Book

The perils of excessive medical care

Last year, President Barack Obama underwent his first routine physical examination after assuming his country's leadership. At the time of an acrimonious national debate over health reform, the White House medical team led by Jeffrey Kuhlman, a family physician and naval officer, pronounced then 48-year-old Obama "in excellent health". However, *The New York Times* reported that Obama had undergone several questionable screening tests not recommended for routine use: an electron-beam CT scan of the coronary arteries (to look for heart disease), a three-dimensional CT scan of the large bowel (to look for colon cancer), and a blood test for prostate-specific antigen (to look for early prostate cancer).

As Rita Redberg, Editor of the *Archives of Internal Medicine*, later pointed out, the US Preventive Services Task Force (USPTF) and the American Heart Association specifically advise against screening CT scans for early coronary heart disease, and USPTF also doesn't support virtual colonoscopy as a valid screening method for colon cancer. Further, neither the USPTF nor the American Cancer Society endorses routine prostate-specific antigen testing. When asked specifically why the President was even screened for colon cancer—which his own government's guidelines recommend only for people older than 50 years—a White House spokesperson answered cryptically, "Yes, the patient is 48, but those guidelines seemed the most appropriate". The implication was clear: even meticulously developed evidence-based guidelines should be ignored if the patient is important enough. More care, in other words, is better care.

In the past few years, several books leaning heavily on research from Dartmouth Medical School have questioned this perspective, including Shannon Brownlee's *Overtreated*, John Abramson's *Overdosed America*, and now *Overdiagnosed: Making People Sick in the Pursuit of Health* by H Gilbert Welch, Lisa Schwartz, and Steven Woloshin. Something of a crusader against the dangers of excessive health care, Welch is the rare academic who writes engagingly and also is unafraid to argue his points in mass media.

> **"How, then, should we better cultivate healthier scepticism of early diagnosis?"**

Welch's thesis is that early detection and treatment has spiralled out of control. "As we expand treatment to people with progressively milder abnormities", he writes, "their potential to benefit from treatment becomes progressively smaller". He piles on the data: year after year, the thresholds for raised cholesterol, blood pressure, blood glucose, and bone density are lowered, swelling the ranks of people eligible for drug treatment. When the "normal" level of fasting blood sugar dropped from 8 mmol/L to 7 mmol/L, almost 2 million Americans suddenly became diabetic. When the "normal" total cholesterol level fell from 6 mmol/L to 5 mmol/L, 42 million previously healthy Americans suddenly developed hyperlipidaemia. In epidemiological terms, the "numbers needed to treat" for any benefit mushroomed.

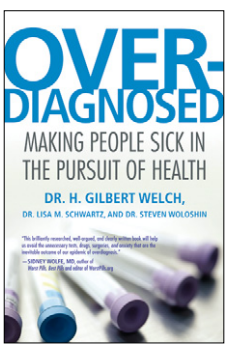
Welch hits his stride when he describes the casualties of this war on mild abnormalities. There is the 74-year-old with new borderline diabetes who begins taking glibenclamide, blacks out from hypoglycaemia while driving, and fractures two cervical vertebrae. A 65-year-old woman with "osteopenia" suffers oesophagitis from newly prescribed bisphosphonates, and after a cascade of medical interventions, almost gets her thyroid removed for no good reason. But Welch reserves his greatest disdain for the industry of early cancer detection. Using data from the US Surveillance Epidemiology and End Results (SEER) programme, he shows how mortality from prostate cancer, thyroid cancer, melanoma, and breast cancer (among others) has changed very little, although the number of new diagnoses has skyrocketed, suggesting that most early cancers have no clinical importance, other than serving as targets for harmful surgeries and pointless chemotherapy.

In that sense, Barack Obama was lucky he didn't end up like Brian Mulroney, Canada's Prime Minister from 1984 to 1993. 6 years ago, his doctors also did a screening spiral CT scan of the lungs, which found two lesions. The subsequent biopsy—which showed no cancer—was complicated by severe pancreatitis that required Mulroney to stay in hospital for almost 3 months.

Still, it's hard to fight the allure of prevention. Welch recounts debating the value of prostate-specific antigen with a prominent proponent of the test on the American television morning programme *Today*. The popular host, Matt Lauer, guided the arguments well, says Welch, but the real surprise came after the camera was turned off. Although Lauer had just heard about all the serious flaws in the test and the dangers of overdiagnosis, he immediately turned to the test proponent—not Welch—for personal advice on when he should be screened.

How, then, should we better cultivate healthier scepticism of early diagnosis? *Overdiagnosed* appeals to the rare cerebral reader who responds to detailed graphs and tables to change his or her behaviour. But it will do little to alter most patients' minds; witness Welch's lack of efficacy on Lauer. In that regard, the book is a somewhat quixotic attempt to generate a revolution, and one almost certainly doomed to failure.

Welch could have taken a page from the former academic physicians



Overdiagnosed: Making People Sick in the Pursuit of Health
H Gilbert Welch, Lisa M Schwartz, Steven Woloshin. Beacon Press, 2011. Pp 256. US$24·95.
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Mehmet Oz and Michael Roizen, whose health guide *You: The Owner's Manual* knocked *Harry Potter* off the top spot on American bestseller lists in 2005. Their book is a model of persuasion and effective communication, using chatty humour, entertaining cartoons, and interactive quizzes to engage and entertain readers. Welch's book demands full attention and quantitative sophistication at almost every turn; Oz and Roizen offer breezy explanations and boldface type to summarise key advice. (In their follow-up bestseller, *You: The Smart Patient*, they applied the same populist style to educate patients about hospital quality metrics).

But perhaps the most constructive model for Welch's book might be Richard Thaler and Cass Sunstein's 2008 bestseller *Nudge: Improving Decisions about Health, Wealth and Happiness*. They admit that people can't process complex data in their daily decisions: what to eat, how to save for retirement, or choose the right medicines. For example, they observe that putting healthy food near a cashier checkout will enhance an adolescent's diet more than lecturing him about nutrition science. Such "choice architecture" underlies the voluntary British traffic light system of food-package labelling. Simplified, consumer-friendly labelling could certainly be expanded to pharmaceuticals.

To discourage overuse of statins and technology like routine cardiac CT scanning, we also could encourage health systems to issue personalised, simple reports about cardiac risks, as offered online by the American Heart Association. (A clear, simple report could show someone like Barack Obama that quitting smoking would reduce 10-year heart attack risk in a 48-year-old with borderline hyperlipidaemia from 16% to 5%, which far exceeds the benefit of taking a daily statin for a decade). Such strategies are well known to marketers and consumer specialists, but alien to most physicians.

Still, Welch's book is a worthwhile read for any general physician. At the very least, the book summarises the case against excessive screening, and may inspire a new generation of public health advocates to develop better ways to inform patients of the risks of overdiagnosis.

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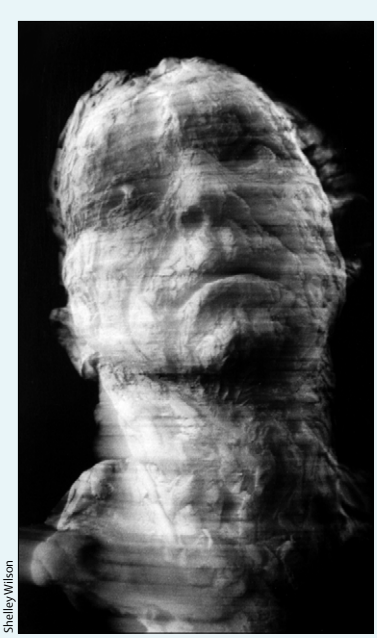
ShelleyWilson

Self Contained
MRC Social, Genetic, and Developmental Psychiatry Centre Atrium, Institute of Psychiatry, London, UK, until June 24, 2011
http://www.shelleywilson.co.uk

In brief

Exhibition **Remain in light**

Issues of identity are central to much of artist Shelley Wilson's work. Her previous projects have explored the troubled relationship between anorexia sufferers and their bodies, the genetics determining facial features, and the tensions between the public and private identities of politicians. For her latest exhibition, *Self Contained*, she has taken on her most challenging subject yet: how an individual's identity is affected by the process of dementia.



ShelleyWilson

Wilson explains that *Self Contained* is a response to a loved one's diagnosis with dementia. She describes how her relative has seemed to physically shrink away with the progression of the illness, and how the boundaries between the sufferer and the family have become blurred. The resulting artworks are uncompromising and disturbing. *Self Contained* consists of a sequence of black-and-white photographs of sculptured heads spinning in darkness: sometimes they resolve into a distinguishable set of tormented features; at others they dissolve into an unreadable blur.

It is surprising to find this emotionally charged work in the modern, quiet atrium of the Institute of Psychiatry's Social, Genetic, and Developmental Psychiatry Centre. Yet consultant psychiatrist Justin Sauer, who has provided text to accompany this project, thinks that its location is important. "The majority of people who see this will be academics", he says. "Perhaps some of them will be working on research into dementia. These pictures illustrate the impact of the illness on carers."

It is a bleak vision: those looking for optimism will find little on offer here. Yet the visceral impact of Wilson's photographs will, for professionals, provide a new perspective on a common illness, and, for relatives, perhaps reassurance that they are not alone in their suffering.

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