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SCIENCE

## Patient, Heal Thyself

'The Patient Will See You Now' Envisions a New Era of Digitally Perfected Care

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Books

By **ABIGAIL ZUGER, M.D.**

Dr. Eric Topol and I appear to practice medicine on two different planets. This fact makes it difficult for me to comment sensibly on his books, let alone critique them.

Instead, I read along with mouth slightly agape, marveling at this missive from a far-off place whose atmosphere, physical laws and inhabitants bear no resemblance to the ones I know.

Dr. Topol is a cardiologist who directs the Scripps Translational Science Institute in La Jolla, Calif., and also serves as editor in chief of the website Medscape. His title at Scripps, "Professor of Innovative Medicine," says it all: Like a fundamentalist preacher heralding the apocalypse, he preaches the end of medicine as we know it and the dawn of rigorous, digitally perfected, accurate and cost-effective care.

Dr. Topol's last book, "The Creative Destruction of Medicine" (2012), described the tools of this new world, including genomic analysis, smartphone sensors and giant crowd-sourced databanks. His new book, "The Patient Will See You Now," provides more detail on all of these, recapitulating pretty much all the futuristic medical chatter of the last decade. Dr. Topol's overriding thesis is that the old days of "doctor knows best" are as good as gone. No longer will doctors control medical data, treatment or profits. Instead, thanks to the newest science, humanity will finally

achieve truly democratic health care: Up with patients! "Our Bodies, Our Selves" for all!

Among the empowering changes Dr. Topol heralds:

- **Soon there will be no more demeaning, time-wasting visits to a doctor's office.**

A smartphone outfitted with the right apps and attachments will easily substitute, analyzing, explaining and transmitting all relevant physiological data to the doctor, generally without the need for the patient's corporeal presence. (Dr. Topol himself reports he hasn't used a stethoscope for years, substituting more accurate audio and video electronic tools.)

- **There will no more hospitals, those expensive, disease-ridden anachronisms.**

"The hospital room of the future will be the bedroom," Dr. Topol predicts. The sick person's home will be outfitted for the occasion with all the right portable sensors, and voilà, hospital services "performed in the comfort of our own home. Seeing our own data on our own devices. In charge."

- **Medical diagnosis will be streamlined:** No more doctors struggling to explain your symptoms with endless tests and scans. Instead, web pages full of sequenced genes and all forms of biologic and behavioral risk calculations will supply a likely diagnosis instantaneously. **Furthermore, the patient may well be the one to make that diagnosis and present it to the doctor for review, for all information will be freely available.**

- Guesswork will no longer plague the use of prescription drugs: Genetic patterns will easily distinguish people likely to benefit from a drug from those likely to be poisoned. Drug selection will become safe enough that for some conditions, patients will prescribe for themselves.

- **Eventually, Dr. Topol predicts, small electronic sensors dispatched into patients' bloodstreams or intestines will quietly track health data in real time.** The most sophisticated of these "molecular stethoscopes" will efficiently identify small molecules like inflammatory mediators and aberrant DNA that herald bad events. Thus, catastrophes like heart attacks, diabetes and even cancer will be pre-empted well before they happen.

Presumably at least some of these visions will come to pass. Is that a good thing? Far be it from me to defend the status quo in medicine, the world's most fallible, inefficient enterprise, but when I imagine the patients I know in Dr. Topol's new medical world, a few problems immediately come to mind.

One is the matter of privacy. Medical data is no more secure than any other; small-scale and large-scale breaches regularly occur. Genomic data is particularly sensitive, but as Dr. Topol makes clear, no practical consensus for securing it has emerged. While high-level policy discussions proceed, I can pretty much guarantee that down here in the trenches, no one is likely to assent to cloud storage of the genome, let alone electronic sensors in the bloodstream, any time soon.

Then comes the obvious point that medical care is considerably more than data management or even disease management. A whole world of comfort, counseling, talk and touch counters Dr. Topol's vision of patient as data spreadsheet. Dr. Topol does pay lip service to this point with six small sentences on the nature of healing, but they are lost in the torrent of all his other sentences.

Finally comes the interesting philosophical question of whether all patients really do want — or, indeed, should want — to be their own doctors. You could actually write a book on that question, a book that might penetrate a little closer to the essence of medicine than Dr. Topol ever gets.

Certainly, people who are engaged in their own medical care fare much better than those who are passive and disengaged. But how engaged must a person be? When does engagement become burdensome?

Sick people have a primal need to be cared for; almost always, the sickest patients find that relinquishing the tough decisions to someone else brings huge relief. Healthy people may certainly enjoy monitoring their own physiology, but that activity can take up an awful lot of time. There are many wonderful things to do in this world other than keeping track of your own organs. Sometimes, it just makes sense to have someone do it for you.

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