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BOOK REVIEW

Pharmageddon by David Healy. Berkeley & Los Angeles: University of California Press, 2012. xii + 302 pp. $41.95 (hardcover), $27.95 (paperback), $15.49 (Kindle). ISBN 978-0-52027576-8.

This book is a fully documented exposé of the considerable damage being done to health by modern "scientific" drug-based medical practice.

The author is a psychiatrist whose earlier books include *Mania: A Short History of Bipolar Disorder*, *Shock Therapy: The History of Electroconvulsive Treatment in Mental Illness*, *The Creation of Psychopharmacology: The Discovery and Development of Antipsychotic Medication*, and *The Antidepressant Era: The First Complete Account of the Phenomenon of Antidepressants*. These described how psychiatry had gone badly wrong by fixating on drugs and misinterpreting what they do, and how the pharmaceutical industry (Big Pharma) fought against acknowledging the harm done by these drugs, notably increased rates of suicide and significant decreases in expected lifespan. In this new book, Healy extends the critique to drug-based medicine across the board.

Increasingly in recent years, many insiders and observers have delineated the damage done by present-day drug-based medical practice (Bauer 2014). Prescription drugs are the 3rd or 4th leading cause of death in the developed world. Drug-company conglomerates are concerned with profit first and foremost and above all. They break laws against off-label marketing and pay fines that are tiny compared to the profits from the law-breaking. They hide data about harmful "side" effects. They mislead doctors and media and the public, and use financial incentives to buy favor from medical journals, researchers, practicing physicians, universities, politicians. They invent and market illnesses to match their drugs (e.g., seasonal affective disorder, attention deficit hyperactivity disorder, restless leg syndrome . . .), endlessly converting natural corollaries of aging into diseases (Bauer 2012) and extrapolating normal conditions of living (feeling low, feeling anxious, variations in laboratory-test numbers) into ailments calling for treatment.

What seemed like good ideas at the time had entirely unintended consequences. The trouble began with "scientific" approaches: quantitative measures like blood pressure, blood sugar, etc., etc. (Chapter 6, "The Mismeasurement of Medicine"; see also Greene [2007]); even the widespread use of weight machines had unforeseen, unintended, and

deleterious consequences (p. 166 ff.). Measuring bone density led to invention of the disease of osteopenia (p. 172 ff.).

Physicians no longer listen to and examine and think about their patients, instead they are essentially automatons taking instructions from lab tests and official guidelines and drug-company propaganda, as though all patients suffered from "some drug deficiency disorder" (e.g., pp. 5, 14, 186, 235). All of medicine has been infected by an absence of clinical diagnosis informed by physician's experience and patient's personal knowledge of and insight into what seems to be wrong: "Doctors . . . are treating diseases rather than treating us. There are no guidelines for treating us. There are only guidelines for the treatment of cholesterol levels or diabetes or depression" (p. 158).

The obsession with measurement extends even to emotional or mental matters. "Rating scales" can "diagnose" anxiety, depression, bipolar illness, etc., even in individuals who function overall quite well despite the normal human episodes of feeling low or exuberant or worried (p. 177 ff.); thus 15–25% of expectant mothers can be diagnosed as "depressed" and antidepressants become among the most commonly prescribed medications for pregnant women (p. 182).

Routine measuring amounts to mass screening without informed consent (p. 170), even though it can lead to damaging consequences from unnecessary treatment and apparent epidemics of newly created diseases (p. 175).

Healy blames primarily these factors:

1. Changes in patenting of medicines in the 1950s that have enabled monopolies (pp. 256–258). Markups on and profits from drugs are enormous. Big Pharma has bribed and corrupted medical journals, professional associations, official agencies, has co-opted if not bribed (e.g., pp. 136, 222 ff.) prominent physicians and researchers, and has assisted in the money-based corruption of politics. Journals and professional associations are complicit with Big Pharma in hyping claimed benefits by repetitive publication and suppressing risks of harm from drugs (pp. 122 ff., 245–246); journals should—but do not—insist that articles make available all supporting data (p. 245). Academe has been corrupted as an unintended consequence of the Bayh–Dole 1980 law that encouraged academics to partner with industry (p. 34). [The obsession with economic growth, Healy points out, may lower quality of life (p. 168). The explosion of healthcare costs, directly harmful to the general public, makes the associated increase in Gross Domestic (or National) Product look good to economists.] Drugs come to market not because they offer novel health benefits but

because the patent on an earlier drug had run out (p. 30 ff.). Thus Big Pharma marketed SSRIs (selective serotonin re-uptake inhibitors) to become the standard antidepressants even though they are not as effective as tranquilizers or older antidepressants (pp. 33–34, 87, 144). The earliest hypertensive drugs are still better than the newer, increasingly expensive ones (p. 87). The era of "blockbuster" drugs began with Zantac in 1990. Ten years later, nearly half of all drug sales were from blockbusters like SSRIs and statins which entail lifelong consumption. Drugs like antibiotics that actually cure an illness are used for only short periods and are not lucrative money-makers.

2. Making drugs available by prescription only, also in the 1950s. The unintended result has been that doctors, trained to use apparently accepted information and unfamiliar with marketing techniques, are subjected to "the most sophisticated marketing machine on the planet"—as are policymakers and the general public. The very terms SSRI, statin, ACE inhibitor, mood stabilizer, and more, are creations by marketing departments intended to distinguish new and "scientific" products from older ones (p. 34 ff.). Since doctors prescribe drugs only for medical conditions, Big Pharma's goal became to create as many medical conditions—illnesses—as possible (Moynihan & Cassels 2005). "Manic-depressive illness had been a rare and serious condition affecting ten people per million . . . . Bipolar disorder, in contrast, supposedly affects up to 50,000 . . . per million" (pp. 37–38, 152). To illustrate the unintended negative consequences of prescription-only drugs, Healy compares expensive prescription-only "SSRIs" with dangerous "side" effects to inexpensive over-the-counter (OTC) anti-histamines that also have a serotonin-uptake-inhibiting effect (see Hellbom 2006) but far less dangerous side effects (p. 249). Pregnant women have largely learned to avoid OTC substances, even coffee, yet they are prescribed SSRIs that double the rate of birth defects and miscarriages (p. 250).

3. No disinterested independent testing of drugs, since the time up to the 1950s when the American Medical Association (AMA) tested new drugs in its own laboratories. It does so no longer, and the AMA and its journals obtain most of their funding from Big Pharma (pp. 40, 247–278). *Clinical trials are carried out dishonestly and their conclusions are mis-used*. The fundamental flaw is that drugs are tested on people unlike those to whom the drug will later be prescribed—unlike in degree or even nature of illness as well as in age, race, sex, medical history, concurrent other medications, or conditions. Up to about the 1950s, drugs came into use because physicians saw tangible changes in actual patients (p. 150), not because some small average difference from placebo among large numbers of people could attain "statistical significance" (p. 211 ff.). Nowadays "guidelines" based on

dishonestly conducted clinical trials and marketed assiduously convince physicians to prescribe drugs when there is no tangible illness and when the drugs produce no improvement noticeable to physician or patient, only changes in biomarkers that may not reflect morbidity or mortality (p. 156). Outright fraud is now prevalent through the deliberate biasing of clinical trials and the hiding of unfavorable data (e.g., pp. 214, 252–253). Equating clinical trials with "evidence-based medicine" is a Trojan horse (pp. 12–13). "[C]ontrolled trials [are turned] inside out, neutering their potential to show that some currently fashionable drugs don't work and transforming them into a means to sell worthless remedies" (p. 65). Despite clear evidence that lifestyle is the chief risk for heart disease, drug marketing highlights the "much less" important association with cholesterol level (p. 169). One of the staggering, hard-to-believe, but fully documented circumstances is that Pharma marketing maintains prescribing of drugs even after they have been shown to be harmful, for example, SSRI antidepressants in pregnancy even though they cause birth defects (p. 44–45, 63) or beta-agonist inhalers that increase mortality (p. 161). Glaxo ignored the bacterial cause of ulcers because they were selling the hugely profitable anti-acid H-2 blocker Zantac (p. 50). With ulcers cured by antibiotics, H-2 blockers have since been marketed instead for GERD (gastro-esophageal reflux disease), previously a rare condition that has now been extended to include infant colic. Colic was never fatal, but the new anti-colic drug Prepulsid did kill some infants (pp. 53–54). *Propaganda misleads by enshrining "statistical significance" from clinical trials as demonstrating value for everyone*, when in reality each individual case may be unique (p. 211 ff.): That drug treatment of blood pressure of 250/120 may be a good thing does not entail that everyone with blood pressure over 140/90 should be administered drugs, but that is the current illusion. *Trials tend to use high doses*, to give the best chance that a given biomarker will show an effect. No data are gathered on what the lowest useful and least poisonous dose might be (p. 88).

Averaging together patients who responded favorably, those who responded very little or not at all, and those who became worse still allowed antipsychotic drugs to seem better than placebo and thereby gain approval for marketing as a general treatment for schizophrenia; yet between one-third and two-thirds of patients are not helped, and all of them suffer the "side" effects of increased rates of heart attacks, strokes, diabetes, and suicide—with an overall decrease of life expectancy by decades (pp. 88–89). Big Pharma is not interested in discovering which patients might be helped and which might not, so this knowledge remains hidden from doctors and patients.

The official pronouncement that "the drugs work" means that physicians seeing no improvement or even deterioration are likely to increase dosages instead of reporting inefficacy or possible harm from the medication (p. 253). Deterioration is blamed on the underlying illness and not on the treatment. So harmful "side" effects may not be reported for a long time; yet systematic, routine data-gathering, which has become so easy in the Internet age, could readily serve to evaluate the efficacy and safety of drugs once they are in general use (pp. 253–254). *Doctors are not free to exercise clinical judgment based on experience and individual circumstances* because of official guidelines sanctioned by all healthcare institutions. Purely statistical data outweigh the uniqueness and idiosyncrasies of the patient (p. 211 ff.).

Like Gøtzsche (2013), Healy makes a thought-provoking reference to the tobacco industry. Tobacco is helpful for ulcerative colitis and probably as good an antidepressant as Prozac or SSRIs. Had tobacco been available by prescription only, with the associated vested interests, how much longer would it have taken before the industry had to acknowledge its harmful "side" effects? (pp. 48–49, 251). Like the tobacco industry, Big Pharma recognized that "doubt is our product" to turn "scientific doubt inside out, transforming it from a means to detect truth into a means to conceal the truth" (pp. 118, 224, 260).

How do drug-company employees—from the top CEOs, VIPs, and Board members down to researchers and salespeople—manage to feel that they are serving the public good even as clinical trials are biased and results disseminated misleadingly? In the same sort of way as people in the tobacco industry did (and do). How do they—and doctors and the general public—square the long list of side effects reported in advertisements with continued marketing and belief in a beneficial value of the drugs? Healy offers an explanation: The multitude of "side" effects are just reports, *anecdotes*, not "scientific evidence." That comes from clinical trials, and these are carefully designed to be too short or too small to allow "side" effects to become "statistically significant" (p. 243). Perhaps 30,000 heart attacks occurred before Merck acknowledged that risk associated with Vioxx (p. 244).

Healy points out that free markets have co-opted and distorted science, in what he calls "industrial postmodernism" that has suppressed the ability to say "that an increase in mortality is an increase in mortality and blockbuster drugs cause adverse events" (p. 261).

Similarly radical and provocative remarks pervade this book, but they can hardly be dismissed as excessive since every assertion is fully documented. That medicine has gone badly wrong is demonstrated by the

failure of the drug-based "scientific" "evidence-based" approach to fulfill its promise of better health and lower healthcare costs (p. 184 ff.): To the contrary, in the most "advanced" society, the United States, healthcare costs have risen about 4 times faster than general inflation while overall health lags other developed countries by every measure including life expectancy and infant mortality (pp. 192, 260).

Every literate person should read this book. It ought to be required reading for every policymaker and every aide to a policymaker.

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