

THE INSIDE STORY®

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New news on old news

A 'nerd's eye view' of health care: From e-health to m-health —health care technology is on the move...

It used to be that happily spending 24/7 online and saying things like "apps" was reserved for computer nerds and teenagers—fast-forward to 2011 and in terms of health care, it looks like we are all going the way of the techno-guru. With the internet increasingly becoming our main source of information as well as communication, we are all very familiar with e-health or electronic health care—everything from learning about health issues online to ordering prescription drugs online. But what about mobile health or m-health? New m-health concepts related to health and wellness, as well as disease management, are moving health care out of traditional settings—and into your plan members' hands, workplaces, homes, and just about everywhere in-between.

e-health goes mobile: health care continues to move out of institutions and into our hands—*literally*...

m-health is definitely thinking outside the health care institutional box as we see numerous health concepts now going wireless – literally on the move. The rise of mobile options is moving us toward a more decentralized and distributed health care system. It's similar to the shift we witnessed in technology where we saw the transition from highly centralized, huge mainframe computers with limited access gradually shift to desktop and laptop personal computers now available to just about everyone.

As a truly hands-on example, as covered in the August 2010 Inside Story, health-related apps are growing by leaps and bounds. Today the apps options cover just about every health care issue imaginable. Currently there are about 17,000¹ health care applications in major app stores. A recent survey found that 85%² of Americans use a cell phone, and of those:

- "17% of cell owners have used their phone to look up health or medical information and 29% of cell owners ages 18-29 have done such searches.
- 9% of cell owners have software applications or "apps" on their phones that help them track or manage their health. Some 15% of those ages 18-29 have such apps."³

And, a new global study predicts that 500 million people will be using smartphone health applications by 2015.⁴

Although apps by nature are mobile, they are now becoming increasingly interactive with mobile applications that can also link the user to a live professional—yes, an actual human. For instance, MyFoodPhone enables users to snap photos of their food choices and send

them to a nutritionist who then responds in real-time with advice and support.

There's no doubt, as ironic as it may sound, that health care apps are becoming the new "killer apps", leading the charge in terms of evolving health care models. However, going mobile is a

lot more than just apps on your smartphone. m-health involves the whole range of wireless devices and body sensors, as well as even planes, trains, and automobiles. And the good news is...that it is all good news because our health care system is already strained. And when you factor in the aging population, our ability to cope will become increasingly difficult if we remain with what could be considered a "bricks and mortar approach" to health care. Embracing m-health is our chance for a better future.



So what is m-health?

m-health is part of the trend toward a more decentralized and distributed health care system. m-health is contributing to the trend in health care of:

- moving from an acute, crisis care model to a more continuous, chronic care model, as well as strategies more focused on wellness than ever before
- expanding delivery options from just centralized locations to more outpatient models, and options that are more convenient for regular care
- introducing options in diagnostics not solely for health professionals, but also for consumers
- making information increasingly decentralized so it's not just in the minds of professionals, but increasingly in the hands of patients and anyone seeking knowledge
- shifting wellness, diagnostic, and even treatment tools from large, fixed technologies requiring hefty capital investment to lightweight, mobile, less expensive innovations

With m-health, increasingly health care comes to you, rather than the other way around through innovative wireless devices...



Cool wireless devices are popping up everywhere making it possible to use them while at home or on the road. For instance, in terms of health and wellness, now you can weigh yourself on a digital scale that transmits data wirelessly to your computer so you

can record weight trends over time. Similarly, in terms of disease management, a wireless glucometer calculates blood sugar readings and then digitally records and stores the data to help diabetics more effectively monitor the disease.

A wireless oximeter functions similar to a glucometer, however, it wirelessly stores and records the amount of oxygen in your blood and circulating throughout your body to help patients with diseases like Chronic Obstructive Pulmonary Disease, Congestive Heart Failure, or Asthma.

And now, even recording heartbeats digitally is possible. An

advanced stethoscope records heartbeats, stores them on digital sound files, and transfers them to a PC as part of a patient's personal health record. This way the digital files can become a permanent record and studied over time.

There are also plans in the works for a "smart inhaler" that, similar to other m-health wireless devices, will transmit to a PC or cell phone reminders to the patient about when to use it, as well as send compliance information to a personal health record. Both the patient and health care professional would be able to access the secure information to monitor and discuss progress.

With m-health, now you can also literally 'walk the health care talk' with wireless body sensors...

As Big Brother as it may sound, experts predict that by 2020, sensors will have made a huge transformation in terms of health care wellness and management. The integration of sensors into everyday life is often referred to as creating "health aware" environments—essentially collections of mobile and embedded devices that monitor every aspect of personal and environmental health. Wireless body sensors differ from other wireless devices in that you actually wear the sensors or have them implanted—or you even ingest them—so instead of using an external device to monitor your condition, the sensors are on or in your body, ever-present, literally monitoring your issues every step of

the way. In fact, researchers predict that body sensors combined with sensing devices will become the norm in that "just about every object around us will have sensing, processing, and communication capabilities that will track a range of health indicators and provide feedback on them."⁵ We are certainly seeing this trend come to life as you can now strap-on-and-go with a number of devices already on the market or undergoing clinical trials, such as:

■ *Wireless Vital Sign Body Monitors:*



thin batteries and a digital patch referred to as a plaster are used to continuously monitor multiple vital

signs, including temperature, heart rate, and respiration. It is useful for a range of patients like those in acute care or home care environments, as well as those with chronic diseases.

- **Digestible Computing Microchips:** microchips are inserted into medicines that are then swallowed and activated by stomach acids to transmit information from within

the body to an external receiver. Information includes which medications have been taken (or not taken), at what time, and in what amount, as well as the patient's vital signs in real-time. As medications or dosages change, the physiological responses can be precisely monitored.

- **Wireless Cardiac Device Transmitters:** patients' implanted

cardiac devices are monitored by automatically downloading information. For example, the transmitter can perform daily checks to test the cardiac device's performance, or monitor patient heart rhythms—it can even directly alert a physician if the monitored data reveals time-sensitive information.



Using m-health innovations increasingly provides health care options focused on going to where the people are, not the other way around. For instance:

- **At home:** all kinds of help – from personal support workers helping with daily living activities in a healthy way, to registered nurses providing more involved health care.

With m-health, there's no place like home... or work... or the mall...

- **At-work:** everything from flu shots in the boardroom to completing health risk assessments online right at your desk.
- **On-the-go:** why not take care of your health while shopping for back-to-school clothes or picking up shampoo? Increasingly department store and drug store retailers are piloting in-store clinics related to all kinds of health issues.

And, of course, m-health is critical in the case of emergencies. This is where planes, trains and automobiles are particularly handy. For example:

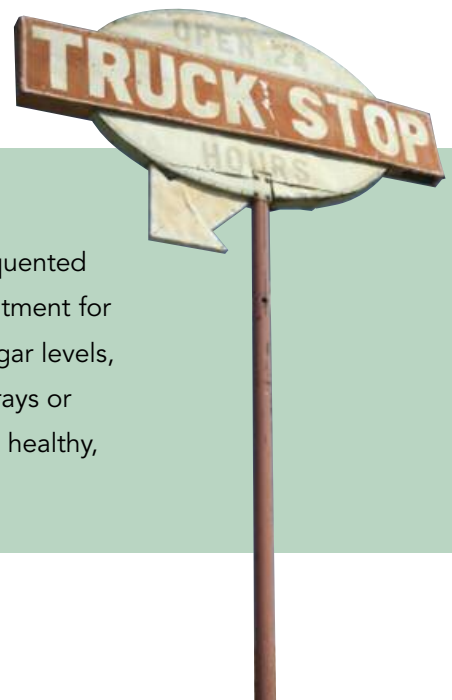
- Each year thousands of Canadians forgo medical care due to the high cost of transportation. However, since 1986, Hope Air has helped

Canadians get to where they need to go to receive critical medical treatment when they can't afford to get there.

- For many health issues, immediate medical attention can make all the difference. Accordingly, the WellWomen Clinic and Ontario Breast Screening program helps women receive the care they need right away by offering priority access and transportation to same day mammograms. Heart, blood pressure, blood sugar testing plus dietary and medication advice is also possible.

Truck stop or mobile health clinic in disguise?

Once a month in Eastern Ontario, a mobile health unit visits a truck stop frequented by about 900 truckers daily. It is fully equipped to provide diagnosis and treatment for both chronic and acute conditions, as well as monitor blood pressure and sugar levels, update immunizations, draw blood, and even provide patient referrals for X-rays or ultrasounds. Innovative m-health options like this not only help keep truckers healthy, they help keep our roads safe.



Overall m-health will take new innovation in health care to infinity and beyond...



With the internet era, new innovations in health care seem limitless. Not only does this mean that as new health concepts evolve so too will health benefits, but also the future should hold numerous innovative ways for plan members to keep healthy. Just as each plan member is unique, coming in all shapes and sizes, increasingly so too will the options for accessing health and wellness initiatives. For plan members, keeping healthy should become more and more at their fingertips and not seem so daunting—or “out of this world.”

Sources:

^{1,3} *Mobile Health 2010*, Pew Research Center, October 19, 2010, page 2

⁴ *Global Mobile Health Market Report 2010-2015*, research2guidance, <http://www.research2guidance.com/500m-people-will-be-using-healthcare-mobile-applications-in-2015/>

⁵ *Booting Up Mobile Health for Medical Mainframe to Distributed Intelligence*, Institute for the Future, May 2009, page 17

From health providers to plan members, m-health is contagious...



m-health definitely provides a positive domino effect for all of us because, in addition to m-health concepts targeted directly at consumers, there are numerous other innovations geared at enhancing how health professionals deliver their services. As m-health concepts revolutionize how health professionals work, in turn, the positive effects benefit everyone. Health care professionals are jumping on the m-health bandwagon in terms of everything from remote monitoring to disease management applications to continuing medical education and much more:

■ **Mobile diagnostic imaging:** Health Canada recently approved the iPhone medical app for diagnostic imaging use. Canadian doctors can now use the app called ResolutionMD Mobile to view brain scans and other diagnostic images.

and provide enhanced quality of care. Using these tools, they can even track and communicate issues with colleagues and other specialists, improving timelines and quality.

devices that identify counterfeit drugs, which should prove useful for government authorities and health professionals alike—not to mention for consumers if it is developed to the point of becoming an at-home tool.

■ **Mobile electronic charting:** tools available via laptop allow a wide range of health professionals to easily and instantly review and manage their schedules, as well as quickly and accurately capture treatment data, progress notes and all other aspects of clinical charting information. They no longer have to rely on jotting down notes and inputting information later. These tools also provide them with the most up-to-date client information so they can make better decisions

■ **Drug authenticity:** research and development is underway for

More power to the people, or at least to your plan members...

In addition to the positive trickle effect that should occur due to more health providers using m-health concepts, it is predicted that the increase of “over-the-counter diagnostics” or “at-home diagnostics” will increasingly change how we interact with health providers. These at-home tools put more diagnostic and health management

capabilities into the hands of the consumer, shifting the knowledge base and power to a more shared model.

For example, the introduction of the home pregnancy test over thirty years ago has been described as symbolizing a “private little revolution”. It moved the process from the physician’s office to home, giving

continues...

women more involvement in their own health care. Similarly, pundits predict that although new at-home tools entering the market will not replace the need for consultation with health professionals, they will significantly change our relationship with health professionals—for the better.

For plan members—this means they will have more knowledge and the opportunity to be increasingly involved in over-seeing their own health. **For plan sponsors**—this means that as more m-health innovations pick up speed, so too will health care solutions in terms of access, quality of service, and the relation-



ship between plan members and health providers. As you continue to promote the vision of everyone working together as partners in health care, m-health

may be the ticket to the future, making this vision tomorrow's reality.

First go low tech to help plan members consider higher tech m-health options...

Of course, innovation can only be a good thing. However, it can also be overwhelming. So, where to begin? Suggest plan members start



slowly by encouraging them to try some low-tech m-health options that are simple but effective—and not intimidating. After some initial success, plan members can then gradually ease into dabbling in the wide range of apps, wireless devices, and sensors entering the market. For example, consider recommending the following low tech option to your plan members...no need for fancy lycra, expensive fitness equipment, or a personal trainer—all they need is an inexpensive pedometer (step-counter).

Clip it on and aim for 10,000 steps a day...

How many steps do you think you take in a typical day? Now it's fun to find out while improving your health at the same time. Simply clip on a pedometer and see how many steps you currently do. Then aim a little higher each day. Every step is a step in the right direction because research shows that 10,000 steps is the recommended daily step goal for a healthy adult. You can even keep track of how you are doing in a personal Step Log by registering at the 10,000 Steps website at www.10000steps.org.au. Start collecting your steps today and see how far you can improve tomorrow.

The 10,000 Steps program is free, and a pedometer is inexpensive, simple to use, and easy to clip to whatever you are wearing—and most importantly, it's motivating! *So why not step to it?*



Steps Per Day	Activity Level
<5,000	sedentary
5,000 - 7,499	low active
7,500 - 9,999	somewhat active
>10,000	active
≥12,500	highly active



NEW NEWS ON OLD NEWS

Following up on how things have played out...

As 2011 unfolds, time to check back on developments in 2010 to get an idea of where things may be headed in 2011...

Two prescription smoking cessation drugs now covered in Saskatchewan as part of a comprehensive anti-tobacco campaign

As reported in the November 2010 Inside Story, smoking cessation research indicates improved success rates when smoking cessation drugs are combined with support in the form of counselling. In keeping with the research, Saskatchewan's anti-tobacco campaign known as PACT—Partnership to Assist with

Saskatchewan currently has one of the highest smoking rates in Canada at about 21%¹ of residents as smokers.

Cessation of Tobacco—is determined to help its citizens keep their resolution to butt out this year.

As part of the province's anti-tobacco campaign, two smoking cessation prescription drugs – Champix and Zyban – received coverage as of January 1, 2011. Saskatchewan pharmacist, Debbie McCulloch commends the move, commenting that, "drug therapy combined with counselling can improve quit success rates from five per cent to 30 per cent."¹ In fact, the PACT strategy reports that receiving even brief advice can greatly improve your chances of successfully quitting.

McCulloch is one of many health care professionals in Saskatchewan that has completed the PACT program that includes special training in

tobacco cessation principles and tools to support both brief and intensive tobacco cessation interventions. PACT has grown into a comprehensive tobacco cessation strategy that almost any type of health care professional can use in almost any type of setting to assist people who want to quit smoking.

For more information about drug coverage details, please see the media release available at <http://www.gov.sk.ca/news?newsId=40b75c7f-6b2a-4d97-b9f6-5ab16c9ecd44>. For more information about PACT, please visit www.makeapact.ca

First nurse practitioner clinic in Alberta...

As reported in several previous issues of the Inside Story, the role of a range of health care disciplines continues to be in flux. In various provinces, we have seen an evolving scope of practice for nurse practitioners, dental hygienists, and pharmacists. Now in the news, Alberta announces its first nurse practitioner clinic—run entirely by nurse practitioners. In fact, there are no physicians at the clinic at all.

When a patient enters the clinic, they are first screened to check whether their issues are appropriate for nurse practitioner care. For example, if they are seriously ill or



have a complicated case, they are referred to a physician outside of the clinic. Fortunately, the clinic is able to handle about 80 per cent of patients—even patients with chronic medical conditions like diabetes, hypertension, high blood pressure, and asthma, as well as those who

are obese and smokers who would like to quit.

In fact, nurse practitioners are particularly effective with these conditions because their philosophy towards care is focused on support, education, and a holistic view of the patient: "We take a holistic approach to treating diseases not just tossing a pill at them."² Their discipline recognizes that chronic diseases don't go away overnight: "It's that long-term follow through and the relationship that nurses like to build with their patients that make this kind of care beneficial."²

With our strained health care system, that includes long emergency room wait times and physicians' practices maxed out, nurse practitioner clinics may help pave the way to improving access and efficiency while ensuring quality care. In Ontario, 25 nurse practitioner clinics have been established since 2007.

For more information about nurse practitioners in Alberta, please visit <http://albertanps.com/page14.php>

Sources: ¹ 2 smoking cessation prescription drugs to be covered under Saskatchewan's drug plan, Leader-Post, Pamela Cowan, December 23, 2010

² Nurse practitioners clinic first of its kind in Alberta, Okotoks Western Wheel, Thandi Fletcher, Wednesday, December 15, 2010

NEWS & EVENTS

Out and About – Events you won't want to miss

February 23rd:

CPBI – 2011 Benefit Outlook

- Toronto Board of Trade, Toronto, Ontario
- Visit http://www.cpbi-icra.ca/en/event_details.ch2?event_id=1080 to register

February 23rd:

Green Shield Canada Benefit Forum – "Say YES to drugs"

- Vancouver Art Gallery, Vancouver, BC
- Contact your Account Executive for more details

March 9th:

Green Shield Canada Benefit Forum – "Say YES to drugs"

- The Estates of Sunnybrook, Toronto, Ontario
- Contact your Account Executive for more details

May 18th - 20th:

CPBI Forum 2011 – The Next Wave

- Sheraton Wall Centre Hotel, Vancouver, BC
- Visit <http://www.cpbi-icra.ca/en/page.ch2?uid=FORUM2011> for more details



Does e-service seem too good to be true?

This could be you... Next time you're at a health service provider like your physiotherapist, ask about e-claims—then at your following visit they could submit your claim online directly to Green Shield Canada. Your claim is immediately processed for deposit into your account. And they will be able to tell you right on the spot exactly what is covered. No paperwork or messy claim forms for you...no paperwork for them.

It's a dream come true—Provider e-claims decreases hassles, especially paperwork. Suggest to your health service provider that they contact Green Shield Canada to find out more about how easy it is to set up e-claims submission.

Winner of the draw for a 'night out on the town'



Congratulations to **Winnie Jones**, of Barrie, ON, the winner of Green Shield Canada's monthly draw for gift certificates for a 'night out on the town'. Through this contest, one name will be drawn each month from plan members who have registered for Plan Member Online Services for that month. To learn more, visit greenshield.ca.

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CANADA

London 1-800-265-4429
Toronto 1-800-268-6613
Customer Service 1-888-711-1119

Vancouver 1-800-665-1494
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