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INVITED COMMENTARY

Occupational exposure and risk of transmission of SARS-CoV2 among European anaesthetists

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This Invited Commentary accompanies the following correspondence article:
Schmid B, Meybohm P, Hartmann K, *et al.* Estimate of exposure to SARS-CoV-2 and performance of high-risk interventions by European anaesthesiologists: A Pan-European cross-sectional survey. *Eur J Anaesthesiol* 2021; **38**:1293–1295.

The degree of occupational exposure as well as the risk of transmission of SARS-CoV2 is understandably at the forefront of questions amongst members of the European Society of Anaesthesiology and Intensive Care (ESAIC). In this issue, Schmid *et al.*[1] report the results of a recent ESAIC survey designed to estimate the exposure of European anaesthesiologists and intensivists to aerosol generating procedures (AGPs) as well as the rate of SARS-CoV2 positivity.

As with many web-based surveys, inherent limitations include very limited response rates (4.1% of all eligible ESAIC members), self-selection bias, nonresponse bias, detection bias and sampling bias. In addition, 62% of respondents were from Germany, thus the sample may not be regarded as representative. These shortcomings are reported in the text as well as the accompanying CHERRIES[2] checklist. Furthermore, the results concern the first wave of the pandemic in early 2020 when access to personal protective equipment (PPE) and to testing for the presence of SARS CoV-2 may have been limited.

Limitations notwithstanding, interesting findings were presented. Although it is unsurprising that the majority of those surveyed reported direct work-related contact with at least one confirmed COVID-19 patient, 61% reported that they had not always known of their patient's SARS-CoV2 prior to exposure. Only 56% reported having performed at least one AGP, perhaps lower than may be expected considering that anaesthesiologists and intensivists are generally responsible for airway and respiratory related procedures. Of those who had performed a high-risk intervention, 31% reported not having worn PPE. This finding is also difficult to interpret since 'PPE' was not well defined in the questionnaire. A further source of bias is the assumption that patients who were 'never tested' were considered to be SARS-CoV2-negative.

Almost a fifth of respondents reported that their institutions did not have mandatory testing rules for all non-emergency patients. As the number of respondents per institution was not reported, it is possible that individuals from a few institutions without mandatory testing may have skewed the responses. A disturbing finding is that despite the high risk of work-related and community exposure, a third of the cohort reported never having been tested and, of these, 56% were not tested despite reported contact with COVID-19 patients.

Although this survey is unable to estimate adequately the exposure to AGPs or the rate of SARS-CoV2 positivity among European anaesthesiologists and Intensivists, we applaud the authors' efforts in launching and conducting this survey during a defining time in the history of anaesthesiology and intensive care medicine. We acknowledge that online surveys are inherently limited in terms of scope and susceptibility to bias, thus compromising the quality of data. In order to mitigate this, we appeal to ESAIC members for their help in gathering robust information on issues of importance to the ESAIC membership by joining future ESAIC surveys.

What might ESAIC and its members learn from this survey? Firstly, measures to protect anaesthesiologists

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from COVID-19 contamination were insufficient and not widespread in Europe, at least during the first months of the pandemic. This also questions risk perception amongst healthcare workers regarding infectious diseases. Secondly, the ESAIC and other similar scientific societies could be more reactive in providing rapid access to medical information and develop guidelines or short statements that could help professionals convince decision makers in their respective countries. Thirdly, surveys are tools that have advantages and disadvantages, and they should be conceived not only to be able to 'describe' complex phenomena but also to facilitate change. In this respect, the authors conclude that: 'Appropriate measures to maintain the proper functioning of the (anaesthesiologic) healthcare workforce will be of utmost importance'. We have not only no doubts about the authors' contention but also acknowledge the heterogeneity of social, economic and political circumstances in the countries with members in ESAIC. Therefore, this 'pan-European' survey is unlikely to lead to proposals for workable solutions that might be implemented uniformly in members' countries. The results of surveys such as this should, therefore, be considered descriptive and explorative.

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References

1 Schmid B, Meybohm P, Hartmann K, *et al.* Estimate of exposure to SARS-CoV-2 and performance of high-risk interventions by European anaesthesiologists: A Pan-European cross-sectional survey. *Eur J Anaesthesiol* 2021; **38**:1293–1295.

2 Eysenbach G. Improving the quality of web surveys: the checklist for reporting results of internet E-Surveys (CHERRIES). *J Med Internet Res* 2004; **6**:e34.