TECHNOLOGY & HEALTHCARE PLAN INNOVATION

CHANGES COMING RAPIDLY

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Changes Coming Rapidly

Every aspect of healthcare and technology is changing and changing rapidly, says Paul Clark, Chief Technology Officer for WorldCare International. He and Dr. Syed Haider, Senior Consultant, Orthopedic Surgeon from Markville/Stouffville Hospital; Tim Clarke, Owner of TC Health Consulting; and Karen Voin, Assistant Vice President, Group Benefits and Anti-Fraud from the Canadian Life and Health Insurance Association; shared their insights into some of the changes that have happened and will happen as more and more technology changes the face of healthcare and employer benefits plans at the Benefits and Pensions Monitor Meetings & Events 'Technology And Healthcare Innovation' session.

From orthobiologics to 3D printers, implantables, and wearable devices, the panel at the Benefits and Pensions Monitor Meetings & Events 'Technology And Healthcare Innovation' session – Paul Clark, Chief Technology Officer for WorldCare International; Dr. Syed Haider, Senior Consultant, Orthopedic Surgeon from Markville/Stouffville Hospital; Tim Clarke, Owner of TC Health Consulting; and Karen Voin, Assistant Vice President, Group Benefits and Anti-Fraud from the Canadian Life and Health Insurance Association – shared their insights on why these changes are necessary and where they are going.

Osteoarthritis is affecting the whole world, not just Canadians, said Dr. Syed Haider, Senior Orthopedic Consultant/Surgeon at Markham/Stouffville Hospital. In Ontario, 1.9 million adults have arthritis, women more than men; 55 per cent of people with arthritis are under age 65; and the biggest increase in arthritis, especially in knee arthritis, is in those between age 45 and 65.

There are two main reasons why people have arthritis – genetics and environment. "If you have bad genes, unfortunately you're doomed." Environmental conditions, however, are "things you can modify," he said.

Disease Of Cartilage

Osteoarthritis, in fact, has nothing to do with the bones, it's a disease of cartilage. "A click getting out the car is the start of a downward trend," he said. There's a meniscus inside the knee which is supposed to act as a shock absorber. It breaks and folds on itself, that's what produces the click. In somebody between 45 and 60, it means "you just broke the tread off your tire."

Invariably, it's not just the meniscus which is broken. Instead, the patient will have a significant amount of arthritis. For "65 per cent of patients who come to me with a meniscal tear, the real cause of the tear is osteoarthritis because this poor meniscus is grinding between two bad surfaces, rather than smooth surfaces," he said.

Traditionally, this was treated by putting a camera inside the knee and trimming that broken piece. But the more trimming, the less cushion was left and the more arthritis. "More and more, we started repairing the meniscus, rather than taking them out, so that we can avoid osteoarthritis," he said.

Surgery is not the only solution. Other options, which are extremely important, include lifestyle intervention, like losing some weight; being more active; physiotherapy; or medications. For example, with knees, every pound gained can translate to four pounds extra pressure on the knee, he said.

There are also injectables like cortisone and hyaluronic acid, a gel which is put on the knee. However, these are only short-term solutions.

Create Cartilage

Orthobiologics is the new trend "Where there is a loss of cartilage, holes are drilled down to the bone marrow so stem cells can leak out. Then PRP (platelet-rich-plasma from your own blood) is put in and might create cartilage," said Haider.

As well, researchers are working on 3D printing of cartilage right into the knee.

TECHNOLOGY & HEALTHCARE PLAN INNOVATION

However, for the guy with severe arthritis, no amount of orthobiologics is going to help. The only solution is knee replacement where the bone is cut and a metal implant is placed on top of it. However, new technologies are coming here as well. "Six months ago I was training on robots and the day is coming when robots will do the surgery. The beauty is it's fast, it's less invasive, and it gets you on your feet quick," he said.

While he confesses he is "a layman as far as insurance companies are concerned," Dr. Haider has some firm thoughts on what he thinks should happen.

Patients need more autonomy and the health system needs to be relevant, he said. For example, if hyaluronic acid or gel that costs $450 is covered, "why not give them flexibility so they can use PRP which costs almost the same? It's more relevant, it protects their knees, and can avoid knee replacements."

On the other hand, he tells seven out of 10 patients who come to him for shoulder or ankle fractures that they don't need massage therapy even though it is in their plan. It is not that he has anything against massage therapy, but it is just not relevant, he said.

No Longer Relevant

Other things are changing that should also be considered. "People are getting out of the hospital the next day. Your benefit plans which say 'Private room in a hospital' are not as attractive anymore all of a sudden. If the patient is going to go home after a knee replacement the same day or the next day, that private room you're offering is no longer relevant. I think all of us need to learn this. It's our responsibility as surgeons to impart this knowledge to you so you can tailor-make your plans accordingly."

These could be a "win-win for not just the insurance industry and medical experts, but, mainly and most importantly, our patients."

"The issue is as new ideas and new technologies come forward where do they land," asked Tim Clarke, founder of TC Health Consulting? For example, pharmacogenetic testing looks at an individual's genetics to understand how they will react to certain medications. It has been in the marketplace for years, yet the group insurance business has not come to a consensus about if and how it should be covered. "Does it fall in the drug plan? Is it part of the disability program? Should insurance companies be doing it as part of their prior authorization? It's a good idea that has great applications, yet it's fallen into a gap," said Clarke.

Money Better Spent

Another example of a technology that can improve the cost effectiveness and value of benefit plans, but is falling into a gap is telehealth. For a $50 video visit with a physician and without taking time off work to take a sick child to see a doctor, the employee does it online and finds out "what you need for your child and whether of not they can go to daycare. Isn't that $50 money better spent than the day off work?"

Technology also fits in with health promotion and wellness. "We have the technology able to support people and provide the data individually and on an aggregate level much better than we have in the past," said Clarke. "People are taking more control of their health and looking for: 'How do I keep myself healthier?' Everyone today likely has a device with a number of apps and many help individuals manage their personal health. However, "how does that connect to your benefit plan," he said? It is unlikely that employers want to make decisions on individual apps to support their employees, yet, they're looking for technology they can get into people's hands that can actually be effective at helping them stay healthy.

This means there is no end to the amount of data that's out there that pertains to health and this includes personal data which can make people uncomfortable. However, 25-year-olds understand what the "deal" is. "They know that these platforms have a tremendous amount of data and they will give access to it, but the platform must give them something in return (preferably for free)," said Clarke. One way of providing value to plan members is to use real-time data to provide useful information on "what else should I be thinking about at this point in time in my life."

10,000 Steps

In addition to providing value to the member, the companies aggregating this data know their customers better, which can be used to enhance product design, pricing, or the user experience. The group insurance industry in Canada, for example, is recognizing the value of this data – everything from enrolment data, wellness programs, plan claims data, and now personalized data from wearable devices. Using this data to provide value to the member and the aggregator at the same time is the industry's next step. Whether it comes to uses of data or the adoption of new and valuable health technology, this is the real challenge going forward, he said.

"Technology is a disruptor in healthcare," said Paul Clark, Chief Technology

TECHNOLOGY & HEALTHCARE PLAN INNOVATION

Officer for WorldCare International, Inc. And while it is happening in a number of areas, the interesting thing, especially on the healthcare side, is this is all going on at the same time at all different levels. Every aspect of healthcare and technology is changing and changing rapidly.

On the consumer side of things, technology is most commonly known with wearables – fitness trackers and even cellphones. Apple's iPhone 8 will offer more than step counters. It will also be capable of oxygen readings and heart monitoring.

Understanding The Difference

So, while things are changing on a regular basis, the challenge is understanding the difference between the consumer level and the professional, clinical level.

Medical alert devices, "the old 'I've fallen and can't get up,' are now built into your phone," he said. However, there's technology being used in senior communities that monitors movement within their home or apartment to make sure that they're okay.

Coming is implantable devices. One company is actually encouraging its employees to get implanted devices for daily fitness tracking. Given this, the next step is delivering medication through implantables, which is not that far away.

Even the "internet of things" is changing. Ten years ago, it was taking medical devices and just adding technology to be able to communicate. Now it's blood pressure cuffs, glucose monitors, and medication verification. There are pill devices now that can dispense a pill, track whether it's taken, and report that back to the physician or just send a reminder to the patient on a phone.

"Ultimately, at the end of the day, it really comes down to a concept that I like, 'connected health,' which is how to interact and interconnect all these different things," said Clark. There are opportunities with this automation in chronic disease management with diabetes, chronic heart disease, and hypertension being the most common ones.

The challenge from the insurance side of things, is "How do I make a plan that's easy to provide and that's tailored down to each individual? That's certainly going to be a challenge, but certainly an opportunity as well, going forward," he said.

One challenge, though, is a lack of standards for equipment. "My Fitbit is not as good as a professional-grade device. My wife found out she can sit in the rocking chair and count steps without actually having to move. The iPhone monitoring your sleep is different from a clinical-grade device monitoring how well you sleep. As you put plans together and incentives, you have to understand the differences. Are we trying to change habits or are we really trying to diagnose and treat a condition," he asked?

Creating Data

With all of these devices creating data – IBM estimates that 90 per cent of all data stored in computer networks has been generated in the last two years – it makes data collection "just the tip of the iceberg. We have all this data. Now, what do you do with it?"

This makes integration across multiple platforms critical. "When you start being able to produce a picture of each individual, this is where artificial intelligence will begin to be able to look at each individual and say 'this is what you should be doing'," he said.

"Technology doesn't solve the problems," he said, "It is a tool to help solve a problem. Right care really is about evidence-based outcomes – getting you the right care at the right time in the right way."

"Needs are changing," said Karen Voin, Vice President for Group Benefits and Anti-fraud at the Canadian Life and Health Insurance Association (CLHIA). Quoting the Sanofi-Aventis survey for this year, she said anyone involved in employee health benefits today will likely attest to the changes in the air. Numerous external factors – such as specialty drugs, new technologies, and consumer expectations – point to both the need and the opportunity to do things differently. Other factors driving this are that employers want more aggressive cost management of their plans to ensure their sustainability. Concern about sustainability is primarily driven by the high costs of specialty drugs which is putting real strains on benefit plans.

Paper-based

"As we talk about all the advancements in technology, we sometimes forget about where we come from and some of the good changes that have occurred over time," said Voin. With prescription drugs, all claims were once paper-based. The doctor would write a prescription and the patient would take it to the pharmacy, pay for it, submit a claim form to the insurer, and get a cheque. Today, the majority of claims are paid electronically so the patient experience is completely different.

There's also needed change in the air in regards to drug pricing in Canada with proposed Patented Medicine Prices Review Board (PMPRB) regulation reform and the provinces jointly negotiating for lower drug prices through the pan Canadian Pharmaceutical Alliance (pCPA) for public plans. In 2012, the industry launched the Industry Drug Pooling Corporation to provide protection for small- and medium-size employer plans which could be devastated with a high drug cost. From an insurer standpoint, all insurers are actively promoting

TECHNOLOGY & HEALTHCARE PLAN INNOVATION

"mandatory generic substitution, managed formulary designs, PPOs, prior authorization, and health coaching" as opportunities to manage costs," said Voin.

One area that hasn't changed much over time is dental plan design. Plans today look very similar to what they did 10 or 15 years ago, even though dental care needs have changed. Advances in dental care mean that for many, other than their regular check-up, there's less need, for example, to treat cavities and the care is often cosmetic in nature. "That is one of the things that probably needs to be looked at," she said.

With paramedical services, the change has been "very positive" in terms of the increased focus on health and wellness. "Paramedicals are a valued service from a plan member perspective," said Voin. However, this is also creating a significant increase in utilization and presents challenges in terms of ensuring that services incurred are medically necessary and have been rendered. At an industry level, benefits paid have gone from around $1 billion in 2010 to $3 billion in 2015.

Becoming The Regulator

One of the challenges in relation to paramedical services is the lack of regulation for some professions. "If it's included in a benefit plan and the profession is not regulated in all provinces, then each insurer is setting their own standards so they're in some ways becoming the regulator," she said. Insurers want to make sure that services provided by these unregulated professions are performed by individuals who have adequate training.

"Overall, the constraints on both public and private payers are going to continue to play a role in driving change. There is a need for increased collaboration between public and private payers, and other stakeholders because we're all in this together," said Voin. **BPM**

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