

Question: Of the 4 types of chemical sunscreen, which one resulted in highest plasma concentrations?

A) lotion

B) pump spray

C) non-aerosol spray

D) aerosol spray

Physician and Patient Encounters

Regardless of how healthcare delivery changes in the coming years, the key to safe care lies at the intersection of patient health needs and physician knowledge, including the ability of both to engage in substantive encounters. This key encounter is being addressed more frequently in medical literature, generally under the moniker of ‘shared-decision making (SDM).’

Using a literature search and a [Delphi process](#) to distill recommendations down to the 5 most important, a [large team of investigators](#) (Donna Zulman, et al.) declared what doctors should do as part of a clinical encounter. In summary these were as follows: 1) focus before the encounter begins, 2) thoroughly listen to the patient, 3) agree with the patient about what matters most, 4) connect with and reinforce the patient’s story, and 5) observe and explore emotional ques. The authors call for further validation of their results and suggest that a supportive environment will enhance the encounter.

An [editorial](#) by 3 MDs acknowledge the importance of the above recommendations but cautioned that under current practices there are at least three barriers to straight forward implementation. These are awkward configurations of current electronic health records, limited time in the clinical encounter, and challenges in dealing with patients having complex needs (e.g. several chronic illnesses or intractable pain.).

In a [second editorial](#) about the study by Zulman, et al., three MD authors note that the patient-physician interaction is at the core of most physician actions, yet little is known about what makes this an effective encounter. The editorialists

are skeptical of generalizations that ignore the diversity of patients and physicians. What sort of interactions will lead to improved outcomes for patients? Perhaps, they suggest, that too much standardization will quash the rich diversity of interactions because of the cultural differences in patients and physicians. Depending on their experiences and personalities, patients will want different levels of autonomy.

The message here for patients is that you must be prepared to engage your doctor in a succinct, thorough process that respects his expertise and time. Be prepared to express your preferences and what outcomes you wish to have. Deliver your story with pertinent details and do not wander with spurious information. Be prepared with thoughtful, informed questions.



Hospital Care at Home - Really

When I first saw a research study on the above subject, I thought something must be wrong. Patients that should be in the hospital will stay there and those who can go home will go home when discharged. Like many subjects in medicine, it’s not that simple. There are gains to be made by allowing select patients to ‘stay in the hospital’ while at

home. A large team of [investigators](#) divided 91 patients needing acute care into 2 groups – one group (n=48) would receive usual hospital-based care and the other group (n=43) would receive hospital care at home. The hospital-at-home had to be within 5 miles of the actual hospital where they would have otherwise been treated. Most patients were older and frail.

Patients in the home-care group received appropriate visits from doctors and nurses, intravenous medications, remote monitoring, video communication and point-of-care testing. They had been admitted through the emergency department and had infections, heart failure, chronic obstructive pulmonary disease, or asthma exacerbation. The home-care patients cost 38% less to care for than the hospital-based patients. They had fewer laboratory tests, less imaging, and fewer consultations. Home-based patients were more active and were less likely to need a 30-day readmission. The authors note that their findings support earlier work on cost savings realized by hospital-at-home care.

Two [experts wrote](#) an editorial placing the above study in perspective. They traced the history of home hospital care and pointed out that the cost of hospitalization is behind the trend to higher healthcare costs. They made an interesting observation. Why would hospitals support home-hospitalization; this would seem to cut into their revenue. Ah, but by placing patients needing less medical care back home, hospitals can then use the freed beds for patients with more complex illnesses that will facilitate higher billing by the hospital. Follow the money.

If you are facing a hospital stay and feel that this may be unnecessary, ask about the possibility of home-hospital care. You'll avoid the inherent risk of any in-hospital stay and may expect better recovery. The answer, however, may depend on how full the beds are in your hospital. After an ER visit with a broken hand, I was seriously pressured by doctors to spend one night as an in-patient. It took some assertive words from me to make them understand that was not going to happen.

How They Get Your Money

It's no secret that out of-network bills can bite into one's savings. But suppose you have a procedure at an in-network hospital that is

performed by an in-network primary surgeon. Are you safe from an out-of-network bill? Of course not. A [team of 5 experts](#) examined claims data for nearly 350,000 commercially insured patients who had undergone 1 of 7 common surgeries from 2012 to 2017 in an in-network hospital or ambulatory surgical center and performed primarily by an in-network surgeon.

They discovered that 1/5th of these surgeries involved an out-of-network bill. Such claims were typically a few thousand dollars and were submitted by out-of-network surgical assistants, and anesthesiologists. Surgical complications led to higher balance billing.

If care facilities and insurers compete for your money, this sort of thing is going to continue to rob patients. Insist to know if an out-of-network professional will be involved in your surgery. If you have a few thousand bucks to waste, then don't worry about asking. A couple of [MD editorialists](#) note that surprise bills may erode the patient-surgeon relationship. Surgeons should seek teams with all in-network participants and refuse to work in facilities that allow out-of-network billing. Of course, some doctors have 'pushed back' on such ideas, claiming that their ability to negotiate fees will be compromised.

Suicide

Two MDs [open their article](#) on suicide in the *New England Journal of Medicine* with a word-picture of the impact of this tragedy, noting that suicide is the 10th leading cause of death in North America and is the most frequent cause of death for persons aged 15 to 24 years. In much of the world, suicide rates have been declining; however, in the United States rates have steadily increased by about 1.5% per year since 2000. Overall, men seem to be about twice as likely to commit suicide as women.

One of the signals that a person may succeed in committing suicide is self-injurious behavior. Of those who attempt suicide, about 4% will die in the next 5 years from suicide. The authors break down the causes of suicide into two groups: individual factors and environmental factors. For example, one of the individual factors is a family history of suicide and one of the environmental factors is lack of social support. The strongest indicators for specific risk factors are drug and alcohol misuse,

access to lethal means, neuropsychiatric disorders, and a family history of suicidal behavior. There are a variety of tools for assessing suicide risk. If you are concerned about someone with suicide risk, then obtaining a copy of this article from the *New England Journal of Medicine* might be instructive. Some larger public libraries may have a copy.

Active Ingredients in Sunscreen that Get Inside Your Body

The usual precaution given to the public is to put on generous amounts of sunscreen when there is risk of sun exposure. A [huge team](#) of investigators rounded up 48 volunteers and placed them in 1 of 4 groups whose skin would be exposed via lotion, aerosol spray, non-aerosol spray and pump spray. The subjects were 75% covered up to 4 times per day for 4 days. Many blood samples were taken. The samples were analyzed for 6 ingredients whose names you never heard before. The idea was to see how quickly plasma concentrations reached an 0.5 ng/ml limit as recommended by the FDA. The geometric mean of the maximum concentrations ranged from 3 to 258 ng/ml, well exceeding the FDA 'limit.' The pump spray had the lowest maxima, ranging from 3 to 14 ng/ml. The investigators assert that their findings do not indicate that anyone should quit using sunscreen. They recommend additional testing to determine if the typical plasma levels could cause harm to users.

Two MDs placed the above findings in perspective via [editorial](#). They note that UV radiation from sun exposure is known to cause skin cancer and the evidence linking it to melanoma is convincing. Sunscreens are of two types – mineral and chemical. The mineral formulations, containing zinc or titanium dioxide, protect the wearer by reflecting or refracting the light away from the skin. Chemical sunscreens contain chemicals that absorb UV radiation. Mineral sunscreens tend to leave a white residue. Chemical sunscreens were the ones tested.

The MDs stated that limited animal studies suggest the possibility of toxic effects of some of the absorbed sunscreen chemicals. Moreover, some of the compounds remain in the plasma for a week or more. Testing in children is lacking. The editorialists declare that more testing is needed to determine the risk-benefit profile of these

compounds. That profile is likely to depend on the sunburn risk of the wearer.

I might note that the chemical sunscreen test involved application to 75% of the subjects' body surface. This is more than the usual surface area of application for most people anticipating sun exposure. The following recommendations make sense to me, especially in children: wear a broad-brim hat, wear eye protection, cover most of your body surface with proper clothing, remain in the shade as much as possible, and use mineral sunscreens on any uncovered surfaces.

Is Your Doctor Competent?

The first question about care quality in the Patient Council's '[What Worries You Most](#)' survey asked whether you worry about trusting your doctor. Nearly 60% of the respondents declared they were 'somewhat' or 'very' worried about finding a doctor they can trust. The core element of trust is the expectation that one's doctor is competent. Three MDs wrote their [opinions](#) in the *JAMA* on the responsibility of physicians to maintain competency. They focus on two areas that impact competency. The first area is the potential loss of cognitive ability as they age and the second is the decrease in opportunities for maintenance of knowledge. The latter may be affected by a physician's increasingly busy schedule that reduces the time and energy needed to maintain learning.

The writers suggest 5 strategies to reduce the negative effects of aging including the following: maintain formal certification, maintain a training regimen, move to less knowledge-intensive practices, engage in self-assessment and reflective practice, and participate in assessment by others, especially peers. The editorialists draw a direct connection between physician competency and patient safety.

There is no doubt that practicing medicine is a complex undertaking. In my opinion it is not a bad idea to ask a doctor you are considering for treatment to describe how he/she keeps up with all the knowledge necessary to care for patients like you. Cast this in terms of reducing your worrying rather in terms of challenging his competency. Your prospective doctor may just be proud to tell a worried patient all the ways he/she keeps up with knowledge and techniques.

Failed FDA Surveillance of Medical Devices

Two MDs wrote an editorial about FDA's [ongoing failures](#) to properly detect device failures after approval for marketing, and then being slow to remove those devices from use in medical treatment once the harm is evident. The editorialists write about 2 articles in *JAMA Internal Medicine* that make their point. The first involves recall of a device in Iceland during 2011. The writers note that Iceland has an exemplary system for discovering harmful devices through a national registry. In the specific case described, a defibrillator lead had a 37% failure rate, which placed it far worse than the average failure rate of 8%. It was quickly recalled in Iceland.

The discovery and slow recall of a pacemaker device was used to point a finger at the U.S. FDA. Not only was the FDA slow to discover the problem, but it took 19 months to issue a recall. If that was not enough, the editorialists note that it was a Class II recall, reflecting a low probability of a serious adverse event. The writers felt this did not reflect the harm caused by the device failure, including death.

The authors point out that the FDA has a 'rudimentary' tracking system for device failures. They write about the Unique Device Identifier (UDI) that was supposed to be implemented by device makers to facilitate tracking of harm. Manufacturers have been slow to respond to FDA mandates and the system depends on voluntary compliance. The process is further impeded because the FDA cannot mandate compliance from hospitals and doctors. About 90,000 adverse events are reported to the FDA each month and only a small fraction of these have an associated UDI.

I'll issue a warning to all patients. You cannot ask too many questions about a device recommended for use in your body. How long has this specific device been on the market? Has any device like it been recalled? Has the device or one like it been recalled in another country? How many of these things have you installed doctor?

Abuse of FDA's Regulatory Procedures

A couple of [experts wrote](#) in the *New England Journal of Medicine* about how drug manufactures abuse the regulatory processes set by the FDA. They used the example of Suboxone, a branded medication to treat opioid abuse disorder. This is a quite profitable market if there is no generic competition. The company managed to obtain orphan drug status for Suboxone by claiming they would not recover drug development costs, and then created sham citizen testimonials, and finally abused the FDA's risk mitigation system. All this earned the company \$1 billion in extra profit. This garnered a \$1.4 billion settlement with the federal government for abuses.

The authors propose that Congress enact laws to prevent this sort of abuse. The trick of course is to create laws that do not punish companies that have legitimate, novel products but do restrain companies that wish to gain profits by gaming the system. In my opinion, the quest for profit is so deeply engrained on our culture that clever minds will always find a way to game any system. Perhaps if a few of those who do this spent some time in the slammer, they would think twice before cheating the public.

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Caps on malpractice damages ruin health care:
<https://centerjd.org/content/fact-sheet-new-studies-show-caps-damages-ruin-health-care>

Medical malpractice caps make no sense:
<https://www.citizen.org/article/patient-safety-and-medical-malpractice/>

<https://www.citizen.org/article/the-great-medical-malpractice-hoax/>

Current state laws on med-mal caps:
<https://www.millerandzois.com/malpractice-damage-caps.html>

Trump rule could lead to big Medicaid cuts:
<https://apnews.com/92d6c29decdda97036b97f7c09bb7375>

Networks of doctors find diagnoses for medically undiagnosed conditions:
<https://med.stanford.edu/news/all-news/2018/10/hundreds-of-patients-with-undiagnosed-diseases-find-answers.html>

One in 4 rural hospitals vulnerable to closure:
<https://www.vox.com/policy-and-politics/2020/2/18/21142650/rural-hospitals-closing-medicare-expansion-states>

Number of American children under 6 without health insurance tops 1 million:
<https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/02/19/the-youngest-children-are-falling-out-of-health-insurance>

Propublica asked health insurance companies if they go after fraudulent claims; they laughed:
https://www.propublica.org/article/we-asked-prosecutors-if-health-insurance-companies-care-about-fraud-they-laughed-at-us?utm_source=The+Marshall+Project+Newsletter&utm_campaign=5eab46f928-EMAIL_CAMPAIGN_2019_09_16_11_31&utm_medium=email&utm_term=0_5e02cdad9d-5eab46f928-174269181

CDC advice on Coronavirus:
<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Prepare your home for Coronavirus:
https://www.npr.org/sections/goatsandsoda/2020/02/26/809650625/a-guide-how-to-prepare-your-home-for-coronavirus?fbclid=IwAR1y_HJV8-IrGqzvcNp1xyu02RRB-zyx8VGwtbbNQnZ9nPFbWkZmly9BdM

WHO social stigma with Coronavirus:
https://www.epiwin.com/sites/epiwin/files/content/attachments/2020-02-24/COVID19%20Stigma%20Guide%204022020_1.pdf

CDC Coronavirus preparedness for schools:
<https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/guidance-for-schools.html>

Medical boards not doing enough to protect patients from doctors with history of misconduct, expert says (quotes Azza from Public Citizen!) WMC (Memphis, TN) 2/10/20
<https://www.wmcactionnews5.com/2020/02/10/medical-boards-not-doing-enough-protect-patients-doctors-with-history-misconduct-expert-says/>

First black woman president of Harvard Medical School: <https://www.teenvogue.com/story/lash-nolen-harvard-medical-school-class-president?fbclid=IwAR2SU290tnT9zLrrv1HxAyorRnbZOANVIDmJst6aCi01JABPDFVbAuPT9mw>

Second Coronavirus death in Washington State:
<https://www.seattletimes.com/seattle-news/health/officials-2-men-in-king-county-being-treated-for-covid-19/>

Answer to question: (A) lotion, reference <https://jamanetwork.com/journals/jama/article-abstract/2759002>