

Review of: "The outbreak of lung injuries often known as "EVALI" was nothing to do with nicotine vaping"

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This is a nice review of EVALI and its cause. I agree with most of what is in this paper and commend the author on his work. I agree that VEA appears by far the cause in the majority of patients. Some additional points:

- 1. I recommend refraining from saying all cases were from VEA. Again, I agree that the vast majority were linked to VEA, but there is a consistent small fraction where it can't be linked. This includes in patients who deny THC use and have negative urine testing, as well. It's small, but it's real, and I've cared for some of these patients.
- 2. My educated guess is there's another mechanism in the small group of patients without a VEA link, such as a virus or another infection, and vaping sets the patient up for injury. It could be called something separate from VEA-induced lung injury, but the practical problem is that these cases are hard to separate: as you've mentioned, many patients lie about THC use, and the clinical manifestations (pulmonary infiltrates, hypoxia, elevated inflammatory markers, etc) are non-specific. They also often respond to the same therapies (supportive care, probably steroids). As a result, it's hard for me to see why we should split these patients (VEA vs non-VEA causes) into separate groups. Teaching clinicians about this disease and making the biggest risk factor "inhaling VEA!" in all caps, bolded, underlined, etc. seems more appropriate, in my opinion.
- 3. It is incredibly unfortunate and a tragedy that more people picked up combustible cigarettes as a result of e-cigarette policies. I agree we should all keep in mind combustible cigarettes are by far the biggest avoidable risk here, not e-cigarettes.
- 4. That said, the downsides of e-cigarettes are not discussed in this paper and really ought to be discussed at least a bit. Accumulating data demonstrate increased risk for infections and altered pulmonary and cardiac physiology. We have a good idea they aren't as bad as combustibles, but to be fair they've only been around since 2007, so it's a bit of a leap of faith to assume long-term use is OK. The data to support them as a means for combustible smoking cessation are, in my opinion, really not impressive. Yes, there are some positive studies, but they are studied over short time horizons and relapse rates are high. By comparison, I've had the same number of patients quit smoking via hypnosis as those who quit combustible cigarettes over a sustained period of time. The author has recently been featured in a Pro:Con debate on the Chest podcast series advocating for e-cigarettes as a means to facilitate combustible cigarette cessation and frequently mentions "harm reduction." I think that is absolutely the right way to think of these: less harm, but not harmless. We need to tread lightly.
- 5. I admire the economics argument the author discusses: distributors have a disincentive to cutting their product with VEA because they want their users to continue purchasing their product. While I think this is true, we do need to



- recognize these products and distribution operations are sketchy. It is within reason to me that perhaps some of the non-THC EVALI patients "accidentally" got VEA even though there was no good reason for it to be in their carts. To be clear, this is speculation on my part.
- 6. I recommend treading cautiously with statements like EVALI essentially being over. We still see cases at my institutions. It may just be a contaminated supply in our region. A possibility (which I hope is not true) is that perhaps our institutions are the only ones still looking for EVALI, so we spot them whereas others do not. I think it's important to note that the CDC abandoned EVALI tracking in Feb 2020 because the numbers died off, but also because COVID happened at that time and CDC's resources couldn't be spared to continue tracking. One of the best things we could do from a public health standpoint would be to test for VEA more routinely and ensure it's out of our e-cig supplies. I am very sympathetic toward the author's argument for marijuana legalization. I would love our system to standardize e-cigarette device/contents compositions to help avoid further outbreaks of lung injury in the future, and this route would probably make physicians more apt to recommend them for smoking cessation, too.

In sum, this is a nice article, my nitpicks above notwithstanding. Well done.