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Letter

**Klauss Kleydmann Sabino Garcia**[a,b,c]
https://orcid.org/0000-0003-2268-8742

**Cristiano Barreto de Miranda**[c]
https://orcid.org/0000-0001-8219-2613

# Letter to the article "Notification of work-related COVID-19: a descriptive study of sociodemographic and occupational profile, Brazil, 2020 and 2021"

## *Carta ao artigo "Notificação de covid-19 relacionada ao trabalho: estudo descritivo sobre o perfil sociodemográfico e ocupacional, Brasil, 2020 e 2021"*

[a] Universidade de Brasília, Núcleo de Medicina Tropical. Brasília, DF, Brazil.
[b] Universidade de Brasília, Faculdade de Ciências da Saúde. Brasília, DF, Brazil.
[c] Ministério da Saúde, Secretaria de Vigilância em Saúde e Ambiente, Departamento de Vigilância em Saúde Ambiental e Saúde do Trabalhador. Brasília, DF, Brazil.

**Contact:**
Klauss Kleydmann Sabino Garcia
**E-mail:**
klauss.garcia@saude.gov.br

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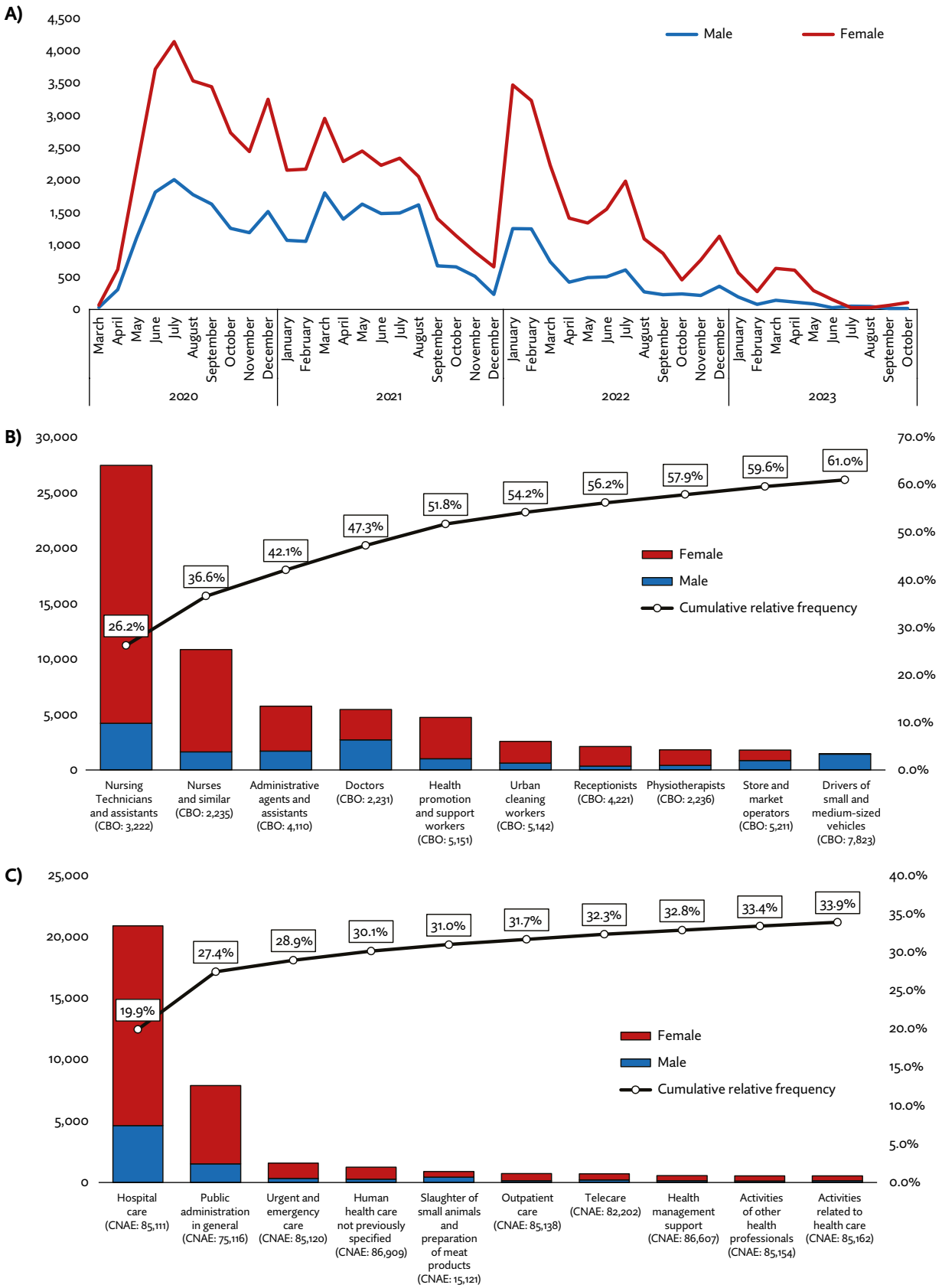
Compliments to the authors[1] of the article "Notification of work-related COVID-19: a descriptive study of sociodemographic and occupational profile, Brazil, 2020 and 2021", which addresses aspects of work-related (WR) COVID-19, based on data notified in the Notifiable Diseases Information System (SINAN – *Sistema de Informação de Agravos de Notificação*). The article includes an epidemiological analysis that covers aspects of "person", "time", and "place". Further clarification of health information systems combined with improved epidemiological arguments would be beneficial for a better understanding of the WR COVID-19 transmission scenario.

Firstly, it's worth clarifying that SINAN's occupational accident form is intended for reporting work typical accidents, commuting accidents, and violence that occur in the workplace or during work. Its exceptional use to record cases of WR COVID-19 was intended to guarantee relevant information for Occupational Health Surveillance (Visat – *Vigilância em Saúde do Trabalhador*)[2].

Secondly, in order to improve the results interpretation, it is useful to note that in 2019 the state of Espírito Santo (ES) started using the e-SUS VS system (Unified Health System - Electronic Health Surveillance; *Sistema Único de Saúde-Vigilância em Saúde eletrônico*)[3] for epidemiological monitoring. This has made it easier to adapt the state's notification/investigation forms. WR COVID-19 notifications were made on the COVID-19 e-SUS VS form and have accounted for around 21,000 cases since 2020 in the state.

In Brazil, 46,193 cases were recorded in 2020, 39,841 in 2021, 36,318 in 2022, and 4,121 in 2023, until October. (Total: 126,473) (**Figure 1**).




Source: Sinan - Ministry of Health, access thorugh e-SUS VS - Espírito Santo State Health Department; Brazilian Classification of Occupations - CBO; National Classification of Economic Activities - CNAE.

A) Series of cases of work-related COVID-19 in Brazil, by sex; B) The 10 most frequent occupations among cases of work-related COVID-19; C) The 10 most frequent economic activities among cases of work-related covid-19.

**Figure 1** Distribution of work-related COVID-19 cases, from March 2020 to October 2023, in Brazil (Total: 126,473)

Calculations of incidence rates, essential for a deeper interpretation of the risk among workers, would add relevant information. Thus, the average rate (annual average of cases [2020-2022]/population economically active and occupied [2022] * 100,000)[4] from 2020 to 2022 was 41.0 cases/100,000 workers, among female workers the average rate was 65.0/100,000, and among male workers it was 23.0/100,000.

The authors[1] highlighted a higher percentage of notifications related to mid-level technical professionals (Major group 3 of the Brazilian Classification of Occupations (CBO – *Classificação Brasileira de Ocupações*)) followed by science and arts professionals (Major group 2). However, they did not highlight the occupations (occupational families) with higher notification frequencies. In the period analyzed here, the most frequent occupational families were nursing technicians and assistants (CBO: 3222), corresponding to 26,2% of notifications in the period, followed by nurses (CBO: 2235), accounting for 10,4% of notifications (**Figura 1B**).

Although the article[1] covers information on occupation, it did not analyze the "Economic Activity" variable (National Classification of Economic Activities (CNAE – *Classificação Nacional de Atividades Econômicas*)), which is also relevant to Visat. Knowing the economic activity helps to identify situations of exposure to occupational risks. For example, nurses (CBO: 2235) can work in hospital environments (CNAE: 85111) or in administrative environments in the public sector (CNAE: 75116). The different types of activities imply different levels of exposure. The most frequent economic activities were "Hospital care activities" (CNAE: 85111) corresponding to 19.9% of notifications and "Public administration in general" (CNAE: 75116) responsible for 7.5% of notifications (**Figure 1C**).

Visat is strengthened with qualified information on occupation, combined with knowledge on economic activities, and can conduct surveillance actions and support policies for the promotion, prevention and comprehensive care of workers' health[5,6].

It is important to highlight the heterogeneity between the states in terms of how Visat is structured, with implications for reporting capacity. Although SINAN is a valuable data source, underreporting does not allow us to know the WR COVID-19 real national scenario.

Furthermore, the incompleteness of the "CAT issuance" variable, in addition to revealing cases underreporting, may also be related to the informality growth in the labor market and the lack of health professionals' training in filling out notification forms. The Work Accident Communication – CAT (*Comunicação de Acidente de Trabalho*) is only issued to workers with formal employment contracts, who are insured by the National Social Security system.

Finally, in the article's conclusion, the authors mention the importance of understanding the workplace as a source of transmission of the SARS-CoV-2 virus. However, it's worth remembering that the responsibility for surveillance is shared between various bodies, and the role of the Workers' Health Reference Centers (Cerest – *Centros de Referência em Saúde do Trabalhador*) and the working population as active and vital players in the surveillance process deserves to be highlighted.

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Klauss Kleydmann Sabino Garcia,
Cristiano Barreto de Miranda

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