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Amazon's Soaring Healthcare Ambition: The Promise and the Problem

Healthcare is a mess in the United States. Consumers pay more and get less than in most other developed countries. Strong comprehensive healthcare is unaffordable for most without substantial help, which is why putting the burden on the government really does not work.

If people cannot afford something, individually aggregating it under what amounts to a tax is not really any better -- and given the extra overhead, arguably is worse.

What's needed is a way to bring costs down sharply so that whether it's funded by the state or paid for by individuals, healthcare becomes affordable.

One way to do that is to have a new player enter the market at massive scale and use its buying and political power to force the industry to reduce excessive pharmaceutical gouging, waste and excessive testing, and erect a stronger barrier to excessive litigation. Amazon, which last week announced its entry into the healthcare market with JP Morgan and Berkshire Hathaway, could be that company. However, as I recently discovered, Amazon already has abused its power. What will happen if it gets massively more powerful?

I'll share my thoughts on that this week and close with my product of the week, one of the most innovative smartphones in the market.

The Real Healthcare Problem

Both political parties in the U.S. are so focused on the issue of control that neither seems focused at all on the real healthcare problem, which is that the cost/benefit analysis suggests the country is in horrid shape.

If you look at the World Health Organization rankings, the U.S. is No. 1 with a bullet on cost (the most expensive of any country in the survey) but ranks a lousy No. 72 on performance.

You know which country ranks first on performance on level of health? Oman, which is No. 62 on cost. France, a country often ridiculed, ranks No. 4 on performance and No. 4 on cost. Its state-sponsored system is aligned at least. However, Italy outperforms France, ranking No. 3 on performance but No. 11 on cost. Saudi Arabia is No. 10 on performance and No. 63 on cost.

Using President Trump's "winning" rhetoric, when it comes to healthcare, the U.S. not only is not winning, but also is arguably behind the world on cost benefit. Even North Korea is better aligned than the U.S. -- it is No. 172 on cost and No. 153 on performance (North Koreans do not get much, but they pay even less).

With all of its technology and unique advancements, the United States sucks at healthcare. The real problem with Obamacare is that it does not fix the "suck" part or the cost part -- it just shifts where the bill goes.

So, a whole bunch of U.S. citizens, myself included, now are paying more and getting less coverage. That is neither any way to get re-elected nor any way to run a country. Typically screwing your constituents does not work well for elections, and that played a much bigger role in the last election than most realize (or want to admit).

Amazon Benefits

I think Jeff Bezos gets this -- it's not rocket science. He likely understands that if the government really is not going to step up (it still is arguing over who pays, not the amount on the bill) then a heavy-hitting corporation must.

Amazon has the reach and capability to reduce healthcare costs massively through better records management; implementation of aggressive artificial intelligence-based diagnoses or diagnosis validation; ability to negotiate better drug prices; scalable AI-based patent monitoring; and policies that could address abuses, such as the overuse of painkillers, more effectively.

Individual benefits would include better and more comprehensive access to medical records; programmatic analysis of those records, triggering proactive medical procedures; more aggressive health monitoring; and far broader access to emerging medical technology and drugs.

Amazon has the capability both to lower healthcare costs and raise performance, so that Americans no longer would be paying the most for healthcare while being outranked in performance by 72 countries whose citizens pay less, often far less.

The Problems With Amazon

Amazon already has gained an inordinate amount of power, and there have been signs of organizational abuse. I personally experienced it when I questioned a series of charges on a little-used credit card, and Amazon suddenly dropped me, with no warning, back into the pre-Echo dark ages. I'm still rebuilding the damage it did, even though it reinstated me last year.

David Caulton covers the same topic, but Amazon is hardly the only big company to abuse its power. Our own Mick Brady got kicked in the butt by AT&T, the brand that keeps on giving.

With Amazon increasingly handling everything its customers consume, a dispute with the company could result not only in the loss of Echo functionality, but also in access to critical healthcare.

You dispute a bill and have a heart attack, you likely will be dead -- and that level of

control would be unprecedented except for the harshest of governments, let alone a retailer.

Without far stronger customer controls, I have my doubts whether Amazon's foray into healthcare will end well rather than becoming just another, deadlier, problem for many American consumers.

Amazon's Problems

Consumers are not the only ones with problems. Amazon is moving into one of the most heavily regulated areas in the United States and one of the areas with some of the strongest lobbies (pharmaceuticals).

In addition, thanks to also owning The Washington Post, Bezos is not exactly close to the current administration. The result is that getting through regulatory approval and not suddenly finding a whole bunch of new and old laws positioned against this effort may be problematic.

Once the government goes after one part of Amazon, the effort could spread more broadly to the overall business. So just bringing this service to market, given how many resources will be focused on stopping it, could be impossible.

Wrapping Up: Living on the Bleeding Edge

There are many billionaires who live on the bleeding edge. Massively used, not that concerned with profits, but aggressively pushing expansion, they are one blunder away from disaster. Elon Musk, Richard Branson and Jeff Bezos all have been playing this high-stakes game of musical chairs -- each pushing the envelope in terms of investment, expansion and risk.

Bezos has stepped away from this risk a bit, as Amazon's current stunning financials showcase. Offsetting this somewhat is pressure from the LGBT community that resulted from Amazon including among possible locations for its new headquarters many that were viewed as anti-LGBT. (Amazon has been supportive of LGBT issues in the past.)

Moving into healthcare is just Amazon's latest aggressive move, but it could be a move too far. It already has been having customer care issues, it is at odds with the current administration, and it will face a ton of opposition because of the needed disruption it would cause.

Potentially, Amazon could fix healthcare -- but it also could kill a bunch of people accidentally in the process. It is that latter outcome that has me very concerned.

Source:
https://www.technewsworld.com/story/Amazons-Soaring-Healthcare-Ambition-The-Promise-and-the-Problem-85106.html

How to protect yourself from Meltdown and Spectre CPU flaws

On Wednesday, researchers revealed serious flaws in modern processors that could affect practically every Intel computer released in the last two decades -- and the AMD and Arm chips in your laptops, tablets and phones, too. Read more here.

The good news: Intel, AMD and Arm believe they can fix -- or at least mitigate -- the so-called Meltdown and Spectre flaws with software patches, and Microsoft, Apple and Google have already released some of those mitigations. (AMD says some of the flaws don't affect its processors at all.)

But as usual, you'll need to be diligent about applying those patches yourself!

So here's everything we know as of Jan. 22 about how to protect yourself. (We'll be updating this guide as new fixes become available.)

Update, Jan. 22: If you were planning to update your BIOS with a fix for your Intel processor, maybe wait a bit? Intel says its own patches are causing some PCs to become unstable and unexpectedly reboot, and advises you to stop patching for now. Mind you, we're talking about manual BIOS updates here -- you should be fine leaving Windows Update turned on.

Android phones

According to Google, a new security update dated Jan. 5 will include "mitigations" to help protect your phone, and future updates will include more such fixes.

If you've got a Google-branded phone, such as a Nexus 5X or Nexus 6P, there's not a lot you need to do -- at some point your phone should automatically download the update, and you'll simply need to install it. With the Pixel ($560.00 at Amazon.com) and Pixel

2 ($749.98 at Amazon Marketplace) (and their XL varients) it's even easier -- it'll automatically install, too.

Theoretically, the same goes for other Android phones, but many manufacturers and cellular carriers can be a little slow to patch. You may want to poke your phone's manufacturer and cellular carrier (particularly in public places) to ensure they update in a timely fashion. Squeaky wheels get the grease.

We'll update this story as manufacturers commit to updates. Also, see instructions for the Google Chrome web browser on Android below.

iPhones and iPads (and iPod touch)

If you've already installed the latest iOS version 11.2 on your iPhone or iPad, you should already be protected from some of the vulnerabilities that researchers discovered as of last month. Apple says that version, released on Dec. 2, included a number of mitigations, and Apple's promising to develop more protections in future updates.

To check, go to **Settings > General > About** and look for Version to verify you're on 11.2 or later. If not, you can probably go to **Settings > General > Software Update** to download the latest version.

Apple says the patches don't measurably affect performance, and it'll continue to develop more mitigations for future updates.

Windows PCs

Microsoft says it released a security update Wednesday to help mitigate the issue. If you're running Windows 10, it should automatically download and install -- but it might depend on your PC's settings.

To make sure your PC is protected, go to **Settings > Update & security** to check and see if the security fix is waiting in your update queue. If not, click on **Update history** or **View installed update history** to see if it was already installed. Depending on when you last updated Windows 10, the hotfix might have one of a variety of different names, but you're looking for **Security Update for Windows (KB4056892)** if you have the Fall Creators Update already installed.

If you don't see it in either place, you'll want to rlick here and read this post: We discuss other names it might appear under, and ways to manually install the fix if all else fails.

Macs

As with iPhones and iPads, Apple says a number of mitigations for these vulnerabilities already rolled out in an update for iMacs, MacBooks, Mac Pros and the Mac Mini last month. The Mac OS High Sierra 10.13.2 update, released Dec. 6, included fixes for some of the flaws. On January 23, Apple brought those mitigations to Mac OS Sierra and El Capitan, earlier versions of the operating system, as well.

Tap the **Apple menu button** in the upper-left hand corner of your screen and select **About this Mac** to see if you've got the latest version. If not, you may want to open the **App Store** application, click on the **Update** tab and update your operating system.

Apple says the patches don't measurably affect performance, and it'll continue to develop more mitigations for future updates.

Google Chrome web browser

On Jan. 23, a new version of Google Chrome should also include mitigations to protect your desktop and phone from web-based attacks. But if you don't want to wait, Google says an experimental feature called Site Isolation can help right away.

Instead of grouping different websites you browse together in a single process -- which helps save your computer's memory, among other things -- Site Isolation appears to make each website use its own individual instance of the Chrome browser. That way, it's harder for a malicious website to access data from other websites you're browsing (using these new CPU exploits) and potentially do bad things.

To turn on Site Isolation on Windows, Mac, Linux, Chrome OS or Android:

- Type or copy-paste **chrome://flags/#enable-site-per-process** into the URL field at the top of your Chrome web browser, then hit the Enter key.
- Look for **Strict Site Isolation**, then tap or click the box labeled **Enable**.
- If your work is saved, hit **Relaunch Now**. Otherwise, save your work, then quit and relaunch Chrome.

For Chrome on iOS (iPhone, iPad), Google says Apple will deliver any necessary fixes.

Other browsers

Mozilla, Microsoft and Apple each said they'll update their web browsers to reduce the threat of the new attack methods. Mozilla began updating its current Firefox 57and Microsoft will modify both its Internet Explorer and new Edge browsers.

The work is only beginning for Microsoft. "We will continue to evaluate the impact of the CPU vulnerabilities ... and introduce

additional mitigations accordingly in future servicing releases," Edge product leader John Hazen said in a blog post.

Mozilla has already released the first of two near-term fixes in the current version of Firefox, and it's working on the second now. Its less frequently updated Enterprise Support Release version of Firefox is not as susceptible to the new attacks, but Mozilla plans an update for the next version of Firefox ESR on Jan. 23.

"In the coming days we plan to release mitigations in Safari to help defend against Spectre," wrote Apple, in a knowledge base article released Thursday.

Google Chromebooks

With a small number of exceptions, Google's Chromebooks are, or will be, automatically protected from these flaws, according to Google. The company says Chromebooks with ARM chips aren't affected at all, and those with other processors (generally Intel) include mitigation as of Chrome OS version 63, which started rolling out in mid-December.

For now, you may want to enable Site Isolation in Chrome OS (see instructions above), and you should know that a few Chromebooks aren't currently slated to get the patch (generally because they're pretty old). You can find a full list here; look for "no" in the rightmost column.

Apple TV

As with Macs, iPhones and iPads, Apple was able to quietly sneak fixes into its December software update for the Apple TV. tvOS 11.2, released Dec. 4, includes a number of fixes. It's possible your Apple TV has automatically updated its software, but if not, you'll want to go to **Settings > System > Software Updates** and pick **Update Software**.

Apple Watch

Apple says the Apple Watch isn't affected by Meltdown. As for Spectre, it will work on mitigations in future versions of its watchOS.

Google Home, Chromecast, WiFi, OnHub, Gmail, Apps and Services

Google says none of its other consumer-facing products are affected by these vulnerabilities.

Source:
https://www.cnet.com/how-to/how-to-fix-meltdown-spectre-intel-amd-arm-windows-mac-android-ios/

How to sleep easier with Google Home's white noise feature

I'm one of those people who falls asleep a little easier if there's quiet, steady noise around me. Cracking a window open isn't really an option in February here in New York, so typically I just turn on a small fan in my room to get that fix of white noise. But a couple weeks ago, I learned that Google Home speakers can play white noise audio on demand. And I was pleasantly surprised by how good it sounds — even on my tiny Google Home Mini, which has slightly improved bass compared the Amazon Echo Dot in my living room. I'm sure the effect is better on a regular Home or the Home Max. This also works through Google Assistant on your phone in a pinch, and the sounds can be played on any Assistant-enabled speaker.

You can trigger ambient noise on Home with several different voice commands. If you don't care which noise track Google picks, it's as easy as saying "Hey Google, help me relax" or "OK Google, play ambient noise" or "white noise."

If you want to get specific, you can ask Google to play audio ranging from a crackling fireplace to the sound of a running river. I'm a fan of the basic "rain" option, which sounds authentic enough to convince you that the weather outside has taken a turn. When requesting to hear a fan, Google plays what must be a heavy oscillating fan; I don't think there's any way to mimic my cheap desk fan from Target, but this also works.

Here's the full list of ambient/white noise that Google can play for you:

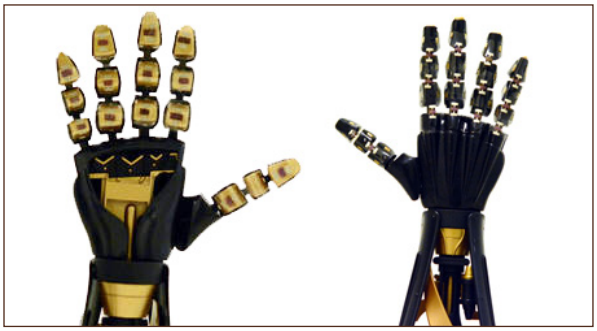
- Relaxing sounds
- Nature sounds
- Water sounds
- Running water sounds
- Outdoor sounds
- Babbling brook sounds
- Oscillating fan sounds
- Fireplace sounds
- Forest sounds
- Country sounds
- Ocean sounds
- Rain sounds
- River sounds
- Thunderstorm sounds
- White noise

Note that Google Home will only continue playing ambient sounds for a maximum of one hour. As far as I know, there's not yet any way to set a timer in case you want them to run longer. Still, this is a really convenient feature to have for those of us who don't like falling asleep to total silence. Alexa can also do similar things through installable skills or by playing a white noise track pulled from Spotify, but it's not quite as seamless as Google's feature.

Source:
https://www.theverge.com/2018/2/5/16973646/google-home-white-noise-ambient-sounds-how-to

Stretchy Artificial 'Skin' Could Give Robots a Sense of Touch

Rubber electronics and sensors that operate normally even when stretched to up to 50 percent of their length could work as artificial skin on robots, according to a new study. They could also give flexible sensing capabilities to a range of electronic devices, the researchers said.



Like human skin, the material is able to sense strain, pressure and temperature, according to the researchers.

"It's a piece of rubber, but it has the function of a circuit and sensors," said Cunjiang Yu, an assistant professor of mechanical engineering at the University of Houston. Yu and his team describedtheir innovation in a study published online Sept. 8 in the journal Science Advances. [Super-Intelligent Machines: 7 Robotic Futures]

Yusaid the rubber electronics and sensors have a wide range of applications, from biomedical implants to wearable electronics to digitized clothing to "smart" surgical gloves.

Because the rubbery semiconductor starts in a liquid form, it could be poured into molds and scaled up to large sizes or even used like a kind of rubber-based ink and 3D printed into a variety of different objects, Yu told Live Science.

One of the more interesting applications could be for robots themselves, Yu said. Humans want to be able to work near robots and to coexist with them, he said. But for that to happen safely, the robot itself needs to be able to fully sense its surroundings. A robot — perhaps even a soft, flexible one, with skin that's able to feel its surroundings— could work side by side with humans without endangering them, Yu said.

In experiments, Yu and his colleagues used the electronic skin to accurately sense the temperature of hot and cold water in a cup and also translate computer signals sent to the robotic hand into finger gestures representing the alphabet from American Sign Language.

Electronics and robots are typically limited by the stiff and rigid semiconductor materials that make up their computer circuits. As such, most electronic devices lack the ability to stretch, the authors said in the study.

In research labs around the world, scientists are working on various solutions to produce flexible electronics. Some innovations include tiny, embedded, rigid transistors that are "islands"in a flexible matrix. Others involve using stretchy, polymer semiconductors. The main challenges with many of these ideas are that they're too difficult or expensive to allow for mass production, or the transmission of electrons through the material is not very efficient, Yu said.

This latest solution addresses both of those issues, the researchers said. Instead of inventing sophisticated polymers from scratch, the scientists turned to low-cost, commercially available alternatives to create a stretchy material that works as a stable semiconductor and can be scaled up for manufacturing, the researchers wrote in the study.

Yu and his colleagues made the stretchable material by mixing tiny, semiconducting nanofibrils — nanowires 1,000 times thinner than a human hair — into a solution of a widely used, silicon-based organic polymer, called polydimethylsiloxane, or PDMS for short.

When dried at 140 degrees Fahrenheit (60 degrees Celsius), the solution hardened into a stretchable material embedded with millions of tiny nanowires that carry electric current.

The researchers applied strips of the material to the fingers of a robotic hand. The electronic skin worked as a sensor that produced different electrical signals when the fingers bent. Bending a finger joint puts strain on the material, and that reduces electric current flow in a way that can be measured.

For example, to express the sign-language letter "Y," the index, middle and ring fingers were completely folded, which created a higher electrical resistance. The thumb and pinky fingers were kept straight, which produced lower electrical resistance.

Using the electrical signals, the researchers were able spell out "YU LAB" in American Sign Language.

Yu said he and his colleagues are already working to improve the material's electronic performance and stretchiness well beyond the 50 percent mark that was tested in the new study.

"This will change the field of stretchable electronics," he said.

Original article on Live Science

Source:
https://www.livescience.com/60386-robots-artificial-skin-stretchy-semiconductor.html

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