



BACKGROUND

Globally, by May 2020

- 3.8M people infected with SARS-CoV-2
- ~20% were healthcare workers (HCW)
- 11.6x higher risk for HCV vs general population

In Kyrgyzstan, by Sept 2020

- 3,173 HCW had gotten COVID-19
- 17% of infections in country were among HCW
- 22 cases per 100 HCW

METHODS

We conducted a nested case-control study in 6 hospitals from 1 June 2020 to 30 May 2021

Day 1: Survey, using structured questionnaire

Day 2: ELISA and PRC testing

Day 3: Repeated ELISA

HCW with COVID-19 contacts outside of the work setting were excluded.

Cases (n=132):

- a healthcare worker
- exposed to a patient with COVID-19
- in 1 of 6 inpatient hospitals in Bishkek
- SARS-CoV-2 PCR positive & ELISA IgG negative between 1 June 2020 and 30 May 2021

Controls (n=406):

- healthcare worker
- exposed to a patient with COVID-19,
- worked in the same inpatient hospital and at the same time as a case
- negative SARS-CoV-2 PCR and ELISA between 1 June 2020 and 30 May 2021

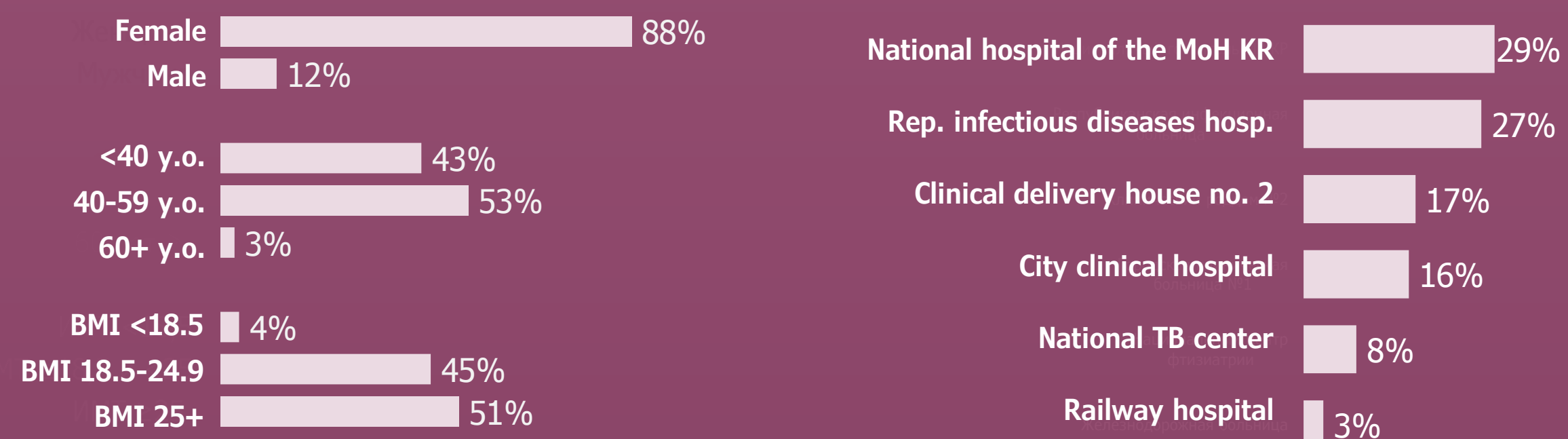
We used conditional logistic regression to identify factors associated w/ COVID-19 in HCW

and

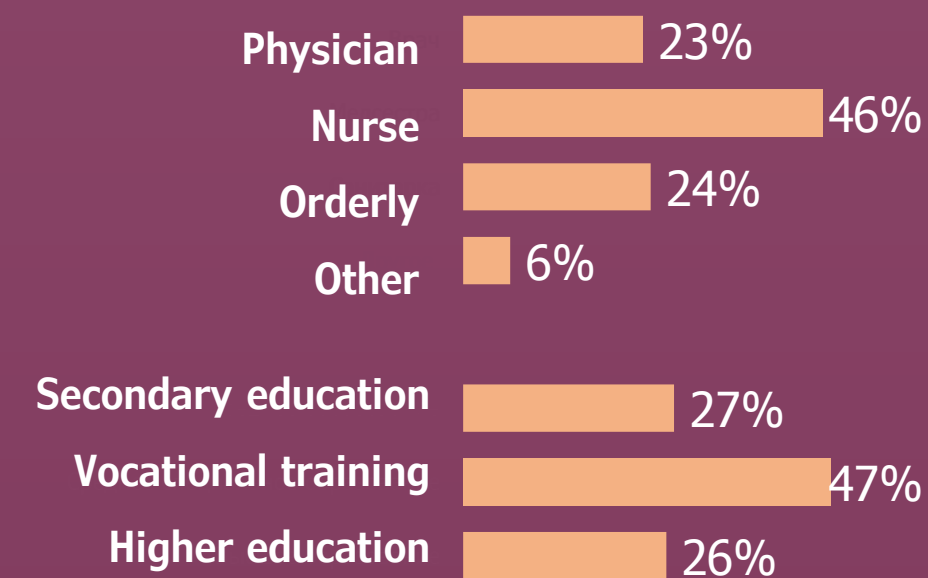
- Described social and demographic characteristics of healthcare workers
- Determined the key clinical characteristics of COVID-19 among healthcare workers

RESULTS

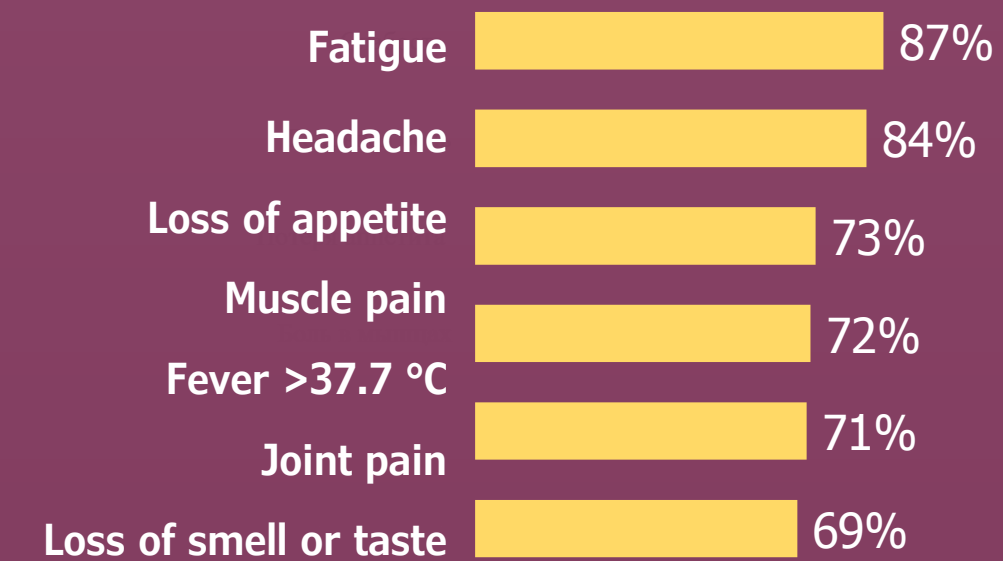
Social and demographic characteristics of healthcare workers



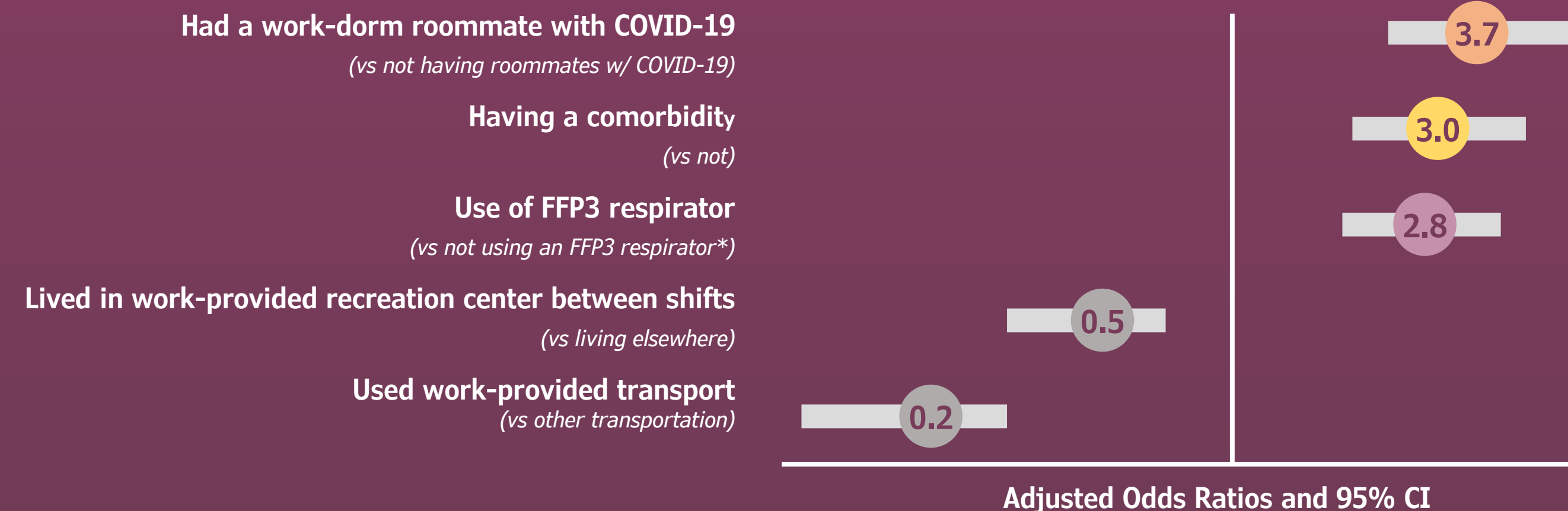
Professional and educational backgrounds of HCW



Primary COVID-19 associated symptoms reported by HCW



FFP3 respirators, dormitories & comorbidities were risk factors for COVID-19



DISCUSSION

- FFP3 filters at least 99% of particles that are 0.3 microns in diameter or larger

BUT

- There was a global shortage of respirators and FFP3 masks used at hospitals may not have been of high quality
- HCW were not always tested for respirator fit nor did they always receive training on correct use of respirators

Limitations:

- Results are not causal
- Survey cannot control for all potential COVID-19 exposures
- Recall bias
- Social desirability bias

RECOMMENDATIONS

- Ensure quality and fit of available respirators and training on correct donning of personal protective equipment
- Draft communication messages, focusing on personal responsibility to protect staff, patients and self
- Ensure proper ventilation in dormitories, where the healthcare are residing during their shifts

Note: Vaccines and self-testing were not options available in Kyrgyzstan during this period in the pandemic

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