so that the prescribers can prescribe a wheelchair that's going to fit a particular user.

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For powered wheelchairs there's additional testing where we measure the maximum speed we measure the range and how far the chair can go just sort of like the miles per gallon on a car.

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We measure its obstacle climbing abilities, so you know what

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kind of curves you can get up we do dynamic stability testing, driving up and down slopes, to make sure the chair is stable and safe on those slopes. We do electrical safety testing to make sure that a fire can't

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occur. We do brake testing of the braking system to make sure the chair can stop efficiently and we've also tested boarding devices just like their wheelchairs.

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that are used to get non-ambulatory passengers on and off an aircraft and we found that those are actually not very stable laterally because they are so skinny to get down the aisle they actually fall over tip over really easily in the jetway.

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that's what we do.

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Great. That's interesting a lot of different

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issues you guys are working on at Beneficial Designs, especially the fact trying to ensure

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wheelchairs are designed properly to meet the RESNA standards, but then you're also working on this

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boarding devices to get on and off an airplane recognizing the fact that they don't meet quite the same standard as your wheelchairs do. I'm wondering

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Since you're the Chair of the RESNA ATAT Committee

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Can you tell us what the committee is doing to try and reduce wheelchair damage?

Peter Axelson

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Absolutely, the

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The RESNA Assistive Technology for Air Travel Committee was created

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to create specifications for a wheelchair that's less likely

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to be damaged by the air carrier, so we have

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air carriers and disability organizations and wheelchair manufacturers all participating in this committee to come up with the features that will prevent damage to a powered wheelchair, and the first is.

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Excuse me, the joystick assemblies have to be able to be remove without the use of tools, so it can be put into the aircraft.

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And that will cause it to be less likely to be damaged. The wheelchair has to have an isolation switch for the battery to be able to disconnect the power without

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having to pull cables apart

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on the wheelchair.

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and all other parts And all other parts of the chair have to be able to be easily removed without tools, so that they can be stored on board the aircraft so.

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Like a headrest or a seat cushion or an armrest, foot supports, back supports, all of those things we want the passenger to be able to remove and put in a separate

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bag of some kind to be put in the overhead on the aircraft, so that they don't get lost or broken.

Peter Axelson

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The Chair has to be able to also disengage the drive system so that the chair can easily be pushed to the nearest elevator and then to get down to the tarmac and then push to the aircraft.



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Once it gets to the aircraft, there have to be four, a minimum of four, strong lifting points so that the carrier handlers can get that wheelchair lifted up onto the belt loader.

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To get it up into the aircraft, some of the carriers now use powered lifts to lift powered wheelchairs up under that belt loader to make it easier for getting it up onto that loader.

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And then, once it's going to go into the aircraft, there has to be a means to lower the back support to either remove it or fold it or tilt or recline the chair, so that that back support is low enough to get through the baggage doors, because the baggage doors tend to be rather short

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in height and so

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if that chair can move lower down to 33 inches or less than it can fit into the 99% of the aircraft.

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and be able to sit in an upright position in the aircraft, because when it gets if the wheelchair gets laid on its side that's where it can get easily damaged and destroyed because now it's laying on its side with the drive wheel very likely to get

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twisted or broken or the seating to get

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damaged, because the aircraft is in turbulent sometimes and you've got this chair never designed to be laying on its side, it's only designed to be sitting

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on its wheels. So once it's in the aircraft there has

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to be securement points so that the air carriers can use cargo straps to properly position the chair in place so that it doesn't move around during flight.

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And then, finally, there needs to be an air travel configuration card that actually shows what that chair supposed to look like when it's configured for air travel and then shows what it's supposed to look like.

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When it's configured for you, so that everybody can make sure that that chairs set up properly to go into the aircraft ideally before it gets taken from the jetway.

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Okay um well that's interesting I was gonna say.

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You know power chairs power wheelchairs come in a lot of different shapes and sizes and they have to meet the need of the person with a disability, because, first and foremost it's all about independence and rehabilitation for that person.

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And I guess i'm wondering, you know, unfortunately, the belly of an aircraft is one size, and we all have to fit the square peg into the round hole I guess you'd say.

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Do we know, right now, if any power wheelchairs that are A: being manufactured or either on the market come anywhere close the meeting design that the committee have been working on?

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Peter Axelson

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that's a great question Lee because at the moment there are no

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wheelchair manufacturers that claim that they have a powered wheelchair that complies with all the features in the RESNA Assistive Technology for Air Travel standard.

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However, there are already powered wheelchairs available that you can purchase many of these features that are in the standard, so you really need to look for wheelchairs that have these features that are listed.

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And look at your own wheelchair, to see what features.

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it has, but I've already mentioned there's at least two manufacturers that have joysticks that can be removed without the use of tools.

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And you can unplug the connectors to them so that they can be taken off the wheelchair to be put in the cabin in the aircraft to be best protected and less likely to be damaged, even if sometimes it might just be really small thing like a screwdriver that's required

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to remove that one joystick that's really worth taking the time to do. Wheelchair manufacturers are working on new

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models of their chairs all the time and it typically takes about two

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to three years to go from the concept stage to having a wheelchair in production with all

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those features and having it tested and ready to go

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to market being fully compliant with the RESNA Assistive Technology for Air Travel Standard, and we know that there are manufacturers are working on

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creating wheelchairs that are fully compliant with these standards so that's good news to know that these are coming.

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Okay, I was gonna say when you go to the airport and you want to go on and you're getting ready to fly you're always the first person on

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when it comes to boarding and you're encouraged to take all your equipment off of the wheelchair, and into the cabin that way to ensure it doesn't get lost

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or damaged.

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What are some good ways.

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That you think the passenger with a disability can do to protect chairs or scooters today when they're traveling on the airplane?

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Peter Axelson

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That's a really good question because it is possible to.

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do certain things now today.

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You can, if you can't remove the joystick on your power wheelchair, you can look for a way to protect it, you can purchase some plastic containers that will fit.

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Around the the joystick assembly, you can find a real small one, that fits over the joystick itself, and then a larger one to fit around the whole joystick assembly.

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To protect that system, and then you could use a bungee cord with the hooks on it or velcro or rig up something or tape to tape that.

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plastic container on your joystick Assembly to protect it during the air travel.

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The other thing is that sometimes you can figure out a way to remove or folder adjust the seating in the wheelchair to get the back, support and the armrest to be lower than that 33 inches.

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we've tested and seen a lot of power wheelchairs, where you can easily remove the head support without tools and then you can recline the power tilt mechanism on the back support or the tilt.

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mechanism or a combination of the recline of the back support in the power tilt you can actually adjust the chair to get

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both the armrest and the head support.

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Or the back support, I mean the to be less than that 33 inches.

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The other thing is, is that you can carry.

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Peter Axelson

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A small duffel bag, that you can put all the accessories from your wheelchair into.

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such as the seat cushion the arm supports, leg supports, the head support, all these parts that components that can be removed from your chair, because that'll prevent them from being lost, and from being broken.

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And the air carriers are completely willing.

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communicated they're all willing to allow that stuff to go into the overhead.

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and

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So that those things don't get damaged and also make sure that the disengagement levers work on your wheelchair, so that it can be easily pushed to get that chair, down to the to the tarmac because to get it down safely they're going to have to go to the nearest elevator to do that.

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it's a good idea, I think, also to carry a spare a wheelchair cushion, especially if you use one that has air in it that those air cushions can get damaged, and if you get a hole in them and so you want to have a backup.

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cushion with you at all times and then, especially in air travel, the cabin pressure changes and an air cushion will expand the greatly and.

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Like a giant balloon basically and see what to open the valve on those air cushions when they're in the overhead container and sit on a good quality.

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foam or some other material there's lots of different pressure relief cushions that don't use air that use that to sit on in the aircraft.

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Aircraft seat, because of the pressure relief on the aircraft seating we've measured is not adequate for somebody that has.

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pressure relief needs and is prone to pressure sores like myself I'm practically skin and bones for sitting.

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After so many years of atrophy so those are the things that wheelchair users can do now and to think through like if, for some reason, your wheelchair did get damaged during that flight.

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Do you have what you need.

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to sit on in an airport wheelchair or some other type of chair that you might possibly have to sit in if your chair did get.



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damaged. I am a manual wheelchair user myself I try to always keep my wheelchair on board the aircraft, I take the wheels off all

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six of them and put it in the closet and it actually fits in the overhead container to make sure it's not going to get damaged and I've never had it damaged carrying in the aircraft and

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If I'm the first person on the aircraft the air carrier access act says I'm supposed to be able to store that wheelchair in the aircraft somewhere.

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Whether they put it in a closet or.

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have to strap it into.

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A seat.

user avatar

Peter Axelson

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So that's our great option for manual wheelchair user.

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Thank you.

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yeah that's great advice.

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hearing that Peter, especially trying to recognize and and educate passengers with disabilities, especially those with catastrophic spinal cord injury.

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Whose skin, may be atrophy, to the point where you know not sitting in their customized seating system could exacerbate their injury more by creating.

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You know, skin sores or or bumps or bruises or just issues that would be secondary towards what their normal disability is.

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Just because they're out of their wheelchair and and the customized seating so you got to ensure that all the cushions are maintained in a safe and proper

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area, and if that means you know, bringing them on board and you sitting on them in the airline seats, or at least having them so they're not going to be lost, or you know popped or or damaged by being underneath the airplane.

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it's good to hear that that.

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Is the advice that you recommend and and what you do in your own practice when it comes to traveling on airplanes. I was gonna say, is there any other type of information, you want to convey.

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In that you, through your work with the RESNA AT AT committee or just through your own general experience.

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Peter Axelson

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yeah but you know the final part of that.

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standard is that there has to be a travel information card that's provided with that power wheelchair that meets all those requirements for air travel.

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And that travel information card we're going to I'm going to provide.

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you with a copy PVA with a copy of that so that can be put on on your website to show people, so they can try to create a travel information card now.

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Basically, it shows the wheelchair in its air travel configuration and shows it in its usage configuration and you can list the steps to.

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Put the Chair into its travel travel configuration put your name on it and stuff so that if there's any questions they can give you a call on your cell phone and.

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I think that would, I think that might be really helpful thing for people to try to create I know some of the wheelchair sports events people do.

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Already, create sort of a travel air travel configuration card now and that's where we got the idea for that and.

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I really appreciate the advocacy efforts that that you're doing Lee and also Heather Ansley there at PVA to get the legislation for accessibility for air travel to progress for us, thank you.

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Great well, thank you, Peter for coming on today.

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Like I say you're the Chair of the RESNA AT AT Committee that's looking at design standards for power wheelchairs.

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When they come to air travel and air travel is an issue that PVA has been working on for over 30 years and we continue to work on it to ensure.

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That all passengers with disabilities have access.

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To accessible and safe travel on the airlines and to ensure that their wheelchairs maintain proper order so again, thank you for coming on Peter, and we will talk to you later.

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Peter Axelson

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you're welcome Thank you.