

## Introduction

COVID-19 severely overwhelmed the healthcare system leading to an increase in burnout in healthcare workers.

- 20% greater patient volume since COVID-19 (Hwang, 2021)
- Increased demand for healthcare workers

Burnout can be defined as, “emotional exhaustion, depersonalization, and an inability to feel job satisfaction.”

Additional studies have found that healthcare workers with regular close contact to patients are more likely to experience burnout (Galanis, Denning, Murat).

A Canadian study conducted in 2021 assessed burnout, related risk factors, and prevalence of burnout during the COVID-19 pandemic for inpatient healthcare providers (Maunder):

- The study found a 20% increase in provider burnout from 2020-2021

A 2020 survey on nurse burnout and associated risk factors during the COVID-19 pandemic found (Galanis):

- 34.1% of nurses experience emotional exhaustion
- 12.6% of nurses experience depersonalization
- 15.2% of nurses experience lack of personal accomplishment.

## Objective

To determine what factors of COVID-19 affected burnout among inpatient healthcare workers in San Diego County.

## Methods

- Exposure: direct COVID-19 patient care
- Outcome: perceived industry burnout
- Related factors: Staff shortage, PPE shortage, extended hours, fear COVID transmission, increased patient volume
- Target population: inpatient healthcare workers in San Diego County
- Recruitment: conducted via calls, emails, and in-person meetings with local hospitals and faculty members
- Survey: 24 question Google Survey distributed with three sections:
  - Demographics
  - Occupation
  - Burnout related questions

A Spearman's rank-order correlation was run to determine the relationship between total time providing care to COVID patients and perceived industry burnout.

Additional analysis was performed via SPSS to determine the mean values of participant responses to various Likert scale questions regarding COVID-19 factors such as staff shortages, PPE shortages, and extended hours.

## Results

	N	%
<b>Gender</b>		
Female	32	66.7
Male	13	27.1
Prefer not to disclose	2	4.2
Non-binary	1	2.1
<b>Job Type</b>		
Inpatient	30	62.5
Outpatient	18	37.5
<b>Race</b>		
White	28	58.3
Asian	12	25.0
Black or African American	2	4.2
Middle Eastern or North African	2	4.2
Latino	1	2.1
Prefer not to disclose	1	2.1
<b>TOTAL SAMPLE SIZE (N)</b>	<b>48</b>	<b>100</b>

Correlation Coefficient	0.475
Significance	*0.014

There is a positive correlation between time spent caring for COVID patients and perceived industry burnout, which was statistically significant (Spearman's rho (26) = .475, p = .014). The above test only includes respondents who reported working inpatient and directly with COVID patients.

	Inc. Stress	Sleep loss	Appetite loss
Correlation Coefficient	0.676	0.477	0.278
Significance	*<.001	*<.001	0.056

	Mean	Median	SD
Staff shortages	4.98	4	1.176
PPE shortages	2.38	2	1.331
Extended hours	3.23	3	1.418
Fear of transmission of COVID-19	3.71	4	1.304
Increase in patient volume	3.33	3	1.342
Changing guidelines	3.71	4	1.336
Increased stress	4.52	5	0.875
Sleep loss	4.21	5	1.031
Appetite loss	3.13	3	1.265

## Conclusions

- COVID-19 has had a direct impact on healthcare providers in SD county
- Burnout is prevalent amongst our sample of healthcare providers
- Most inpatient healthcare providers surveyed have suffered from burnout related symptoms including increased stress and loss of sleep because of the COVID-19 pandemic

## Policy Implications

- Increased staffing
- Reduced hours with COVID-19 patients
- Access to mental health professionals
- More time off
- More recognition of sacrifice

## Acknowledgements

UC San Diego Health, Scripps Health, Sharp Medical, UCSD Student Health, Rady Children's Hospital, Aurora Behavioral Center, Dr. Nguyen-Grozavu, Naomi Wilcox, and all HCWs

## References

- Denning, M. et al. (2021). Determinants of burnout and other aspects of psychological well-being in healthcare workers during the COVID-19 pandemic: A multinational cross-sectional study. *PLOS ONE*, 16(4). <https://doi.org/10.1371/journal.pone.0238666>.
- Galanis, Petros, et al. (2021, March 25). Nurses' Burnout and Associated Risk Factors During the COVID-19 Pandemic: A Systemic Review and Meta-Analysis. *Wiley Online Library*. <https://onlinelibrary.wiley.com/doi/full/10.1111/inm.14839>
- Giacomo Leo, Carlo. (2021, October 29). Burnout Among Healthcare Workers in the COVID-19 Era: A Review of Existing Literature. *Frontiers in Public Health*. <https://www.frontiersin.org/articles/10.3389/fpubh.2021.750529/full#B23>
- Hwang, K. (2021, August 28). Nurse Shortages in California Reach Crisis Point Amid Delta Variant COVID Surge. *Times of San Diego*. <https://timesofsandiego.com/health/2021/08/28/nurse-shortages-in-california-reach-crisis-point-amid-delta-variant-covid-surge/>
- Maunder, R., Heeny, et al. (2021). Burnout in Hospital-Based Healthcare Workers during COVID-19. *Science Briefs of the Ontario COVID-19 Science Advisory Table*, 2(46). <https://doi.org/10.47326/ocsat.2021.02.46.10>
- Murat, Merve et al. (2020, November 21). Determination of Stress, Depression and Burnout Levels of Front-Line Nurses During the COVID-19 Pandemic. *Wiley Online Library*. <https://onlinelibrary.wiley.com/doi/full/10.1111/inm.12818>
- Sasangohar, F. et al (2020). Provider Burnout and Fatigue During the COVID-19 Pandemic: Lessons Learned from a High-Volume Intensive Care Unit. *Anesthesia and Analgesia*, 131(1). <https://doi.org/10.1213/ANE.0000000000004868>
- Shah, M. et al. (2021). Prevalence and Factors Associated with Nurse Burnout in the US. *Jama Network Open*, 4(2), 1-11. doi:10.1001/jamanetworkopen.2020.36469
- Talae, N. et al. (2021). Stress and Burnout in Healthcare Workers During COVID-19 Pandemic: Validation of a Questionnaire. *PMC*, 1-6. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7275852/>