

Review of: "Low incidence of daily active tobacco smoking in patients with symptomatic COVID-19"

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This is a review of Miyara, et al (2020). Low incidence of daily active tobacco smoking in patients with symptomatic COVID-19. Qeios. doi:10.32388/WPP19W.3.

1. The first concern is with the definition of smoker vs. non-smoker. Quoting the methods:

Daily smokers are individuals reporting daily smoking or reporting a daily frequency of the number of cigarettes (manufactured or rolled) or other tobacco products (cigars, cigarillos, pipe, shisha)¹³. Occasional smokers are individuals reporting infrequent, but not daily smoking. The group of ex-smokers included anyone having smoked in the past, occasionally or daily, and had abstained from smoking prior to the time of investigation. The term "never smoker" designated people who had never smoked. The quantities of tobacco smoked were calculated using the following equivalences: 1 cigar = 1 cigarillo = 2 cigarettes.

The distinction between daily and occasional smokers seems reasonable, but the definition of former smoker may be problematic as written. "Abstained from smoking prior to the time of investigation" does not take into account a significant history of smoking directly leading up to admission, and may skew the categories towards "ex-smoking" while underlying health issues from prior long-term smoking may be present.

2. For the statistics regarding inpatient vs. outpatient, there are significant differences with high blood pressure and COPD, with more occurring in the inpatient group. While HBP can have many causes with smoking being one of them, a majority of COPD cases occur in smokers, so a statistically significant increase in COPD the inpatient population casts some doubt on smoking being protective.

3. For the comparison against the population smoking questionnaire, which has a smoking rate of approximately 0.25 (roughly averaging age differences), your data show a very significant decrease in current smokers in both inpatient and outpatient relative to the population. I cannot exclude that this effect is an artifact of your questionnaire as described in bullet 1, as "former smokers" were not included in your comparison group and could include very recent quitters, or even people who quit upon admission. Finally, and I believe this to be the most significant piece of data supporting the null hypothesis, the prevalence of never-smokers in the general population is approximately 0.75, if one subtracts the smoking incidence rate from 100. In your patient groups, non-smokers are strongly under-represented by about a factor of 2 relative to the general population, with 31% of outpatient and 32% of inpatient being labeled as never-smokers. This suggests to me that any amount of smoking actually puts one at risk for contracting COVID-19 as defined by this paper.