



Collaborative Healthcare: Lessons from the Las Vegas Military-Civilian Partnership in the COVID-19 Pandemic

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Introduction

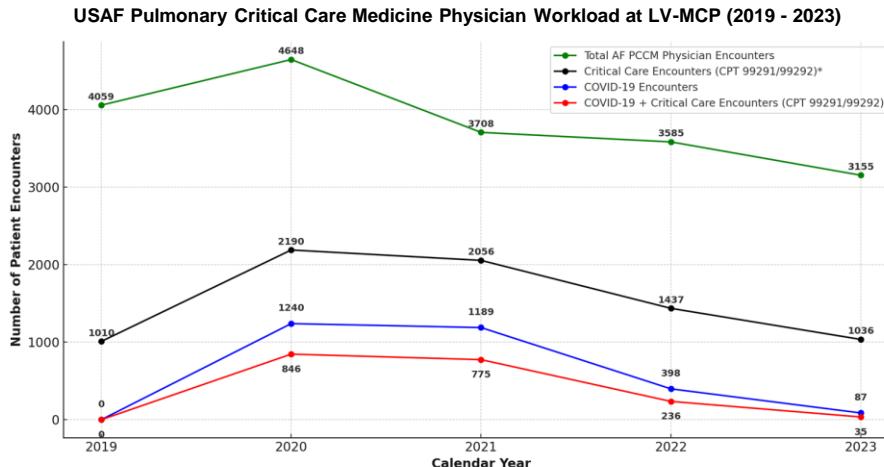
The COVID-19 pandemic exposed critical vulnerabilities in civilian healthcare surge capacity, highlighting the potential for military-civilian partnerships (MCPs) to augment public health emergency responses. The Las Vegas Military-Civilian Partnership (LV-MCP), a unique and comprehensive collaboration, offers a case study in such integration.

Objective

To evaluate the impact of the LV-MCP, specifically the workload of U.S. Air Force (USAF) Pulmonary and Critical Care Medicine (PCCM) physicians, on the Las Vegas civilian healthcare system during the COVID-19 pandemic.

Methods

This retrospective review analyzed USAF PCCM physician workload data at the University Medical Center of Southern Nevada (UMC) from Calendar Years 2019 to 2023. Data included critical care encounters (CPT codes 99291, 99292) and COVID-19 encounters (ICD10 coding). Consistent staffing of five USAF PCCM physicians was maintained, with seven individuals accounting for personnel rotations.



*CPT 99291/99292 = Billing codes for physician-delivered critical care to patients with life-threatening or complex conditions.

Figure 1: Workload trends of U.S. Air Force Pulmonary Critical Care Medicine Physicians at the Las Vegas MCP (2019 – 2023)

Results

From 2019 to 2023, USAF PCCM physicians recorded over 19,000 patient encounters at UMCSN, including a 116% surge in critical care encounters during the 2020 COVID-19 peak (Fig. 1). Notably, 2,914 encounters were COVID-19-related, with 1,892 requiring critical care (Fig. 1). Despite limited PCCM staffing in Las Vegas (1.9 per 100,000 vs. 4.2 nationally), the city avoided federal DSCA activation due to the pre-established LV-MCP, demonstrating the mission-critical role of integrated military-civilian partnerships in crisis response.

Conclusions and Relevance

The LV-MCP demonstrated a highly effective model for military medical support during a protracted public health crisis. Its pre-existing, integrated nature enabled a rapid and sustained surge response, significantly increasing critical care capacity in a medically underserved region without necessitating ad-hoc federal deployments or DSCA. This highlights the value of deeply embedded military-civilian partnerships as a resilient and efficient strategy for future national emergency preparedness, advocating for comprehensive data collection to inform future integrated responses.

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References

1. Centers for Disease Control and Prevention. United States COVID-19 Cases and Deaths by State. Published 2021. Accessed August 20, 2024. <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html>
2. Blumenthal D, Fowler EJ, Abrams M, Collins SR. Covid-19—Implications for the Health Care System. *N Engl J Med*. 2020;383(15):1483-1488.
3. Mani V, Pomer A, Korona-Bailey J, et al. Supporting the nation in crisis: the military health system's role in enhancing public health capacity through public-private partnerships. *Health Res Policy Syst*. 2024;22(1):108.
4. Marklund LA, Graham AM, Morton PG, et al. Collaboration between civilian and military healthcare professionals: a better way for planning, preparing, and responding to all hazard domestic events. *Prehosp Disaster Med*. 2010;25(5):399-412.
5. Gurney JM, John SK, Whitt EH, et al. Data-driven readiness: a preliminary report on cataloging best practices in military-civilian partnerships. *J Trauma Acute Care Surg*. 2022;93(2S Suppl 1):S155-S159.
6. Kuhls DA, Fildes JJ, Johnson M, et al. Southern Nevada Trauma System uses proven techniques to save lives after 1 October shooting. *Bull Am Coll Surg*. Published March 1, 2018. Accessed August 21, 2024. <https://www.facs.org/for-medical-professionals/news-publications/news-and-articles/bulletin/2018/03/southern-nevada-trauma-system-uses-proven-techniques-to-save-lives-after-1-october-shooting/>
7. Kilburn JP, Streit S, Degoes JJ, et al. The Las Vegas military-civilian partnership: an origin story and call to action. *J Trauma Acute Care Surg*. 2022;93(2S):S169-S173.

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