

Book review: *The Patient Will See You Now: The Future of Medicine Is in Your Hands*



By Eric Topol, MD. New York: Basic Books, 2015. ISBN 978-0-465-05474-9. Hardback, 364 pages. \$32.

You may already be familiar with this book

but, if not, I urge you to become so. Particularly if you, like me, are over the age of 30. Eric Topol is an American cardiologist, a professor of genomics and, as his book thoroughly demonstrates, someone who is completely comfortable with the sweeping digital revolution that is happening in medicine right now. He also has a Twitter account worth following.

The book is divided into three sections. The first section deals with the issue of who is in charge of health care information. Here Topol comes down firmly on the side of the patient. He rails against what he characterizes as the paternalistic attitudes of the

medical establishment, both historically and in the present. Topol feels strongly that we are living in a new era where increased access to information about one's health can lead to individual empowerment regarding health care choices.

I found Topol's extensive coverage in this section on 23andMe, the consumer genomics company, and its personal genome service (PGS) interesting and helpful. 23and Me has been receiving considerable coverage in the popular press recently. At the moment an unusual situation exists in that the health-related results revealed in 23andMe's PGS are available to Canadians but not to Americans. Topol covers in detail the decision by the FDA to ban 23andMe from offering this information to Americans and the reaction to this decision. Anyone interested in learning more about 23and Me testing should go to the company's website and review their terms of service. It has yet to happen to me, but I'm sure it won't be long before I see someone with their report from 23andMe asking me what it means that they are positive for some health-related genetic marker or another. In

the end Topol characterizes 23andMe as a starter kit but does feel the report on drug interactions is worth learning about, a suggestion that prompted me to order a 23andMe kit for myself.

The second section deals with all the health data, both macroscopic and microscopic (genomes, microbiome, etc.), that are available for analysis and the myriad, and rapidly growing, ways this information can be collected and stored. Topol writes extensively on the role of genomes in medicine. To further illustrate the accelerating importance of genomes, to both patients and the cancers from which those patients suffer, recently *NEJM* Journal Watch carried a story about the rise of so-called basket studies. In these studies patients are enrolled not on the basis of the particular type of cancer from which they suffer but on whether their cancers share particular mutations. One such study involved patients with various types of histiocytosis. They received a melanoma drug that targets a particular BRAF mutation, and initial results were very encouraging.

Also in the second section, Topol

Continued on page 150

SPINE
WE DO THAT TOO

Call 604.737.7464 or toll-free 1.866.737.7460
specialistclinic.ca

CAMBIE
SURGERY CENTRE

SPECIALIST
REFERRAL
CLINIC

NERVE BLOCKS • DISCECTOMY • LAMINECTOMY • CERVICAL

Continued from page 148

derides the use of the traditional stethoscope and favors the use of a pocket ultrasound device that can image various organs. He makes reference to, but does not name, two American medical schools that equip their students with such a device on their first day. He also decries the current state of EMRs because of their lack of portability and universality and feels that the way they are currently used acts as a barrier to establishing a personal connection between the physician and the patient, a barrier that could be removed with the development of speech-to-hardcopy systems.

Topol returns again and again to the theme of patient autonomy in the matter of ownership of data. A simple example that comes to my mind is the review many of us do of the collection of outpatient blood pressure readings that we ask our patients with hypertension to record at their local pharmacy. This section also introduces the revolution in personal and world medicine that the use of smartphones is engendering, such as the use of “obsolete” smartphones in the delivery of health care in developing countries.

The third section of Topol’s book deals with the impact that the previously described changes are having

and will have on the way health care will be delivered. In essence, this comes down to the old categories of who, how, where, and when. The category of who will collect data and who will deliver health care is expanded far beyond us physicians. Under the category of what, again Topol has an extensive section on what he sees as the role of smartphones. A development not touched upon in Topol’s book is Apple’s recently announced ResearchKit software, which expands the ability of iPhones to become diagnostic and research tools. As I understand it, one of the aims of initial ResearchKit apps is to broaden the potential pool of study subjects by making it easier to recruit participants. One app, mPower, which is involved in research on Parkinson disease, uses readings from the accelerometer, microphone, gyroscope, and GPS sensors to gather data on an individual study subject. Patient confidentiality remains a concern.

I have only a few caveats about the book. Topol’s analysis deals with the American medical system and American society’s emphasis on individual freedoms, though many of his observations and conclusions can be transferred to our Canadian system. Another issue is the lack of empha-

sis he puts on the for-profit factor that comes with the principle of bringing more autonomy to patients regarding their health, an aspect of the case dealing with private surgical clinics currently before the Supreme Court of Canada that, in my opinion, is too little commented on. He also doesn’t deal with the issue of whether the increasing availability and use of patient-generated data will lead to further burdening of our already-strained publicly funded resources.

In the end Topol convinced me that perhaps the stethoscope is on its way to join the slide rule as a reasonably useful but ultimately limited analog instrument. I remember the response one of my first medical school professors, also a cardiologist, gave to the question of whether we would be better off using a Littmann or a Sprague-Rappaport stethoscope: “Remember this, young doctors, it is not so important what you put into your ears, but what is between them.” I believe the crux of the matter is not so much how we as physicians obtain data on our patients’ health, but how we counsel and advise our patients on what to do with the results of that data.

—Doug Cooper, MD
Vancouver

Pulsimeter continued on page 153

pacificfertility.ca
pacific centre for reproductive medicine

IVF
Fertility
First Trimester Screening & NIPT
Reproductive Genetics
Maternal-Fetal Medicine
Tubal/Vasectomy Reversal Surgery

Physicians: Jon Havelock | Jeffrey Roberts | Ken Seethram | Niamh Tallon | Tim Rowe | Mohamed Bedaiwy | Victor Chow | Ken Poon | Elizabeth Waterman

604.422.7276

Continued from page 150

Permanent life insurance 101

You are probably familiar with term life insurance, which provides coverage for a specified period such as 10 or 20 years. Odds are that you'll cancel or outlive your term-life policy and a benefit will never be paid. In contrast, permanent life insurance covers you for life and is guaranteed to pay a benefit.

There are two main types of permanent life insurance: universal life and whole life insurance. Both are fueled by deposits that are divided into a basic life insurance component and an investment component (cash value). The main difference lies in whether you or the insurance company manage how the cash value is invested.

A universal life policy allows you to choose your investments, which range from guaranteed interest options (similar to GICs) to mutual fund–like account options. If your funds are invested in a nonguaranteed account option, you may benefit from market upswings, but you may also feel the pinch from market downturns.

Whole life insurance offers an individual a participating account investment option, which is typically a mix of fixed income and equities, and is managed by actuaries and expert portfolio managers. With whole life, the returns are returned to policyholders as dividends. The growth from investments can be added to the death benefit payable to your beneficiaries. As well, the growth within the policy is tax free. While living, you may access the cash values through direct withdrawals (there may be some tax implications) or by taking a loan against the policy.

Like all life insurance, permanent life insurance pays a tax-free death benefit to your named beneficiaries and bypasses the estate and probate taxes.

Retirement assets

Physicians often use permanent life coverage as an alternative tax-advantaged investment asset within their corporation. An ideal candidate

for permanent life is someone with annual excess discretionary cash flow after other tax-efficient investment vehicles like RRSPs and tax-free savings accounts are maximized. You can often use the cash values in the policy to supplement your retirement or help finance your long-term care costs.

An estate-planning tool

A permanent life policy can be used for estate planning. If you have a spouse, you can reduce your premiums substantially with a joint-last-to-die policy where the death benefit is only paid upon the last person passing away, which is when the terminal tax liabilities typically come due. If you have an estate that is not easily divisible among your beneficiaries, you may use permanent life insurance to help equalize the estate by providing a cash payment to a beneficiary.

For children

Having insurance on children isn't about expectations of early death. Some children may encounter health issues that may make it difficult for them to get insurance coverage as adults. By purchasing a permanent life policy for a child, you guarantee an amount of coverage that can be carried forward as an adult. As well, because permanent life has tax-advantaged cash value growth, this is another investment asset that you can contribute toward your child.

If you are interested in learning whether permanent life insurance is appropriate for your situation, I encourage you to seek expert advice from your MD financial advisor* or your Doctors of BC insurance advisor.

—Julie Kwan

Business Development Manager of Insurance, Doctors of BC

*As a CMA member, you have access to MD Financial Management, which provides comprehensive financial planning, including insurance, to help you protect valuable assets and build wealth.

Personalized Onco-Genomics program at BC Cancer

The Personalized Onco-Genomics (POG) program at the BC Cancer Agency is a clinical research program bringing genomic sequencing directly into patient care for those with incurable cancers. POG was launched in 2012, and more than 170 patients have taken part to date.

Oncologists and scientists at the BC Cancer Agency work collaboratively on POG to sequence the patient's tumor and healthy DNA, compare the results, determine what's biologically driving the patient's cancer, and identify potential treatments. The program is a leading clinical research initiative with genomic science informing chemotherapy decision making in the routine clinical care of patients with metastatic cancers.

Each patient taking part in POG is in a personalized clinical trial where science is translating into care and providing research data that may benefit other cancer patients in BC and around the world.

The POG program was in the news recently when it identified a novel treatment option for a patient with advanced cancer. The genomic sequencing of Ms Trish Keating's aggressive colorectal cancer identified a unique protein function at play. This critical detail pointed to an unusual treatment option, which dramatically reduced her cancer to barely detectable in just weeks.

The POG program is funded entirely by the BC Cancer Foundation. The Foundation's 2014 Inspiration Gala raised over \$5 million in support of POG, and the Foundation has committed \$12.5 million to fund POG, which will see over 300 patients enter the program.

Pulsimeter continued on page 159

bcmj.org

that she didn't want it for us. It made me despise myself even more for hurting her, hurting us. But after, it was almost as if the threat had only made our bond stronger."

He coughed and cleared his throat.

"She knew. She had known that something was wrong for a while. She started losing weight, and lost her appetite. I caught her once trying to scrub off blood in the bathroom. She was tired all the time, and had these crippling migraines. The terminal diagnosis wasn't surprising for her."

Beep... beep... beep.... The ventilator jolted as the motor started up, drowning out the monitors with a steady hum.

"This morning, she asked whether I wanted to go on vacation over the long weekend. She had this silly grin on her face, like a giddy young girl begging her parents for ice cream. She just stepped out to get some coffee beans and must not have seen the taxi...."

He choked back a sob. Slowly, he bent over the bed rail, cupped one hand under her chin and kissed her. He began combing his fingers through her hair peeking out of the bandages.

"We were going to go to our friend's cottage up in Whistler... bring up our dogs, visit some friends. It's too soon. We wanted to do so many more things. We had a whole list...."

He sighed and drew himself up. The lines on his face ran deep, showing years of experience and memories, accentuating his piercing stare as he spoke.

"Can you give me some time?"

With a nod, I moved to leave.

"I'll be here when you're ready."

I bundled up the trails of my cloak and lowered the hood. With a wave, I was gone. **BCM**

Continued from page 153

New support for medical students with rural interest

A total of \$100 000 is available for up to 20 medical students who demonstrate an interest in practising medicine in rural and remote communities in BC. Annually, up to 20 medical students will be given individual awards of \$5000 to support their pursuit of practising rural medicine. The award is offered by the BC Ministry of Health and Doctors of BC with the goal of strengthening efforts to attract more doctors to rural and remote communities.

The first British Columbia Rural Interest Awards have been granted to UBC medical students who come from a variety of rural communities or have demonstrated an interest in entering rural medicine once training is complete. The British Columbia Rural Interest Award will be given to:

- Up to seven third-year students who have completed the Rural Family Practice Clerkship or the Integrated Community Clerkship.
- Up to seven fourth-year students who have completed a four-week rural elective.
- The remaining awards are granted to first-year students upon admittance to UBC Medical School.

For students applying upon completion of the third-year Rural Family Practice Clerkship, Integrated Community Clerkship, or fourth-year rural electives, the deadline is 30 June 2015. For first-year students applying upon admittance to UBC medical school, the deadline is 30 September 2015.

The awards were established through ongoing funding from the Joint Standing Committee on Rural Issues, a collaborative committee of the Ministry of Health and Doctors of BC. For information on eligibility and application deadlines, visit rccbc.ca/education-and-cmecpd/medical-students/reap/british-columbia

-rural-interest-award. For information about the collaborative committee of Doctors of BC and the Ministry of Health, visit www.doctorsofbc.ca/resource-centre/physicians/hand-books-guides.

Read about a few of the current winners on the *BCM*J blog (bcmj.org/blog/listings).

Quality Improvement Toolkit online

The Divisions of Family Practice recently launched a new Quality Improvement Toolkit on the Divisions of Family Practice website. The toolkit is a guide to getting started, planning your improvements, implementing your ideas, and sustaining your improvement efforts, and it explains how to integrate QI techniques into your everyday work. It offers resources, videos, tools, and templates that cater to users at all levels of experience—those learning the basics, looking for practical tools, or creating strategies to engage a team and build project momentum. Learn more about the toolkit at www.divisionsbc.ca/provincial/qi.

Dr Pollock's work in Haiti featured in *Post*

On 15 March 2015 the *National Post* ran the story "BC doctor delivers unusual foreign aid to Haiti by teaching surgeons to perform safer circumcisions." Dr Neil Pollock recently spent a week in Haiti training surgeons to perform circumcisions with the hope that the operation will assist in the fight against HIV in the country. Dr Pollock cites recent research suggesting the procedure can cut spread of the disease significantly. Dr Pollock is also in talks to deliver similar training in the Kwa-Zulu-Natal province of South Africa, a place harder hit by HIV than almost anywhere in the world.