Twitter Thread by Mr. Garvin

Mr. Garvin
@garvs_72

Okay ladies and gentleman, the time has finally come for Mr. Garvin's mega Don't Go To The Doctor thread ■■■ ■

"But Mr. Garvin, aren't you a medical student?"

Yes! And the more I learn about the medical system the less I want to interact with it!

Lame disclaimers:
1) not medical advice (I am a guy on the internet lol)
2) "don't go to the doctor" doesn't literally mean to never ever see a doctor under any circumstance. There are good ones and sometimes you need them. But as you'll see, you should be quite careful about it

I'm gonna break this down into roughly four sections:
1) General effectiveness (and risks) of medical intervention
2) Declining standards in medical education
3) Physician Conflict of Interest
4) What you should do

Part I: Effectiveness and Risks

In this section we're going to ask two questions:

1) When a doctor does something for their patients, is it usually helpful?
2) Do doctors harm their patients?

The answer to 1 is "sometimes", and the answer to 2 is "often"

The most important concept to understand in this section is that of "medical reversal". Medical reversal is when a treatment (a drug, surgery, anything) gets widely rolled out into medical practice, only to be shown to be either ineffective or harmful later.

Medical reversal is *extremely* common. In an analysis of every trial in the NEJM over 10 years, Prasad et. al found that over 40% (!) of trials testing an established medical practice found that practice to either be ineffective or harmful! [1]

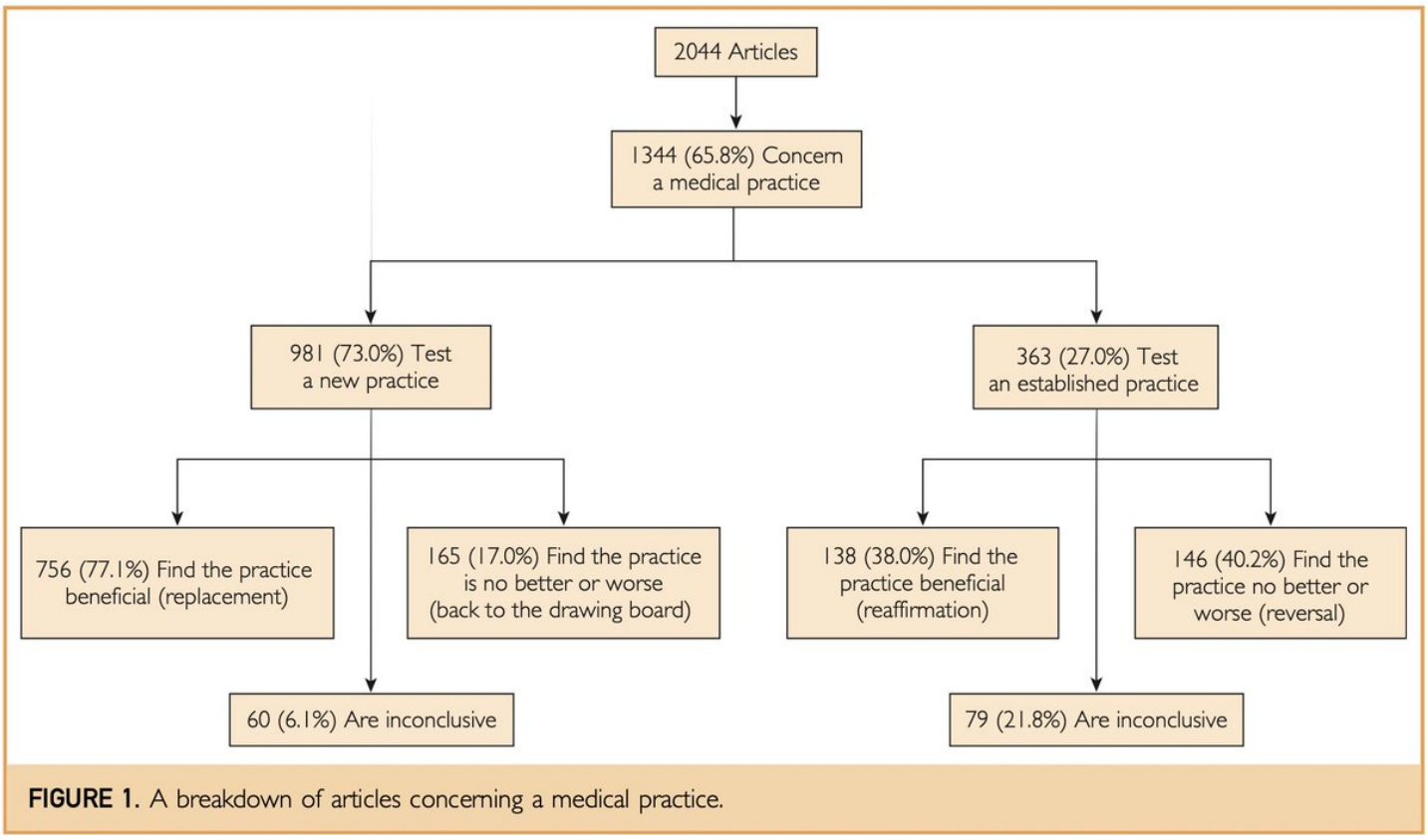


FIGURE 1. A breakdown of articles concerning a medical practice.

You can of course quibble over the exact numbers and methodology, but it's quite clear that this is a very common occurrence. Reversal has happened for common and/or important practices.

Have any of your family members gotten a stent placed because of their stable coronary artery disease? It didn't help them! [2][3]

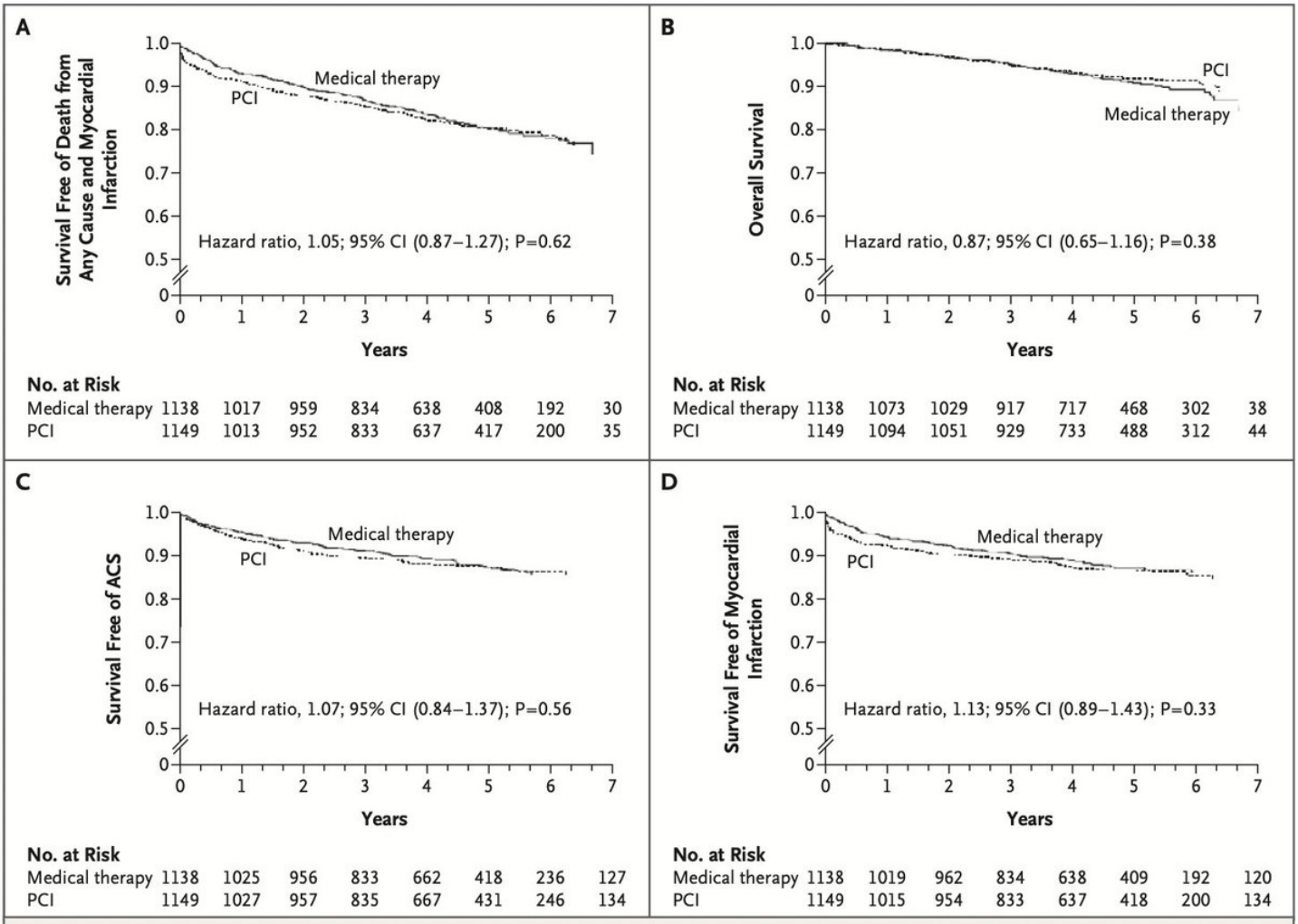


Figure 2. Kaplan–Meier Survival Curves.

In Panel A, the estimated 4.6-year rate of the composite primary outcome of death from any cause and nonfatal myocardial infarction was 19.0% in the PCI group and 18.5% in the medical-therapy group. In Panel B, the estimated 4.6-year rate of death from any cause was 7.6% in the PCI group and 8.3% in the medical-therapy group. In Panel C, the estimated 4.6-year rate of hospitalization for acute coronary syndrome (ACS) was 12.4% in the PCI group and 11.8% in the medical-therapy group. In Panel D, the estimated 4.6-year rate of acute myocardial infarction was 13.2% in the PCI group and 12.3% in the medical-therapy group.

Beta blockers for hypertension? Didn't help! [4][5]

Table 2

Incident cardiovascular events associated with metoprolol tartrate compared with atenolol.

	Multivariable[a]				Propensity Matched[b]			
	No. of Events	Person years	Hazard Ratio	95% CI	No. of Events	Person years	Hazard Ratio	95% CI
MI	3517	631,403	0.99	(.97 to 1.01)	712	94,261	.99	(.97 to 1.02)
HF	3272	633,987	.99	(.97 to 1.01)	831	94,257	.99	(.96 to 1.01)
Stroke	3664	632,386	.99	(.97 to 1.01)	773	94,346	.99	(.97 to 1.02)
Any CV event	9353	616028	.98	(.99 to 1.00)	2064	91,191	.98	(.95 to 1.00)

The carelessness with which physicians push their favorite pet interventions is shocking. Take, for example, the NELSON trial. The trial is simple: in current/former smokers, give them a CT scan to check for lung cancer. one group got the scans, the other didn't. [6]

Now, this one might seem like a no-brainer. Smokers get lung cancer, so you want to scan them and catch it early, right? If you read what the paper authors say, you'd certainly think so!

CONCLUSIONS

In this trial involving high-risk persons, lung-cancer mortality was significantly lower among those who underwent volume CT screening than among those who underwent no screening. There were low rates of follow-up procedures for results suggestive of lung cancer. (Funded by the Netherlands Organization of Health Research and Development and others; NELSON Netherlands Trial Register number, NL580.)

And look at that! The lung cancer mortality is lower in the screening group! The cancers were caught at much earlier stages! Better sign up for your cancer screening, right?

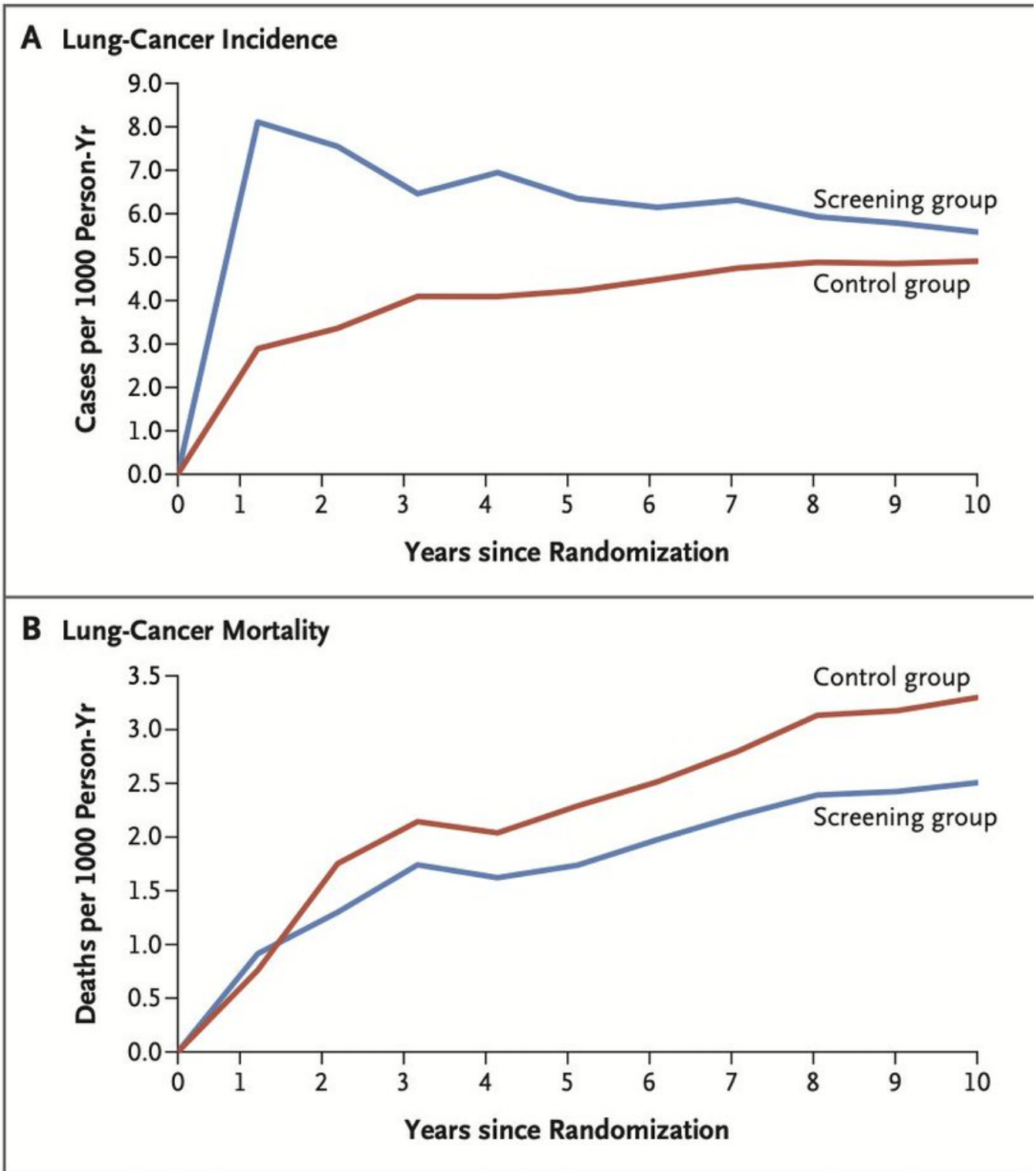


Figure 1. Lung-Cancer Incidence and Lung-Cancer Mortality among Male Participants.

Panel A shows the cumulative lung-cancer incidence (per 1000 person-years) according to follow-up year since randomization. Panel B shows the cumulative lung-cancer mortality (per 1000 person-years) according to follow-up year since randomization. Cause of death (with known date of lung-cancer diagnosis) was defined by the cause-of-death committee, if available, or by vital-statistics registries.

Of course, what they don't bother to discuss is the fact that the two groups had *the same* all-cause mortality. This means one of two things - either the earlier detection didn't help, or the extra tests and treatment harmed patients enough to offset the benefits.

Table 4. Cause of Death of Deceased Male Participants at 10 Years of Follow-up or until the Data-Cutoff Date of December 31, 2015.*

Variable	Screening Group (N=868)	Control Group (N=860)	Total (N=1728)	Rate Ratio (95% CI)
		number (percent)		
Cause of death — no. (%)				
Lung cancer	160 (18.4)	210 (24.4)	370 (21.4)	0.76 (0.62–0.94)
No lung cancer after cause-of-death review, no other specification	6 (0.7)	11 (1.3)	17 (1.0)	0.55 (0.17–1.61)
Other neoplasm	318 (36.6)	289 (33.6)	607 (35.1)	1.10 (0.94–1.30)
Cardiovascular disease	189 (21.8)	181 (21.0)	370 (21.4)	1.05 (0.85–1.29)
Respiratory disease	42 (4.8)	43 (5.0)	85 (4.9)	0.98 (0.62–1.53)
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified	37 (4.3)	20 (2.3)	57 (3.3)	1.86 (1.05–3.37)
Diseases of the digestive system	30 (3.5)	21 (2.4)	51 (3.0)	1.43 (0.79–2.63)
External causes of illness and death	24 (2.8)	19 (2.2)	43 (2.5)	1.27 (0.67–2.45)
Endocrine, nutritional, and metabolic diseases	21 (2.4)	9 (1.0)	30 (1.7)	2.34 (1.03–5.80)
Diseases of the nervous system	9 (1.0)	19 (2.2)	28 (1.6)	0.48 (0.19–1.10)
Other cause of death	26 (3.0)	28 (3.3)	54 (3.1)	0.93 (0.52–1.65)
Unknown	6 (0.7)	10 (1.2)	16 (0.9)	0.60 (0.18–1.83)
Total person-yr at risk	62,298	62,484	124,782	
All-cause mortality — deaths per 1000 person-yr	13.93	13.76	13.85	1.01 (0.92–1.11)

Lest you think this is just a single random trial, this is one of the two pivotal trials that the USPSTF used to make its recommendation that smokers get screened! [7] (the NLST trial found a modest 6% reduction in overall mortality) [8]

Seven RCTs (described in 26 articles) were included (Table 1): NLST, Detection and Screening of Early Lung Cancer by Novel Imaging Technology and Molecular Essays (DANTE), Danish Lung Cancer Screening Trial (DLCST), Italian Lung Cancer Screening Trial (ITALUNG), Lung Screening Study (LSS), the German Lung Cancer Screening Intervention Trial (LUSI), and the Nederlands-Leuvens Longkanker Screenings Onderzoek (NELSON) study.[12-37] Two trials in the US compared LDCT with chest radiography (LSS and NLST), and 5 trials in Europe compared LDCT with no screening (DANTE, DLCST, ITALUNG, LUSI, and NELSON). Only the NLST (53,454 participants) and NELSON (15,792 participants) were adequately powered to assess for lung cancer mortality benefit.[24,31] The majority of participants were White in all trials; in the NLST, 91% were White, less than 5% were Black, and less than 2% were Hispanic or Latino.

I could do an entirely separate thread about the problems in life science research and why, despite the claims that "we're making breakthroughs every day", medical science is essentially stagnant. You can even see it in life expectancy, which has been nearly flat since 1990.

Table 4. Life expectancy at birth, age 65, and age 75, by sex, race, and Hispanic origin: United States, selected years 1900–2018

Excel version (with more data years and standard errors when available): https://www.cdc.gov/nchs/hus/contents2019.htm#Table-004

[Data are based on death certificates]

Specified age and year	All races			White[1,2]			Black or African American[1–3]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
At birth	Life expectancy (years)								
1900[4,5]	47.3	46.3	48.3	47.6	46.6	48.7	33.0	32.5	33.5
1950[4,5]	68.2	65.6	71.1	69.1	66.5	72.2	60.8	59.1	62.9
1960[4]	69.7	66.6	73.1	70.6	67.4	74.1	63.6	61.1	66.3
1970	70.8	67.1	74.7	71.7	68.0	75.6	64.1	60.0	68.3
1975	72.6	68.8	76.6	73.4	69.5	77.3	66.8	62.4	71.3
1980	73.7	70.0	77.4	74.4	70.7	78.1	68.1	63.8	72.5
1990	75.4	71.8	78.8	76.1	72.7	79.4	69.1	64.5	73.6
1995	75.8	72.5	78.9	76.5	73.4	79.6	69.6	65.2	73.9
2000	76.8	74.1	79.3	77.3	74.7	79.9	71.8	68.2	75.1
2001	77.0	74.3	79.5	77.5	74.9	80.0	72.0	68.5	75.3
2002	77.0	74.4	79.6	77.5	74.9	80.1	72.2	68.7	75.4
2003	77.2	74.5	79.7	77.7	75.1	80.2	72.4	68.9	75.7
2004	77.6	75.0	80.1	78.1	75.5	80.5	72.9	69.4	76.1
2005	77.6	75.0	80.1	78.0	75.5	80.5	73.0	69.5	76.2
2006	77.8	75.2	80.3	78.3	75.8	80.7	73.4	69.9	76.7
2007	78.1	75.5	80.6	78.5	76.0	80.9	73.8	70.3	77.0
2008	78.2	75.6	80.6	78.5	76.1	80.9	74.3	70.9	77.3
2009	78.5	76.0	80.9	78.8	76.4	81.2	74.7	71.4	77.7
2010	78.7	76.3	81.0	78.9	76.5	81.3	75.1	71.8	78.0
2012	78.8	76.4	81.2	79.1	76.7	81.4	75.5	72.3	78.4
2013	78.8	76.4	81.2	79.0	76.7	81.4	75.5	72.3	78.4
2014	78.9	76.5	81.3	79.1	76.7	81.4	75.6	72.5	78.5
2015	78.7	76.3	81.1	78.9	76.6	81.3	75.5	72.2	78.5
2016	78.7	76.2	81.1	78.9	76.4	81.3	75.3	72.0	78.3
2017[6]	78.6	76.1	81.1	78.8	76.4	81.2	75.3	71.9	78.5
2018[6]	78.7	76.2	81.2	---	---	---	---	---	---

Part 2: Declining Standards in Medical Education

"Ok, so lots of things lots of doctors do are useless or harmful, I'll just find a good one!"

Good luck! The vast majority of doctors being trained today are not going to be able to

On an anecdotal level, I am at a slightly above average US MD school (we'll discuss DO schools later), and almost all of my classmates say they feel overwhelmed by the curriculum. Almost none of them are interested in doing research beyond what they need for residency matching.

You might be asking, "if they can barely handle the basics, and are not interested in the details of biomedical research, how will they be able to think independently and figure out what is really best for their patients?"

Good question! The answer is that they won't!

Almost all preclinical medical education is now pass/fail. As long as you score above a minimum level on your exams, usually ~60%, you will pass. If you do fail, the retake exam is often literally the same as the original

USMLE Step 1, the first licensing exam, is now pass/fail

Clerkships, the time in the third and fourth years when medical students are in the hospital to learn, are graded, but even students who do poorly graduate; 95% of US MD students match, and most who go unmatched do so because of a major red flag (crime, etc.) not mediocrity

(by "match" I mean match into a residency position)

The medical schools desperately try to ensure everyone graduates, regardless of their abilities, both because their accreditation body demands it, and because of "equity" concerns

The concern about lax standards just theoretical. In a 2007 survey of residency program directors, 30% said that their interns (first-year residents) struggle with "responsibility and reliability". One-third said they struggle with "organization" and "application of knowledge"!

Table 1

Comparison of the ACGME Core Competencies With 30 Program Directors' Views of Common Struggles of Interns and the Related Competencies Interns Should Gain in the Fourth Year of Medical School, 2007*

ACGME core competency	Common struggle of interns	Program directors reporting struggle: No. (%)	Competency interns should gain as fourth-year medical students	Program directors advocating the competency to be gained in the fourth year: No. (%)
Practice-based learning and improvement	• Self-reflection and improvement	12 (40)	• Self-reflection and improvement • Effective use of evidence-based medicine	10 (33) 9 (30)
Patient care	• Organization • Application of knowledge	10 (33) 10 (33)	• Advanced clinical reasoning • Near intern-level independence • Capacity to care for more patients	18 (60) 16 (53) 8 (27)
Professionalism	• Responsibility and reliability	9 (30)	• Responsibility and reliability • Ownership of patient care	8 (27) 8 (27)
Medical knowledge	• Fund of knowledge	8 (27)	NA	NA
Interpersonal and communication skills	NA	NA	• Communication with patients	8 (27)
Systems-based practices	NA	NA	NA	NA

* ACGME indicates Accreditation Council for Graduate Medical Education.

Now, that survey was in 2007, and things have undoubtedly gotten worse. They will continue to get worse. The steps that are being taken to alleviate the "doctor shortage" are going to crater the average quality of physicians, especially in primary care

One of the reasons for this is that medical schools are expanding, fast. MD enrollment is up 37% since 2002, and there's no sign of this slowing down. This, however, is only part of the problem.

U.S. Medical School Matriculants, 2002-2021

Year	Total	Percent Change from Prior Year	Percent Change from 2002*
2002	16,488	+0.8%	-
2003	16,541	+0.3%	+0.3%
2004	16,648	+0.6%	+1.0%
2005	17,003	+2.1%	+3.1%
2006	17,361	+2.1%	+5.3%
2007	17,759	+2.3%	+7.7%
2008	18,036	+1.6%	+9.4%
2009	18,390	+2.0%	+11.5%
2010	18,665	+1.5%	+13.2%
2011	19,230	+3.0%	+16.6%
2012	19,517	+1.5%	+18.4%
2013	20,055	+2.8%	+21.6%
2014	20,343	+1.4%	+23.4%
2015	20,631	+1.4%	+25.1%
2016	21,030	+1.9%	+27.5%
2017	21,338	+1.5%	+29.4%
2018	21,622	+1.3%	+31.1%
2019	21,869	+1.1%	+32.6%
2020	22,239	+1.7%	+34.9%
2021	22,666	+1.9%	+37.5%

*The year 2002 represents the baseline year used to calculate medical school enrollment increases that the AAMC called for in 2006.
Source: AAMC Applicant Matriculant Data File as of 11/16/2021

Right now the AAMC is pushing for an additional ~4000 residency spots. If almost all MDs already match, who will fill these spots? The answer: DOs from new schools and International Medical Graduates, mostly from the Caribbean. (getting cut off, will add rest of the thread soon)

Now, I won't clutter this thread with a full discussion of DO/Caribbean schools, but DO schools are mostly the same. Generally students with lower test scores and grades attend DO schools. This is mostly fine, but DO enrollment is exploding. There is even a for-profit DO school!

Table 3. MD and DO Enrollment Growth Since 2002

	2002	2019 and 2020		
	Enrollment	Enrollment	Increase	% Increase
MD (2020)	16,488	22,239	5,751	35%
DO (2019)	3,079	8,805	5,726	186%
Total	19,567	31,044	11,477	59%

Caribbean schools (and similar ones in Europe) are generally attended by Americans who couldn't get into an MD or DO school. Since most MD and DO students match (95% and 80%), the thousands of new residency positions will mostly be filled by unmatched DOs and carribean grads.

It's hard to tell exactly what will happen with this, but expect it to be quite difficult to find good primary care doctors. The extra residency positions, when added, are going to be mostly primary care specialties, and a lot of them are specially earmarked for new schools

> The manager's amendment included a new provision that would provide 4,000 new, Medicare-supported graduate medical education (GME) slots in 2025 and 2026. The legislation would require that 25% of the new slots go to primary care specialties and 15% of the slots to psychiatry and other behavioral health training programs. The slots would be distributed to eligible hospitals with 30% to teaching hospitals over their Medicare caps, 20% to teaching hospitals in rural areas, 20% to teaching hospitals in states with new medical schools or branch campuses, 20% to teaching hospitals located in or serving a health professional shortage area (HPSA), and 10% to teaching hospitals in states in the lowest quartile of resident-to-population ratio.

In summary, if you thought doctors were Very Smart, reconsider! If it was ever true, it certainly isn't true now, and won't be in the future!

Now for Part 3: Physician Conflicts of Interest

I'll keep this part short since this is already a ridiculously long thread, but let's say you find yourself a doctor who is not an idiot. Great! Unfortunately, they could be taking thousands from the pharmaceutical companies!

Conflicts of interest are pervasive in academic medicine. About 2/3 of US doctors receive personal payments from the pharmaceutical industry, and the total value of these payment is over $2 billion. This is not benign; it influences patient care directly:

Discussion

Prior work has established that interaction with the drug industry influences physician formulary recommendations (48), clinical research (49–52), and clinical practice guideline recommendations (53). Published reviews (identified by MEDLINE search) have also found that physician-industry interactions influence prescribing (17–21). However, the older studies included in these reviews measured interactions in non-financial terms, such as frequency of sales representative office visits or physician participation in sponsored education events. More recently, enabled by the availability of Open Payments data, direct measures of financial COI have become possible.

In this review, we therefore focused on studies that measured physician-industry interactions in solely financial terms. Each included study found a positive association between payments and prescribing in one or more of its constituent analyses. These analyses included several types of prescribing decisions, finding that physicians who received industry payments were more likely to prescribe drugs made by the companies that had paid them over alternatives, had higher prescribing costs, and prescribed relatively more brand-name products over generic alternatives. The positive results of these studies spanned a broad range of physician specialties and drug classes. The consistency of the payment-prescribing association across the type of prescribing decision, physician specialty, and drug class suggests that financial payments are an important mechanism by which physician-industry interactions influence prescribing.

Physicians who receive payments from industry are common among guideline-writers, conference speakers, and heads of departments, which means that even those physicians not taking the money are influenced by those that are.

This is only a small fraction of problems with the medical system; I haven't even mentioned cost, and a discussion of the pharmaceutical companies, FDA, and conflict of interest should be its own thread.

Now that we're through the blackpilling, what should you do?

Part 4: What to do

The main thing you really need to do is find a good primary care doctor. And by "find", I really mean go digging. Don't go do Dr. Dipshit that your neighbor told you about because they love him and he's "so thorough!"

You have to really make sure they know what they're talking about. Ask them about what the evidence is for what they want to do to you. If they give a bullshit answer because the real answer is "that's what my board prep said", get rid of them.

Next, you have to stay out of the hospital. I didn't include this in the original part, but hospitals are extremely dangerous places. Hundreds of thousands of patients die in hospitals due to medical errors [8].

Finally, and especially if you go to see a specialist, check to see if they have any conflicts of interest. There are two ways to do this, but neither are perfect. First, if you can find one of their papers or presentations, their conflicts will usually (but not always) be listed

Second, the CMS open payments database (https://t.co/h0rrkn9661) documents industry payments to physicians, both personal and research. You would be surprised, I've seen personal payments on here upwards of $100,000/year

In conclusion, don't go to the doctor! Or, at least, find one good doctor and don't let any other dipshits do anything to you without running it by them first. Be careful out there! Good luck!

going to add my references shortly, also going to completely shamelessly tag @MogTheUrbanite to find out if he deems this important enough to share with the people lmao