

Durability by Design: art, business, and peak performance at Cirque du Soleil

Erin Sanchez interviews Paul McGinley MSc, MCSP, about the unique qualities of his role as Director of Performance Medicine at Cirque du Soleil and the critical value of data to promote safety and sustainability in this most physical of artforms.

WHAT DID YOU DO BEFORE YOU WORKED IN THE CIRCUS?

I came from the professional sports world. Directly before circus I was the Head of Performance Medical at Scottish Rugby, responsible for each of the medical teams across professional teams and the national representative team.

FROM THAT WIDE VARIETY OF PROFESSIONAL EXPERIENCES – WHAT IS SIMILAR AND WHAT IS DIFFERENT ABOUT THIS JOB?



At the end of the day, in both settings people are exercising, and using the whole of their bodies to do so. They are focused on trying to deliver outstanding achievements. A key difference is the structure of a business and the structure of the way our teams work. In circus, we have multiple shows that are not based in one venue, that travel globally.

You need to manage people who are remote or at a distance, while allowing environments to be autonomous, achieving their own agendas and being self sustaining, as much as is possible, as well as complying with the overall goals and objectives of a business that are established centrally. As a clinician you're expected to be capable of seeing anything that comes through the door. And that is what we face in circus, you're expected to deal with first response, like in sports, where if someone gets a profound injury, we are the first responders who react to that.

There are many surfaces that our artists perform on – water bowls, trampolines, gymnastics style flooring for acrobatic work, and floors for dance and other activities. Our job is to provide emergency response in each of those contexts, but it requires a team around us of technicians that understand the nature of the equipment that we could be facing onstage and how to safely navigate through that or use it.

HOW DO YOU STRUCTURE THE EMERGENCY RESPONSE WHEN PEOPLE ARE PERFORMING SUCH INTENSIVE – AND OFTEN DANGEROUS – MOVEMENT?

We must be able to respond to any emergency onstage within one minute, and for specific acts where we have risk assessed the profile of the act and significance of something happening (if the risk of injury is high in this act or the nature of a rescue is complex should a rescue is required) we factor those things together, enabling us to make a decision about the risk profile for the act and whether we have a team of therapists standing at side of stage to

respond in two seconds, or, somewhere in the facility that can respond within one minute. And that's a major part of what we do that is different to most performing arts environments. It is more of a sports model, where we establish emergency action plans, manage emergency response equipment, lead the emergency response teams and are the people to connect any injured artists to the external paramedic providers who then take them to a hospital if required.

WHAT IS THE MOST SURPRISING EXPERIENCE YOU'VE HAD IN YOUR ROLE?

I did not appreciate the difference between our artists and sports people. With around 38% of the Cirque du Soleil cast coming from gymnastics backgrounds, you would think it would be just like sports. It's absolutely not. Sport does not perform 10 times a week, or only 3 hours of training per week, (but potentially that can be 10+ performance hours per week) – it doesn't have the 5 days a week schedule. That is hard, it's a pace that is intense for our artists.

It's also repetitive; the same music, the same actions, and so it runs the risk of being repetitive to the point where it is automated. And that was a real surprise.

In sport, you have the capacity to win – to win games and to win a title. That's the priority: "we need to win". Circus is about the creation of the art, and we're a business. It's about having incredible show and being a leader in live entertainment in the world. In this environment, this company does not need to win the Super Bowl, it needs to have Super Bowl level performances every single night. It's not about peak for that one off event, it's 'be ready to keep peaking' time after time. Keep the outstanding nature of what you do, and make sure every time you deliver it – it is the same for the audience. That's a different pressure, it means you have to think differently, it means you have to train differently, it means you have to prepare differently.

One of the things we've realised in assessing workload, when we see that sports teams talk about the 'acute-chronic workload ratio', they talk about the nature of the loading of their athletes such that significant change in loading volume leads to injury. Instability in loading – you're unable to adapt to that so you potentially get injured. We don't really have those profound changes in load. We realised our artists get injured by volume, by doing a lot of training over a lot of time. We've got to make sure we keep our people at the highest level possible – 'maintenance' as opposed to 'peaking' – it's been the biggest surprise for me.

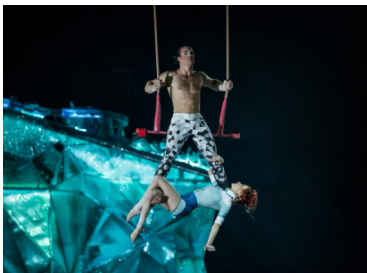
HOW DOES PERFORMANCE MEDICINE OPERATE AT CIRQUE DU SOLEIL? WHAT IS THE ROLE OF DATA SCIENCE, RESEARCH AND STATISTICS IN YOUR WORK?

It's fair to say that we are not as advanced as sports teams in our use of data science and that is something that we have been focusing on since I took up this post. Cirque du Soleil has been an early adopter of electronic medical records, we have wonderful volumes of data that we can potentially access. We have 1500 artists, and so the numbers are huge, and the opportunity to use the data is huge.

The data science approach started firstly to establish some consistent parameters that we can refer to across shows, and secondly, to connect our shows to our data. We created an online platform and portal through a system called Power BI that would allow us to visualise data for each of our shows, including the breakdowns of their injury profiles and comparability in terms of injury rate, performance and severity.

In doing that, those shows could bust some myths about what areas needed focus and enable them to refocus, and to choose their priorities. Rather than being told centrally, 'this is what your priority is' we've asked them 'What do you think you need to work on? What is your data telling you?' and encourage them to make decisions around that.

WHAT ARE THE PRIORITIES OF USING DATA?



That was the larger part at the start, the clinical bias to what we were trying to achieve with our data – to improve quality of care. But we cannot deny that we are a business, and close behind that is being business minded. We've got to understand that here are sometimes better ways to do things, and that better ways to do things could be improving care, but it could also be spending less money.

And so, the second part of our focus has been on reviewing models of care. So if an artist gets injured on tour internationally, my job is to make sure that they have the appropriate quality of care, that is intense, lasting, and encourages recovery as quickly as possible. That still emphasises quality care but is also good for the business.

That is one of the challenges that we face: being sure that we achieve quality care, but that we're also saving the business money on unproductive time and length of time out, costs associated with going to an external provider as opposed to seeing an internal person who has Cirque-specific expertise. So our data has really helped us, when we combine our data from a medical point of view, more widely with other data such as financial data, we can really be more agile in our business models.

The last area where data is involved is in the wellness daily monitoring, including workload management and tracking workload. We have the ability to monitor our artists on a daily basis, and to combine that with their medical data. There is the capacity to combine data pools into researchable projects that hopefully will enable us to share some of our learnings and to change some of our ways of working for the positive benefit of the artists and for the business.

TELL US ABOUT YOUR STRATEGY TO MAINTAIN 'DURABILITY BY DESIGN'

We created the pillars of Prepare, Perform, Recover as a mechanism to standardise our language. We want artists to ask,

“Does that help me with my preparation? Does it help me with performance? Does it help me with recovery?”

It's something I've never had to do before – creating this concept, working with a branding team to market to ourselves to market to our own staff to give us that vision of how we could potentially do things better and to give us that focus to say 'if it isn't helping with this, is this something that we really need to do? Does it weigh up in the balance of our priorities?' And it's a critical point – it's not just medicine, it's not just strength and conditioning or performance science, it's not just coaching, it's not just our artistic directors – it's actually for everyone, that we consider how to make it sustainable to do what they do over and over – which is reassuring to our artists, it's reassuring for our staff. Durability by Design is not coming from Montreal, from Cirque du Soleil core management – but coming as a concept that enables each show to generate its own solutions to its own challenges, and to feel supported that it is a corporate message which is saying "yes, this is important to us." It goes beyond caring for our artists, but also caring for ourselves.

FURTHER INFORMATION

cirquedusoleil.com

Crystal, Cirque du Soleil's first show on ice, tours the UK until April 2020.

See some of the data on Cirque du Soleil's work here: <https://youtu.be/WfA1hCcC3VA>

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