DIANA ANDERSON
"Virtual Windows: Design solutions to improve the mental health of clinical staff"
Mental Health Symposium May 27th 2017

[02:57 PM] Carolyn Carillon: Hello everyone.
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A little explanation about this service.

Voice-to-text transcriptionists provide a translation of the key ideas discussed, NOT a word for word transcription.

Voice-to-text services provide an in-the-moment snapshot of ideas and concepts, so that those who are unable to hear or to understand the audio program are able to participate in real-time.

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The transcriptionist is
Carolyn Carillon

The following initials in the transcription record will identify the speakers
DA: Dr. Diana Anderson

[03:00 PM] Carolyn Carillon: <<transcription begins>>

[03:02 PM] Biji Kuu: Good afternoon and welcome to The Sojourner Auditorium and the sixth annual Virtual Ability Mental Health Symposium.
My name is Biji Kuu inworld and Bob Grant in RL.
My personal causes include Soldier Ride for the Wounded Warrior Project, some international outreach and work includes a startup for high need populations in economically challenged areas. It has been my honor to join Virtual Ability from time to time,
So thank you again for this honor..

IM a VAI Greeter in the back of our auditorium at any time if you need assistance.
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Visit our blog http://blog.virtualability.org and our corporate website http://www.virtualability.org for more about the Symposium and our services and projects.

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Now a bit about our presenter.
Dr. Diana Anderson is a board-certified healthcare architect with the American College of Healthcare Architects (ACHA)
and a board-certified physician through the American Board of Internal Medicine (ABIM).
She calls herself a "dochitect."
She has worked on hospital design projects within the United States, Canada and Australia.

(rest of welcome speech missing in text)

[03:06 PM] Carolyn Carillon: DA: hi everyone
Can everyone hear me ok?
Thanks everyone
I'm happy to be here
I'm going to talk today about virtual windows and beyond
We don't talk about this
But we're hearing a bit more about it in the media
My role is unusual
I have a hybrid career
Bridging the gap between healthcare and architecture
In terms of an outline
I thought I'd touch on the two careers
It's take me a long time to board certify in both
We founded a group because so many young people want to do both
I want to focus mostly on clinician wellness
And the future of hospitals
By future, I mean in the next 5 years

As a resident doctor I kept two notebooks in my lab notebook
Doctor's notes
And design notes
You collect stories from people about what's right or wrong with their space
Most of my slides are pictures
You may have seen a picture like this
This is what hospitals used to look like
These patients look healthy compared to some we see today
It's a big open space
Windows on either side
Hospitals have changed since then
On the top is a children's hospital in the UK
Very green

On the bottom is a hospital in Singapore
One thing hasn't changed
The need to have the clinician patient relationship
We need to have that interaction
Let's look at the convergence of the two fields
Architecture and medicine have chugged along in parallel to each other
At one point they might have crossed
That's recent
During the 1920s
When the tuberculosis sanatorium was built
Here's the Palmio Sanitorium in Finland
I visited this
It was the first day I didn't feel queasy in a hospital
This architect (Alvar Aalto) designed the building with the patient in mind
It's built in Finland in a beautiful pine forest
Since tuberculosis is contagious the building had to contain the disease
I wrote about the hospital
In an article called Humanizing the Hospital
It's designed for the patient and staff
See the door handle?
It's designed so the lab coat doesn't catch on it
The design is for the patient
The heating aims towards the patients feet
The window shows the patient a view
Sink basins were designed so there's no splashing
Spit basins are separate
Wardrobes are made from curved plywood
So you could clean the floor easily
For infection control
They called it the cure
It was a 2 hour period when patients had to go to the balconies for fresh air
The angle of the chairs made it comfortable for the patient to breathe

Louis Kahn designed the Salk Institute
He said when architects are challenged they can find new shapes for the hospital
But he can't know what they doctor knows
But maybe they can
Maybe our world is changing
Medicine is changing at a fast pace
Learning lessons from the humanities
Many of my colleagues came from different backgrounds
Not just science
Architecture is moving away from anecdotal evidence
And towards science
To prove that architecture can have an impact on health
Just some food for thought

Let's look at the incorporation of nature
Nature is a big one & it's close to my heart

We think about it when it comes to patients but not so much when it comes to clinicians
Look at the window in this painting
There's a quote that says sunlight coming in through the window are soothing and create an atmosphere of peace of mind
It shows how much I support windows in design
This was powerful to me
Nature is powerful to us as humans
We saw it in Finland
More than just outside, what about the idea of a window in a hospital
The painting looked like someone's home
These are sketches from my diary from my residency
This is a woman I cared for in her 80s
She couldn't talk & was probably demented
She was in a room without windows
Now by building code, we have to have windows in new ICU rooms
That day, her heart rate was out of control
We didn't know why
Someone said maybe we should move her to the window room
We said ok but what's the evidence
In fact there is
In 1984, a study shows that patients after surgery who faced a window that showed nature
Used less pain medication
Went home sooner
That began the era of evidence-based design
We looked at the evidence and we moved her
Her heart rate was normal by the next day
There may be other factors
But it's an incredible story
We considered the environment as part of her care plan
You can create more evidence
It's a powerful moment

This is a sketch of an intensive care unit (an ICU room)
We've tried to overcome the era of extreme technology
The windows soften the technology
Patients can move out of their bed to an exterior terrace

This is a sketch I did in the last year
For a pediatric ICU
We used colour blocks to determine space
We were trying to develop a garden where patients and families could go
But where are the staff in this picture?
Do they have access to the windows?
Do they go to the garden?
We've entered an era of patient wellness
I'm Canadian but I've seen different health care systems
There's been a big shift

This is an image from a drug ad
There's a move away from hospitals and towards home
I think bed rest is harmful for patients
If you put an old person in bed for days, it's harmful
So we're trying to increase mobility
Should we design a room around a bed?
What's the role of the clinician?
Our building codes
Our focus on nature
Have been around the patient & family
But clinicians spend the most time in the hospital
Staff are there for long hours
So let's talk about that

I'll go back to the painting
What's happening in the foreground?
This is probably a home
Someone is very sick
The man to the left is probably a physician
There's a sense of calmness
This physician has cared for this patient all their life

The next image is very different
It shows the high tech environment we have today
Very intense for the staff who work there
It's a very different environment than the home
There can be a disconnect between design intent and user experience

This is an image I took in a park near my home in Canada
It's a typical example of someone paving all the paths
Assuming that's the best way to get to the building
But people will create their own paths
It's hard to figure out what people will do
It's hard to design for it
The sanatorium closed this gap

This is probably a medical student examining a patient
I saw that because his coat is short
He's examining the patient from the right hand side
This is a clip from a teaching video
Notice this examiner is also standing on the right
That's convention
There are reasons for that
You can lose points in medical school for not doing this
This is the room I had as a resident doctor
Can I examine a patient from the right in this room?
I can't
The built environment impacts our work patterns
Now I'll take you into the trenches

Going to your residency is akin to going to battle
There's some association shows between changing shift work and coronary disease
Look at the lighting
Not much daylight
You can imagine the noise and the chaos
This is a drawing I made
That shows the no sun zone
Patients get the daylight
Staff get the inner core
Last year I overheard two doctors talking
One told the other than he had two rooms
He preferred the one with the window
The other said she had an office with a window
All I could do was sit there thinking this shouldn't have anything to do with luck
You should always have access to a window
There should be building code standards for staff
It can be tricky to get sunlight

Here's an example from the sanatorium
It's beautiful
There's light coming in
They put light wells in
On the right hand side is a hospital in Canada
Designed to bring nature in
Here's an ICU in Melbourne
That has clerestory windows
It's one thing I think works well

This is a symposium on mental health
So I have to talk about burnout and the environment
It's been in the media
Evidence is accumulating that burnout doctors make more errors
Physicians are human
We struggle with what we have to do as doctors
Burnout is real

[03:37 PM] VAIPresenter8 Resident: First day of ICU:
“All you have to do is try and survive” a senior resident said to me. I close my eyes and still see their faces...
The young man in his 40s in the corner room who had back pain and took too many Tylenols now lying in a bed in a coma, yellow, swollen and waiting for a new liver.
“Don’t worry”, my attending said as we were rounding, “weekends are good for livers.” How morbid.
I left the rotation before I ever knew if he got an organ. Later I found out that he died before one was available.
A 32 year old woman with end stage AIDS and encephalitis. She lies there with eyes that follow you, like a cabbage patch doll said my resident.

She is unable to speak. When we ask her to squeeze our hands she remains limp but when we ask her to blink, her eyelids close and reopen.
Can she understand us? How frightening to think of such things… the locked-in state. After I left the ICU I found out that she had died too.
This week I performed my first chest compressions on a human being – a 57 year old woman with no medical history who fell down suddenly in the park.
I declared her time of death. The family cried the whole day and many came in and out of the room. The death was too sudden.

[03:39 PM] Carolyn Carillon: DA: when I was in the ICU and I was going through those kinds of experiences
I wanted to go to a window
So I could think
But I couldn't
So instead I went to a supply room
Where you'd see someone wiping away a tear
There's no where else to go to take a moment
At night the hospital changes
Even sitting down for a few moments can refresh you for hours
There's a big debate going on right now
About shifts
About having longer shifts vs shorter ones
But that requires handing off
And doctors exchanging info
The hand off is a dangerous period
It's hard to do in a short period of time
Where do you do that?
This summer shifts are changing and going back to 24 hrs
There's debate about what's best for physicians and patients
You've heard of call rooms
It's hard to sleep here
And how do you get to the top bunk without a ladder?!
I'm open to ideas
And having it in the right location
When the shift lengths changed
Some wanted to take away call rooms
But we need to rest

This article was in the Huffington Post
Showing $$ raised for different diseases vs. what we actually die from
There's a disconnect
It made me thinking about where we spend money in design
We put lots into patient rooms and spaces
Not the ones for staff
But in my dream, they're number 1
Research is showing that
Look at the pie chart
We spend 7 minutes a day with a patient
The most time, we spend talking to providers and charting
So space has to reflect that

It has to reflect collaboration

Here are two places that designed for collaboration
They've incorporated blackboards and whiteboards
For people to communicate and think together
If that's the case, what about the doctors' lounge?
It's almost nonexistent
Where is it?
Where do these relationships thrive and develop?
One is the corridor
A lot happens here
We chart
We gown
We have discussions
Patients do physical therapy
Can it be more?
Can there be alcoves? gardens?
More interesting with artwork?
This one is my favourite
Where do my best conversations take place with my care team?
On the fire stairs
We'd often take the stairs and bump into consultants
And have a face-to-face conversation
Maybe technology can give us other ways
But I imagine a grand staircase
That's the new lounge

So if we think of the role of hospital design overall
We're designing to break barriers
Buildings are becoming part of the solution
I know I've painted a harsh metaphor today
But there are hospitals working on solutions
Here's a hospital in Western Canada
You'd think this was a patient area but it's only for staff
For collaboration
Full of respite zones and nature
A powerful space dedicated for staff
Here's a building in England
You can see cascading gardens that cut through the whole building
To address deep floor plans in older buildings

Like in NY
Virtual windows
They have a huge role to play
There's a study where we found a big improvement in quality of life with virtual windows
What about on-call rooms?
Maybe we don't need to take so much space
Maybe we just need a lounge chair
The AMA came out with an article about a reset room

Maybe a space where you do yoga for 10 minutes
We'll create a space for ideas
To start a conversation
I'll send out a link
We'll have that online
Now is the time to reinvent the hospital for clinician wellness
Handoff spaces need to be redesigned
On-call rooms need to become respite rooms
We need to use virtual technologies
The trends toward universal design
Has taken off overseas
What's driving the change in hospital architecture?
We've moved from care to cure
I think we're going back to the sanatorium model
We're coming back to care

What about us as clinicians?
In 2050, doctors may be doing something else
They may teach
Explain
Answer questions
To reassure families
What's contributing to health?
Planning and architecture are contributing
To health and mental health
Of patients and clinical staff
So those are the anecdotes I wanted to share today
I have ideas
I'd love to hear from the audience
I'm happy to take any questions
thank you very much

[03:53 PM] Leandra Kohnke: I worked in a hospital that had a large atrium with greenery and natural lighting supplemented for our very short Canadian winter days. People with seasonal affective disorder reported it made them feel much better. Have you designed for SAD?
[03:54 PM] Carolyn Carillon: DA (responding to Leandra):
I think it's a very good question
Being from Canada, I understand the question
I haven't seen a lot done from the point of view of architecture
Not for patients but maybe for staff
[03:55 PM] Leandra Kohnke: It was an accidental discovery, that it would help, I mean
[03:55 PM] Carolyn Carillon: DA: I'd like to know what was done at Leandra's location
[03:55 PM] Carolyn Carillon: LK: They put the atrium in
At the Health Sciences Centre in Winnipeg
It had all the supplemental effect
It wasn't something they planned

We had a sleep disorder clinic right outside the atrium & they picked up on it first
Staff & patients
Everybody
[03:56 PM] Carolyn Carillon: DA: I hope somebody wrote that up
[03:56 PM] Carolyn Carillon: LK: I don't know if they did
[03:56 PM] Carolyn Carillon: DA: That's the challenge
Lots of anecdotes
But how do we capture that with research?
So we can take it to a client and say these are real results
Unfortunately, clients want to hear about return on investment
There's some data
But I'll look into that
I've never been there but I'd love to visit it

[03:57 PM] Gentle Heron: [15:53] Zip Zlatkis: but what about those great designs for staff collaborations. How is the patient brought into that? How can the patient reset? How can the patient meet with their entire physician team. How can the patient get out into nature?
[03:57 PM] Carolyn Carillon: DA (responding to Zip): that highlights another disconnect
I didn't touch on the gap between the care team and the patient
There's a lot of literature in the ICU
That involving the patient in the care plan is beneficial
I think the sketch of the ICU with the floor to ceiling windows
Showing that the patient can get outside
Might be an interesting concept
Someone looked at windows in the ICU
And found no benefit
But patients might be sated
But you touch on a great point
About including patients
We're trying to get away from the idea of a desk with a physician on one side & a patient on the other
We're trying to get more toward the physician collaborating with the patient
[04:00 PM] Zip Zlatkis: patients are important and they and their family

[04:00 PM] Gentle Heron: [15:53] Faust Saenz: Are there implications from your work for landscape architecture, and community and regional planning such as could positive psychological wellbeing be proactively enhanced as a matter of public health policy through architecture, landscape architecture, and community and regional planning?
[04:01 PM] Carolyn Carillon: DA (responding to Faust): you're touching on some big topics that are being talked about around the world
Like in NY
There's a conference coming up on healthy design
Thinking about exercise in an urban landscape
I have a colleague who thinks hospitals won't exist in the future
It might be possible
Care might shift to the home or community

Hospitals might become critical care centres
Both are important
Then you need to think about urban planning
I think that's the direction we're moving towards

[04:02 PM] Draxtor™ (draxtor.despres): This may be off topic but the big picture: perhaps invest in prevention more? In the US?

[03:53 PM] XeniaBastet: As an artist I find the idea of mental health related design very interesting.
[04:02 PM] Gentle Heron: [15:54] XeniaBastet: More interdisciplinary concerns where art and design play a key role in fields that people consider "more serious"
[04:02 PM] Carolyn Carillon: DA (responding to Xenia): that's possible but I think our views are shifting
There's a body of literature on art & design related to healing
If you think of dementia
Where we have no good treatments
We use nature as treatment
There's a good book called Lost in Space
About using space to generate memory
Using our senses to heal
That's fascinating
It's a ripe time for medicine to consider all these ideas

[04:03 PM] Jujue: A comment: I was married to a man with 35 years in emergency care, beginning right out of college, and 28 years as an ICU RN. He had a triple bypass at 44 and continues to have a heart attack every 2-5 years. He has expressed his stress through addictions of all sorts and hides his depression. He can no longer work because of physical disabilities caused by overwork and spinal subluxation and hip surgeries. Your work is vital to help these people, both the staff that work 12 hour shifts and are overworked with no hope to see the sunlight if working night shifts. Virtual windows could save lives. I applaud you in your insight and ability to see outside yourself to help others.
[04:07 PM] Jujue: Further: The time he spent working in the dark, in the ICU, drastically changed the quality of his life.

[04:04 PM] Gentle Heron: [15:54] Biji Kuu: What role does culture play in hospital and medical design?
[04:04 PM] Carolyn Carillon: DA (responding to Biji): You guys are asking tough questions!
You can think of that lots of different ways
You can think globally
But use the example of designing a new hospital wing
Looking at the old picture I showed of the ward
Then you have a hospital with private rooms
Changing the culture can be challenging
For a while we struggled with sinks
Where do we put them

To change the culture of handwashing
[04:05 PM] Biji Kuu: My question was directed towards the culture of the patient in their country or region as an example
[04:06 PM] Carolyn Carillon: DA: I have no doubt it will be more complicated with more immigrants
[04:06 PM] iSkye Silverweb: And you can't design hospitals with spaces that accommodate cultural differences of every kind
[04:06 PM] Carolyn Carillon: DA: Where we're going to the private room model, it may be easier to integrate culture
It's difficult in terms of cost
At one point we were going bigger and bigger
An operating room can only get so big
But as the world gets bigger, we'll have cultural challenges
The biggest challenge for architectures may be informatics
We often think of it later on
We should do it earlier
An IV pole is now a computer
You need to think of that early on
Maybe culture is like that
We need to incorporate it earlier on
[04:07 PM] Biji Kuu: thank you

[04:07 PM] Gentle Heron: [15:54] draxfiles: I would like to remind folks of the AVESS project done in SL 2010 https://youtu.be/oUt2_C3SKIg
[03:54 PM] The Drax Files Radio Hour (draxfiles): It is regrettable that it never took off
[04:08 PM] Carolyn Carillon: Gentle: This is the amputee virtual support space
That gave amputees a virtual space to get together and support each other
[04:08 PM] Draxtor™ (draxtor.despres): What was so important was that
A virtual world really provided the window
To the outside world
And during rehab
That could last months
Fathers could hang out with their kids
In worlds they created themselves
They could create these worlds together
Well they can do it NOW in SL as well :)
I am using past tense
Because ultimately the project was not funded
Today we have more tech
etc
One addendum is that as I am working with VR and current tech = Second Life has NOT LOST any of its relevance :)

[04:09 PM] Gentle Heron: [15:54] Polaris Grayson: QUESTION: What other technologies have been incorporated besides the virtual windows like fragrance drops and atmospheric immersion auditory tech?
[04:09 PM] Carolyn Carillon: DA (responding to Polaris): other tech that I've seen ...

I don't know about the fragrance drops
We try to stay away from that
There's quite a bit on music in ICUs
I can tell you a story of a screen with a live video feed
With nature scenes that were live
They had a problem with a patient who said he heard crickets
They sedated him until they realized the cricket sounds were coming from the screen
There's an example of a negative connotation
But music
There's been some positive research on music
If anyone has examples I'd love to hear about them
[04:11 PM] Polaris Grayson: Thank You ☺

[04:11 PM] Gentle Heron: [15:54] Kyna Blackburn: Your comment about a Grand Staircase made me think of one of the facilities where I trained: Legacy Salmon Creek Medical Center in Vancouver, Washington. They have one.
[04:11 PM] Carolyn Carillon: DA (responding to Kyna): I will definitely look that up
Thank you for that

[04:12 PM] Gentle Heron: QUESTION- Do you find any relationship between the medical delivery system model (e.g., national health insurance model; out-of-pocket; social insurance) and the ease of acceptance of your model of architecture supporting the doctor-patient relationship?
[04:12 PM] Carolyn Carillon: DA (responding to Gentle): That's a big question
I mean in terms of the ease of acceptance
There's definitely a difference
In the acceptance of health care design in different countries
I see a difference between Canada & the US
The sketches I shows on where we put our resources for design
I see a bigger discrepancy
I see resources distributed differently
Some areas in the US have much larger grandiose spaces for patients but smaller back area spaces

[04:14 PM] Svea Morane: Comment: Dr. Anderson, we agree entirely with your approach and comments about the importance of spaces for patients and staff. At Mayo Clinic we have been actively engaged in research and experimentation in these areas for decades. Our conclusions match yours and I would encourage your continued work in this area. Nicely done.
[04:14 PM] Carolyn Carillon: DA (responding to Svea): thank you very much

[04:14 PM] Gentle Heron: Dr. Anderson, you've given us a lot to think about here in our virtual environment! Let's thank her for sharing all her ideas with us today.
[04:15 PM] Carolyn Carillon: DA: Thanks everybody

[04:15 PM] Draxtor™ (draxtor.despres): applause
[04:15 PM] Jujue applauds

[04:15 PM] Biji Kuu: applause
[04:15 PM] Draxtor™ (draxtor.despres): amazing this virtual stuff
Never thought it would have such an impact ;)
[04:15 PM] Jujue: Fantastic work!
[04:15 PM] Stepin (stepinwolf.darkstone) claps in appreciation
[04:15 PM] Biji Kuu: applause
[04:15 PM] Mook Wheeler: THANK YOU!! That was absolutely amazing and ground-breaking
[04:15 PM] iSkye Silverweb: This is so good to hear about
[04:15 PM] Namaara MacMoragh: Thank you! Thank you!

[04:15 PM] Carolyn Carillon: <<transcription ends>>