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## **INSIDE THIS ISSUE**

#### **EMPOWERING PATIENTS THROUGH** KNOWLEDGE

Discover how digital solutions can improve health literacy p06

## PATIENT ACCESS AND EMPOWERMENT



## **The Journey Towards National Pharmacare: Dr. Eric Hoskins on Canada's Next Steps**

Dr. Eric Hoskins is Chair of the Advisory Council on the Implementation of National Pharmacare. He spoke with Mediaplanet about the work of the Council and Canada's next steps towards increasing health care access for all.

Mediaplanet What are the primary considerations that have to be made when recommending a national pharmacare strategy for Canada?

Dr. Eric Hoskins The two main considerations that the Pharmacare Advisory Council is working on are that firstly, too many Canadians are left behind with the current patchwork of drug coverage and are unable to afford the medicines prescribed to them and that secondly, Canadians are paying the highest prices for prescription drugs compared to almost every other country in the world. Our challenge is to recommend a national pharmacare program that will help solve those two issues and work in the Canadian context. Throughout our engagement with Canadians over the past several months we were guided by three central questions: who will be covered and under what circumstances; which drugs should be covered; and finally, how we should go about paying for a national program.

MP What role can a national pharmacare program play in widening access for Canadians? **EH** National pharmacare can ensure that all Canadians have the ability to access the medicines they need. Right now, two to three million Canadians say that they did not fill one or more prescriptions in the last year because of affordability issues. More than one million Canadians forgo necessities like food or heat so that they can afford their prescription drugs. To put this into perspective, one million Canadians populate a city the size of Winnipeg. Imagine for a moment, if all the people in Winnipeg could not afford their medication. This is the challenge the Council has been tasked with solving and this is the problem that National Pharmacare can address. That is why the Council will give the Government a blueprint on how to implement National Pharmacare in a way that respects provincial and territorial jurisdiction in health care, and delivers comparable access to prescription drugs at an affordable cost.

## MP What would you say are the main barriers to its implementation?

EH I am not sure I would like to characterize any one thing that we've come across as a barrier to national pharmacare — there are certainly numerous challenges in terms of the design and implementation due to the way health care is currently delivered in Canada. These challenges are, of course, part of those key questions that we have been meeting with our partners to discuss and work through. Ultimately, it is up to the Council to recommend something to the federal government which addresses these challenges, like cost, but keeps its focus on Canadians' best interest. Of course, it is important to choose a model that is both affordable for Canadians and reduces the barriers that prevent people from having access to prescription medicines.



## MP What role could private payers play in the National Pharmacare strategy?

EH I don't want to get ahead of the Council's work just yet as we are still working on our recommendations to the Government. What I can tell you, however, is that the role of private insurance is one of the factors that we are continuing to look at. Private insurers deliver benefits to millions of Canadian workers and their families, but at the same time, not all Canadians with private insurance have the same coverage. We know that many Canadians, despite having private coverage, struggle to afford their medicines. Some programs are very generous and cover almost all drugs with no co-pays, while others are more restrictive with significant deductibles, co-pays, spending caps and a limited number of

#### MP How can we ensure the widest possible access for those with rare diseases to the medication they need?

**EH** Again, I don't want to get to ahead of the report and our recommendations. However, I will say that the Council heard from many Canadians who struggle with a lack of coverage for rare diseases or the cost of that coverage. We also heard from employers and governments about the significant challenge the cost of these drugs can pose. This is something that the Council will be considering as we formulate our recommendations to the Government.

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Which dentists are open on the weekend?

If you don't know,



An innovation from Sun Life

luminohealth.ca

## Is Equitable Access for **Rare Disease Drugs Within Sight?**



**Durhane Wong-Rieger** President. Canadian Organization for Rare Disorders

believe we all support the principle that every patient should get access to the medicine that best meets their needs. We all probably also agree on two key issues: the importance of finding the right drug for the right person and determining the right amount that should be paid for each drug. These challenges are especially acute for so-called "orphan" drugs, as developing a drug for a small and littleknown disease group takes a lot of time and money.

The good news is that there is a strategy that can not only promote equitable access by directing the right patient to the right drug, but can also promote cost-effective drug expenditure by assuring outcome-based payment. This strategy encompasses two components: managed access and risk-sharing. Managed access acknowledges that orphan drugs are often the first therapy to address a specific life-threatening or progressively debilitating disease — because of urgent need, these drugs may be approved without absolute certainty as to how well they will work for each patient.

A managed access plan defines the criteria for access based on available evidence and sets up a monitoring program to collect additional, real-world evidence. The risk-sharing component of the strategy calls upon the drug developer to share the financial risk of treating patients in a monitored setting

while additional evidence is being collected.

The very good news is that we know this strategy works because we have been employing it in Canada for over a decade. For selective cancer and rare disease drugs, patients have been getting access to promising therapies in clinic settings where payment is based on a risk-sharing agreement. So why hasn't Canada implemented this strategy for all orphan drugs?

The (potentially) very, very good news is that the Provincial/Territorial Expensive Drugs for Rare Diseases working group, set up in Sept. 2014, just proposed a supplemental process for complex and specialty drugs, including those for rare diseases, in October of this year. This process includes expedited reviews through Health Canada and the Canadian Agency for Drugs and Technologies in Health and has, at its core, both managed access and risk-sharing components. Implementation of the process is expected next spring. It is too bad that the Spinal Muscular Atrophy patients didn't have this in place sooner — it would have saved a lot of hardship.

Nevertheless, as we continue to fight for patient access to rare disease drugs, we will remain steadfast in believing advocacy works, partnership rules, and miracles do happen.



lives with Spinal Muscular Atrophy (SMA), a rare and progressive genetic neuromuscular disorder that affects about one in every 6,000 Canadian children.

Now in their teens, their lives have been characterized by a steady loss of motor function that began in infancy. Without treatment, that progressive decline will continue until they are eventually unable to breathe on their own.

Because SMA is rare, diagnosis often comes as a surprise. "We noticed that Ishan, at six months old, wasn't crawling, wasn't rolling over, and wasn't very active at all," says Pradeep Manerikar, Ishan and Shanaya's father. "Eventually we got to see a neurologist and, after the first visit, he said he wanted to do some tests for something called SMA."

When the tests came back positive, an intense learning process began. "We had never heard of SMA before," says Karen Kornelsenand, Ishan and Shanaya's mother. "We didn't even know it existed," Manerikar says.

#### **New treatment brings** hope, and frustration

At the time of Ishan's diagnosis in the early 2000s, there was simply no treatment available for SMA. But there was promise on the horizon. "When Ishan got his diagnosis, the doctor said there was treatment coming," says Kornelsenand. "So I just held on to that hope that there would be something for them."

In 2016 that promise was delivered in the form of the very first treatment shown to be effective at slowing, stopping, and sometimes even partially reversing the progression of SMA. But, to this day, it's still not being made available to all who could benefit from it. "We waited and waited, and

she says. "But now, it's so frustrating because we can't access it. I feel like our government has inadvertently told everyone with SMA who isn't eligible for treatment that their lives don't have value."

### With progressive diseases, every day matters

According to Susi Vander Wyk, Executive Director of Cure SMA Canada, time is of the essence for patients with the disease. "Our patients have waited far too long to access the only treatment ever to come available for Spinal Muscular Atrophy. Some of our patients have been declining steadily since their diagnoses, making them

shan Manerikar and his sister then finally there was something real more dependent on others for tasks opportunity to take it to increase my Shanava have lived their entire and viable and we were so excited," they used to be able to perform them- strength and decrease my progresselves," she says. "If a drug is able to change this outcome for a patient, why is Canada withholding treatment?"

Vander Wyk's 22-year old daughter Holli lives with these challenges on a daily basis. As a type 2 SMA patient, she finds strength in a community of others with SMA. "I have always said that I have my blood family and my SMA family," she says. "Because your SMA family supports you and understands you like no one else can." Despite treatment being on the horizon, the younger Vander Wyk has been unable to access it as a Type 2 patient. "I have faced tremendous difficulty accessing treatment as an adult with Type 2. I would love to have the

sion," she says. "In the future, I hope that every individual has the ability to access whatever treatment is created. Everyone deserves the chance to better themselves and their lives are one and the same."

When it comes to the lives of those with SMA, including teens like the Manerikars, waiting for the scope of treatment to be expanded may not be an option. "At the rate that I've declined, I think I've only got about a decade of decent quality of life left," says Ishan. "Ten years isn't very long when you're dealing with the government."

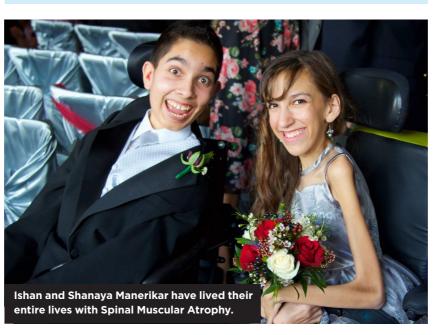
From the perspective of an SMA family, there is no justification for letting red tape keep young people from the treatment that could save their lives. "A lot of children with SMA have passed away while we've been waiting," says the elder Manerikar.

SMA has no cognitive effects it's heartbreaking to see bright and engaged young Canadians watching their bodies decline knowing that treatment exists. The siblings, like all teenagers, have dreams for their future. But unlike most, they're waiting for the government to decide if they'll get a chance to pursue them. "My plan is to go to university, get a master's degree, get a job as a teacher or a counsellor, and hopefully have a family and a couple of kids," says Shanaya. "But I have to accept that this might not be viable in the future. Treatment could make the difference."

D.F. McCourt



Our patients have waited far too long to access the only treatment ever to come available for Spinal Muscular Atrophy.



CIPhotos/ Getty images

## Minimally-Invasive Procedures Lead to Effective Cancer Care



**Dr. Amol Mujoomdar**Division Head, Interventional
Radiology, London Health Sciences
Centre & Associate Professor,
Radiology and Oncology,
Western University

hanks to research, innovation, and advancements, many of today's medical procedures can be done in a minimally-invasive way typically on an outpatient basis — yet be as effective as major surgery.

"Aside from allowing hospitals to function more effectively, minimally-invasive procedures enable patients to resume normal activity, energy, and appetite levels with fewer side effects than one typically gets with big operations," says Dr. Amol Mujoomdar, Division Head for Interventional Radiology at London Health Sciences Centre and Associate Professor of Radiology and Oncology at Western University.

## Patients driving alternative care decisions

The field of interventional radiology offers minimally-invasive procedures to treat liver and kidney (renal) cancers, among others. Interventional radiologists use guided imaging to insert small needles into solid tumours — or inject chemotherapy beads or radiation beads into blood vessels — to help shrink tumours from the inside out. TheraSphere, a type of Y90 radio-embolization procedure used to treat liver cancer, for example, involves impregnating a microscopic glass bead (microsphere) with high dose radiation and injecting it directly into the blood vessel of a tumour. An angiogram through the groin or wrist is used to map out the patient's anatomy so that the dosage and radioactive microsphere can be individually tailored to the patient, who can usually return home from the hospital the same day.

Patients who are not good candidates for regular surgery, such as the elderly or people with heart issues, are typically treated with interventional radiology. But as more scientific data becomes available to support the treatment's efficacy, and as patient awareness increases, Dr. Mujoomdar says more of his younger patients are requesting it. "People go on the internet and research, so they're driving their own care a bit more," he says.

Although Dr. Mujoomdar cautions that interventional radiology may not be the right option for all, he believes the ideal scenario is to have the specialist team present all available options to the patient and design an approach that's best suited for that individual. "In some cases, the less invasive option is the better one"

patient access," says Dr. Mujoomdar.

A further complication is that certain procedures, like Y90, are funded in some provinces but not in others meaning the need continues to grow, unmet. "Ontario doesn't fund Y90, so it can be incredibly frustrating if you're a physician and you know that your patients would be funded if they lived in another province," says Dr. Mujoomdar. "This disparity between provinces can also result in patients not having access to what might be the right treatment for them at the right time," adds Manthorne.

To improve patient access to these new technologies, patients and their families are encouraged to increase their own awareness of what's out there and advocate for more government funding. "In this Google era we should be as informed as possible and

# Aside from allowing hospitals to function more effectively, minimally-invasive procedures enable patients to resume normal activity, energy, and appetite levels with fewer side effects.

"The Canadian Cancer Survivor Network supports access to new, minimally-invasive treatments that provide greater choice for patients," says Jackie Manthorne, President and CEO of the Network. "Unfortunately, access to treatments is often restricted as some provinces do not yet fund some devices and medications."

### **Greater advocacy required for change**

While minimally-invasive technologies may be cost-effective to the health care system in the long run and provide long-term benefits, upfront investment in technology can sometimes prove a barrier to access. Unfortunately, Canada lags behind the other G7 nations — where interventional radiology is considered the standard of care — in funding these technologies. "This presents a huge challenge to

know our options, especially in oncology," says Dr. Mujoomdar. "In certain instances, our treatment options are extremely limited and a minimally-invasive procedure becomes the only treatment option or one of a few."

In addition to asking medical professionals, patients may want to lobby their MPPs and contact different cancer advocacy agencies to help propel greater uptake of this new approach across the board.

Anne Papmehl



# Nasal Spray Helps to Prevent Death from Accidental Opioid Overdose which requires some skill and training



Mark Barnes
Pharmacist

bout 4,000 Canadians died last year from accidental opioid overdose. Many of these were from prescription pain medications such as codeine, morphine, and OxyContin, which are often used to treat conditions such as cancer, neuropathy, or chronic pain caused by permanent physical injury or disability.

Many situations can lead to an accidental opioid overdose. "It can come from a loss of tolerance, medication mismanagement, and even kids getting access to it by mistake," says Mark Barnes, an Ottawa-based pharmacist and vocal advocate on the dangers of fentanyl abuse and other opioid addictions. "Accidental overdose can also occur when patients are initially prescribed a dose that is too high for their tolerance level, or if they have additional medical problems, such as asthma, chronic obstructive disorder (COPD), and/or other breathing difficulties," he says.

## Nasal spray for emergency opioid overdose

Because people who overdose on opioids are unconscious and unable to breathe, it's critical that they receive immediate emergency treatment. The drug naloxone, an opioid antagonist, counteracts the life-threatening effects of opioid-related overdose. One form of administration is by injection,

which requires some skill and training and is typically used by first responders. Thanks to the nasal spray form of Naloxone called NARCAN, available since 2016, the drug can also be given more easily by anyone, including family, friends, and caregivers. "NARCAN is like an EpiPen for opioids, but in a nasal spray form," says Barnes. "All you need to do is place it into the nostril of a non-breathing opioid overdose and spray," says Barnes. The drug temporarily reverses the overdose effects until paramedics arrive.

NARCAN Nasal Spray is currently available free of charge at pharmacies in Ontario and Quebec. Barnes would like to see free access to NARCAN across the country for anyone who is at risk or knows someone at risk. "It should be similar to what we do for people with heart disease, where we give them their nitro spray and heart pill," says Barnes. "If you get an opioid, you get a NARCAN kit."

## Better understanding of opioid use and addiction needed

Barnes believes one of the biggest roadblocks to free patient access to NARCAN is the stigma surrounding opioid use, addiction, and treatment. "People don't really understand why people use opioids and that it's not a social choice," says Barnes. "They use opioids to kill the pain, which is often more mental than physical. It could be used for post-traumatic stress disorder from the military or from being first responders," he says.

To reduce the stigmas associated with people perceived to use opioids, Barnes believes we need to elevate the conversation beyond what it is today. This can be done by having more medical professionals talk about misuse of opioids, providing better education for pharmacists on how to approach people at high risk for opioid addiction,

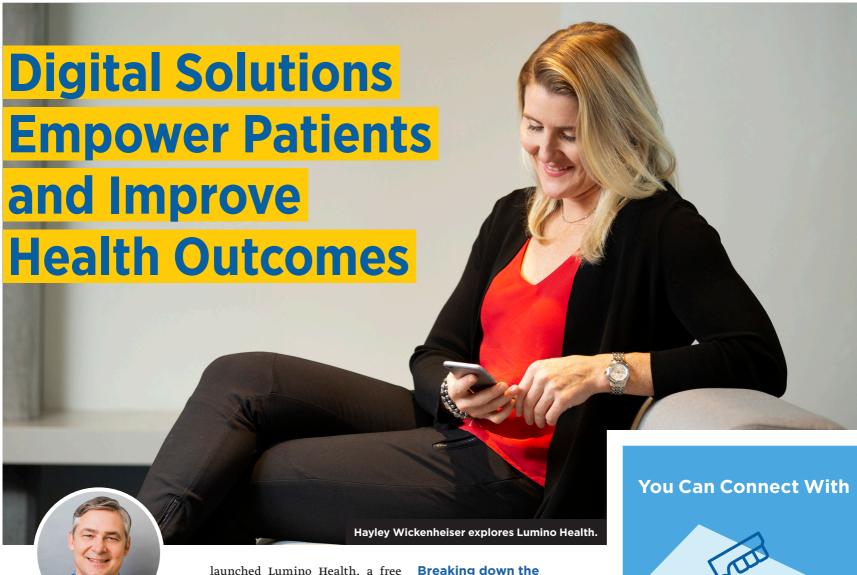


People don't really understand why people use opioids and that it's not a social choice. They use opioids to kill the pain, which is often more mental than physical.

instituting mandatory dispensing of NARCAN with opioid prescriptions, and raising public awareness. "You can't use NARCAN on yourself, so we need to help people realize that this is really a toolkit they should have in their house just in case of accidental cross-contamination or overdose," says Barnes.

Canadians can do their part to help reduce deaths from accidental opioid overdose by advocating for better access to life-saving NARCAN Nasal Spray through their provincial health coverage and by requesting a kit at their pharmacy.

Anne Papmehl



**Chris Denys** Senior Vice President, Possibilities, Sun Life Financial

n virtually every industry, people have access to information about services before they use them. You can find detailed ratings, reviews, and costs before visiting restaurants, booking hotels, or going on vacation.

But when it comes to health care, access to digital information is notably lagging behind. While finding a new dentist, psychologist, or massage therapist should be easy, that's simply

launched Lumino Health, a free digital health network. Lumino Health was developed to empower Canadians to take control of their health by providing easy access to a variety of providers. It offers ratings, costs and other information to help patients find a health care resource that suits their needs within seconds.

"In my conversations with Canadian health care leaders, I constantly hear about the need for patients to connect with the right health care providers at the right time," says Chris Denys, Senior Vice President of Possibilities at Sun Life Financial.

The sentiment is shared by Canadians who have been using the platform. "As an athlete, I've used my share of massage therapists, physiotherapists and dentists to help

#### **Breaking down the** barriers to health care

Making the platform accessible to everyone was important for Sun Life. "We want Canadians to lead healthier lives," Denys explains. "It really leads back to the reasons why we are proud of our health care system in Canada — a system that values fairness, equity, and access."

Currently, information is available on more than 150,000 health providers, including dentists, massage therapists, chiropractors, psychologists, and more.

"Providing digital health support has so many advantages, but what our clients truly appreciate is the convenience," says Marion Adams, COO of Hasu eCounselling, a service provider on the site that

> offers online mental health and substance abuse counselling. "Having access to a therapist on-the-go means that whether you're at work, school, or at home, you still get the support you deserve."

> Having an online presence ensures the

widest possible access to services, and can reduce overhead costs for providers, leading to more affordable

Digital health solutions like Lumino Health widen patient access, ultimately helping Canadians take charge of their own

## It really leads back to the reasons why we are proud of our health care system in Canada — a system that values fairness, equity, and access.

not the case. If you're new to a city me be my best throughout my playdations from colleagues and friends can be uncomfortable and time-consuming, and online searches won't always provide the most accurate or complete information.

## **Unlocking greater**

access for all

Recognizing that Canadians need better ways of connecting with the right care providers, Sun Life Assurance Company of Canada recently

or simply looking for a new health ing days," says Canadian Olympic care service, asking for recommen- hockey legend Hayley Wickenheiser. "But now as a busy mom and medical student, Lumino Health makes it so much easier and quicker for me to find everything I need in one place." The directory has more than six million ratings on various health care providers, gathered from Sun Life clients who have used their services.

solutions for Canadians.

Melissa Vekil





COUNSELLING AND **MENTAL HEALTH SERVICES** 



**VISION CARE PROVIDERS** 



PHYSIOTHERAPISTS



**ALTERNATIVE MEDICINE PROVIDERS** 

e.g. naturopaths and acupuncturists

## **Making Informed Health Care Decisions**

To learn more about how Lumino Health is empowering

people to live healthier lives, visit luminohealth.ca.

Digital health solutions empower Canadians to make smarter, more informed decisions by providing detailed information on over 150,000 health care providers from coast-to-coast. Lumino Health showcases relevant health solutions by using data on provider costs, locations, and more. The platform also provides validated ratings from Sun Life members, who rate health care providers during the claims process. This means all validated reviews are from Canadians who have interacted with the service providers listed. Lumino Health groups all of this information together to allow Canadians to make smarter choices, ultimately saving time and empowering them to live healthier lives.

## Things to Consider Before Choosing a Health Provider

There are a variety of factors to consider in finding a health provider that fits your needs. The Lumino Health Network makes this easy by providing one-stop shop to access all the information you need to make an informed decision.



(ability to compare provider costs)

request an appointment online)





(and other helpful information to help choose a provider)

Where can I find a

top-rated optometrist,

dentist or massage

therapist near me?

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## **Innovative Platform Empowers Patients Through Education**

id you know that a typical patient forgets 80 percent of what is discussed with their doctor in the exam room? This presents a big problem for the Canadian health care industry — and for patients themselves — because patients simply aren't retaining enough of the information (or remembering it correctly) required to adequately manage their health.

Research conducted by St. Michael's Hospital in Toronto¹ shows that a patient's ability to understand health information and subsequently make decisions based on that information — otherwise known as health literacy — is vital to their overall health and well-being. A similar study published in Applied Nursing Research<sup>2</sup> demonstrated a

strong link between patient education, empowerment, and satisfaction.

Technology is increasingly being relied upon to address the many needs of our health care industry. One such innovation is paving the way for improved patient empowerment by providing a platform that is devoted to patient health literacy.

#### **Helping doctors** empower patients

Thousands of health care professionals across Canada are using iMD Health's patient engagement platform to facilitate the delivery of complex health information to their patients. The easyto-use online platform, developed in Toronto and refined by a decade's worth of in-field user experience feedback,

provides a much-needed solution to the problems of poor patient health literacy and limited consultation time.

"Our vision is to create happier, healthier, better-informed patients by equipping health care professionals with the information they need, when and where they need it," says Jared Sonnenberg, Vice President of User Engagement and Product at iMD Health.

The platform provides health care professionals and their patients with access to thousands of professionally vetted images, videos, documents and other resources from over 50 of Canada's leading health organizations, as well as the Mayo Clinic. The platform covers over 1,700 health topics, and resources are organized within an intuitive user interface designed for efficient and effective education delivery.

Using high-quality visuals, patientfriendly resources, and secure email functionality that allows patients to review and learn more post-appointment, iMD makes complex medical topics easy to understand. Consultation time is reduced, while patient adherence, compliance, and satisfaction are improved.



**Jared Sonnenberg** Vice President, User Engagement & Product. iMD Health

The company attributes a large portion of its success over the past decade to its ability to provide top quality patient resources from Canadian medical institutions.

For iMD, it's all about providing health care practitioners and their patients with reliable information in the exam room, quickly and easily.

"iMD has created a versatile and easy-to-use tool that provides me with reliable information I can use to counsel patients," says Dr. M. Alexander of Niagara Falls, ON. "I am always up-todate, all on one platform."

Gavin Davidson and Krysten Palser

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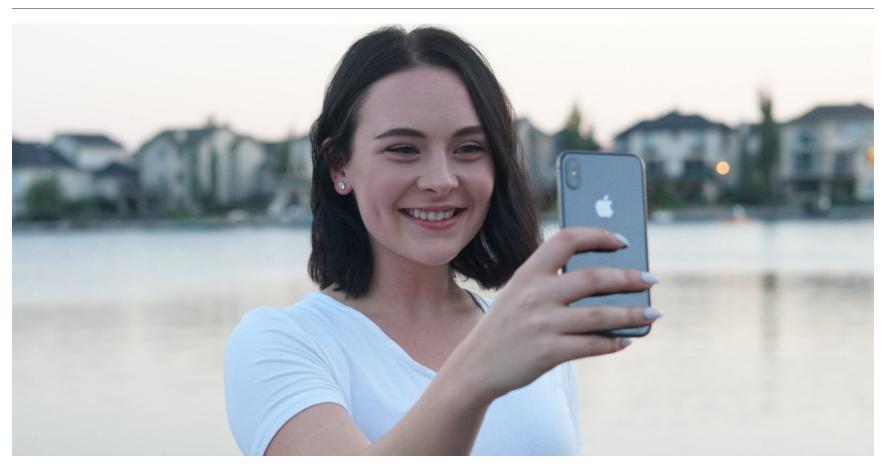


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http://www.stmichaelshospital.com/education2016/patient\_and\_family\_education.html <sup>2</sup>https://www.sciencedirect.com/journal/applied-nursing-research/vol/39/suppl/C

If you are a health care professional and would like to see all that iMD has to offer your practice and your patients, visit welcome.imdhealth.com to register for a free account.





## **How Taking a Selfie Can Help Heal Your Acne**

f you look in the mirror and you're not happy with your complexion, what are your options? Should you see a specialist or try a DIY approach? Recently, new approaches have emerged to make that decision much easier.

An estimated 85 percent of the population between the ages of 12 to 25 suffers from acne, although it's no longer a condition associated only with the teenage years. Changes in diet, lifestyle, and environmental factors mean that more than 25 percent of individuals 25 to 40 years old experience it as well. Across the age spectrum, a staggering 96 percent of those with acne reported feeling depressed about their skin. The lack of confidence about their appearance takes an emotional toll on their wellbeing.

Acne sufferers face the difficult and daunting task of finding the right solution. The experience can be disheartening after trying many solutions, and feeling as though none have worked. It takes a personalized solution for success, since there's no single

approach that's right for everyone. While some people may turn to advice from a local dermatologist or doctor, many can feel dismissed or uncertain about how to treat their acne. In response, patients are taking control of their own health care through innovative new technologies.

## A new, customized approach

eTreatMD is designing a suite of apps to transform smartphones into medical devices equipped with the latest self-management tools. The Canadian company was co-founded in 2014 by CEO Shanil Gunasekara and VP of Clinical Strategy Nicholas MacKinnon, who set out to empower patients with customized solutions for chronic conditions, giving users options beyond

waiting to see a specialist. Your journey to healthier skin starts by downloading the intuitive, easy-touse app. Then, take a selfie to prompt the app to evaluate the condition of your facial skin. "Our algorithm analyzes the skin and detects all lesions

and blemishes. From there, it classifies

each type and measures the severity of the facial acne," says Gunasekara.

The software kickstarts a process to find treatments that really work. The interactive eTreat Acne app functions are designed to help users understand the causes of acne. For example, did you know that diet has a direct impact on skin? The app helps you keep an accurate record of your food intake so that you can see patterns emerge based on your eating habits.

If you are one of the many people looking for a customized solution that will help treat your acne, eTreatAcne also offers product recommendations that are personalized to your needs, budget, and acne severity. The product suggestions are based on most effective treatments for users who share your skin type, and recommendations by experts in the field. Taking an individualized approach removes much of the frustrating - and often expensive - guesswork in finding the most effective formulations.

## Patient empowerment is key

"We want the experience to be personalized to the user," says Marketing and Business Development Director Alissa Taylor. "Our priority is to give the users as many choices as possible within a framework intended to provide education and resources to help them treat their acne." The app was developed after years of careful research and clinical tests and used input from both patients and health care providers.

Based on feedback from its users, eTreatMD will continue to evolve the app to meet their needs, meaning patients with acne no longer have to deal with extended wait times or the trial and error phase of new products.

"It's so important that we get it right for our customers," Taylor explains. "We're always looking to improve each version and we value every person who lets us know how we can make the experience as amazing as possible."

Michele Sponagle



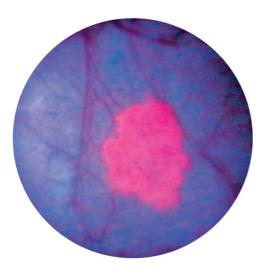


Receive personalized help through the eTreat Acne app. Download it today and start seeing healthier skin soon. Find out more at acne.etreatmd.com.

# Shining a New, Blue Light on Bladder Cancer



Bladder image seen using white light.



Same bladder image seen using blue light (cancerous tissues fluoresce pink).



**Dr. Jack Barkin**Urologic/Robotic Surgeon,
Humber River Hospital & Clinical
Professor, Department of Surgery,
University of Toronto



Dr. Girish Kulkarni
Ph.D, FRCSC
Associate Professor of Urology,
Division of Urology, Depts of
Surgery & Surgical Oncology,
Princess Margaret Cancer Centre

ladder cancer is one of the most common cancers in Canada, with roughly 9,000 Canadians being newly diagnosed every year. The good news is that it is also one of the most treatable. The bad news is that it also has a very high rate of recurrence, up to 80 percent after 5 years.

New developments, however, are beginning to provide tools to help reduce the rate of recurrence. Blue light cystoscopy (BLC) is a technology in which the patient's bladder is flooded with a diagnostic agent that is selectively absorbed by fast-growing cancer cells and carcinoma in situ (abnormal cancer cells that are confined to the surface layer of the bladder and have not yet developed into cancer). During the operation to remove the cancer, known as a resection, a blue light is used which causes those cells to fluoresce pink. "One of the reasons behind the high recurrence rate is that we have inadvertently been doing incomplete resections, leaving some difficult-to-see cancer behind," says Dr. Jack Barkin, Urologic/Robotic Surgeon at Humber River Hospital and Clinical Professor at the University of Toronto. "This tool helps us accomplish a complete resection without leaving cancer behind and without missing carcinoma in situ."

Dr. Barkin and his team at Humber River were the first to bring BLC technology to Canada, and the results of even the earliest trials were striking. "I was able to do a pilot study here at the Humber River Hospital where I compared my visualization under the white light versus the blue light," says Dr. Barkin. "In 24 percent of patients, where I thought I was finished resecting, I saw more tumour when I flashed back onto the blue light. And the most sobering thing was that, in 42 percent of those patients, I saw carcinoma in situ under the blue light."

## The switch that makes the difference

In terms of patient outcomes, a more complete resection often means that even if the cancer does recur, it takes longer to do so. And that's extremely valuable, especially considering that the average bladder cancer patient is around 70-years old. "From the patient's standpoint, even if you increase the interval between recurrences, that's a big benefit," says Dr. Barkin. "There's a big difference between going in for a resection every few years versus every six months."

Bob, a patient of Dr. Barkin's, was 64-years old when he was first diagnosed and treated for bladder cancer in 2009. Bob ended up having several recurrences and resections before BLC became available.

The very first time Bob was resected with BLC, Dr. Barkin was able to find and resect a small tumour that had been invisible under the white light. "It's revolutionary," says Bob. "The only additional inconvenience is that you have an extra hour in the hospital while they fill you up with the agent before the procedure."

Today, at 73, Bob is happy and strong at home with his wife in Toronto, and he credits a lot of that to Dr. Barkin and BLC. He does, however, believe that patients must drive the push for greater access. "The patient has to be a serious advocate for himself or herself," he says.

#### Patients must drive change

BLC was approved by Health Canada in 2015, and yet uptake by Canadian hospitals has been slow because funding has not been provided — despite the proven benefits and years of successful use around the world. "This isn't an experimental technology," says Dr. Girish Kulkarni of the University Health Network in Toronto, home of Canada's newest BLC unit. "It's just been slow to come to Canada. But now that it's here, it requires additional funding. Patient advocacy groups like Bladder Cancer Canada are aware of this technology, but it's going to be the patients themselves who help drive this. If there was more awareness among patients, they would be asking for BLC."

Enter Ryan Lougheed of Sudbury, ON. He was diagnosed with bladder cancer last year after noticing blood in his urine and immediately began to educate himself. "I read this article that showed the difference that BLC can make compared to the white light," Lougheed said. "I decided immediately that I wanted to bring this technology to Sudbury."

In less than a year, Lougheed's fundraising efforts are already at the \$70,000 mark and his group is not planning to slow down. "Our timeline is, the sooner the better," Lougheed says. "Sudbury is a regional hospital for all of northeastern Ontario."

If you ask Dr. Kulkarni, Lougheed's efforts may actually end up saving other patients and supporting an overtaxed health care system. "We did a study that showed a decrease in the number of hospital beds required for these patients. It also helps lessen the strain on the health care system by freeing up operating room slots for other people," he says.

With all the benefits that BLC has shown at Humber River and, more recently, other hospitals, there is a massive need for greater access across Canada. But that access will be much slower to arrive if patients don't advocate for it.

D.F. McCourt











# Parents Seeing a Difference in Type 1 Diabetes Management with New Technology

ype 1 diabetes is an autoimmune condition with no known cause or cure. It causes the body to attack its own insulin-producing cells in the pancreas. For those with the disease, it means a lifetime of trying to manage it by injecting insulin and trying to mimic the action of a normal pancreas. Statistics from the Government of Canada indicate that more than 25,000 children and youth are living with Type 1 diabetes, while over 200,000 Canadian adults are also living with the insulin-dependent condition.

## An accurate solution in real time

"CGM technology has changed how we monitor and manage diabetes," says Dr. Suzanne Stock, a Pediatric Endocrinologist based in North Vancouver, BC. "It is something I recommend for the majority of my patients." The technology consists of a wearable sensor inserted just below the skin and a transmitter that provides continuous glucose readings at five-minute intervals, allowing data to be sent to a smartphone<sup>2</sup> via a mobile app.

With the Dexcom Follow app, parents can view

staff were able to wake him from a nap, check his monitor, and give him a juice box to help elevate his blood sugar. "I believe that I would have lost my son that day without Dexcom," she says. "He could have slipped into a coma and had brain damage."

## All patients deserve transformative solutions

The peace of mind CGM systems deliver cannot be underestimated. Instead of parents having to prick their child's fingers more than a dozen times a day — an invasive and painful way to get blood sugar readings around the clock — families can rest easy and rely on a steady flow of data. "It's really a gamechanger," she says. "It makes our quality of life so much better," says Bilodeau. "My son can visit grandma's house without me worrying, as I can see how he's doing no matter where he is."

Though CGM systems can save lives by improving blood sugar control and avoiding dangerous lows, they are not widely available. This lack of access is unfortunate, notes Dr. Stock. "The main challenge around the use of CGM in our patients is the cost," she says. "In BC, Pharmacare is not currently covering the cost of this life-saving technology. Many countries outside Canada are now publicly funding CGM systems, but that is not yet the case. Luckily, some extended health benefits providers are starting to pick up these costs but it is not yet universally covered. Hopefully, this will change in the future."

Bilodeau agrees wholeheartedly. "It's a shame that more people don't have access to it," she says. "Dexcom allows William to be a normal kid and to be safer with his diabetes management. I would have a hard time coping with my son's condition without it."

Michele Sponagle

 $^{1}$  The Dexcom CGM System is approved for use on children 2 years old and older.

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To view a list of compatible devices, visit dexcom.com/compatibility.

## Many countries are now publicly funding CGM systems, but that is not yet the case in Canada. Hopefully, this will change in the future.

William Bilodeau was just a toddler when his mother, Amanda, noticed that his thirst was extreme. A blood test confirmed what she and her husband, Scott, had suspected — their son had Type 1 diabetes. The Halton Hills, ON-based couple went to a Toronto-area clinic where their nurse introduced them to the Dexcom G5® Mobile Continuous Glucose Monitoring (CGM) system¹.

data and trends in their child's glucose levels 24 hours a day and be alerted in case certain glucose thresholds are crossed. Within the first day of William using the device, Bilodeau discovered the CGM system was also a lifesaver. When her son was at daycare, she was notified on her phone that his blood sugar was plummeting to dangerously low levels.

While she left work to be at his side, the daycare

## **KNOW BEFORE YOU'RE LOW**



- Continuous glucose monitoring, alerts, & alarms help prevent highs & lows day & night
- Clinically proven reduction of both A1C¹ & Hypoglycemic events²
- Remote monitoring with the Dexcom Follow app offers caregivers more peace of mind than ever before<sup>†</sup>



- \* For a list of compatible devices, visit www.dexcom.com/compatibility
- † Following requires the Follow App and an Internet connection.
- 1 Beck R, Riddlesworth T, Ruedy K, et al. Effect of Continuous Glucose Monitoring on Glycemic Control in Adults with Type 1 Diabetes Using Injections for Insulin Delivery: The DIAMOND Randomized Clinical Trial. [published online January, 24, 2017]. JAMA.
- 2 Heinemann L, Freckmann G, Faber-Heinemann G, Stefania Guerra S, Ehrmann D, Waldenmaier D, Hermanns N. Benefits of continuous glucose monitoring use in adults with type 1 diabetes and impaired hypoglycaemia awareness and/or severe hypoglycaemia treated with multiple daily insulin injections: Results of the multi-centre, randomised controlled HypoDE study. Lancet. In press.