ATS POSITION STATEMENT 2023-01
Impacts of the COVID 19 Pandemic on Trauma Care

Background

The global coronavirus disease 2019 (COVID-19) pandemic was declared by the World Health Organization on March 11, 2020\(^1\) and quickly disrupted the entire healthcare system. While COVID-related case numbers and hospitalization rates have substantially decreased in the United States in recent months\(^2\) and most acute workforce challenges may be easing for the time being\(^3\), it is essential that healthcare organizations and multi-national governmental agencies identify, understand, and create processes to mitigate the vulnerabilities experienced during the COVID-19 pandemic. While the full impacts of the pandemic to the trauma care continuum are unclear, the emergence of preliminary data demonstrates a greater need to highlight and understand the critical factors that have negatively impacted trauma care. We identify three prominent components of the trauma care system that were greatly affected by the pandemic to ensure sustainability of trauma care systems, and ensure trauma survivors are fully supported.

1. Clinical, Administrative, and Workforce Services

Healthcare workforce shortages existed prior to the declaration of a global pandemic.\(^4\) However, the rapid spread of the virus required healthcare workers to grapple with additional clinical and nonclinical stressors, including shortages of personal protective equipment (PPE), COVID-19-related mortality and morbidity, fear of bringing the virus home to loved ones, losing colleagues to the disease, federal vaccine mandates, staff testing, quarantines, family caregiving, and the emergence of COVID variants.\(^5\) Considered as the greatest financial threat to hospitals in history by leading experts, system-wide issues caused by COVID-19 compelled many leadership teams to reallocate critical human and financial resources away from trauma, reduce hours, eliminate or furlough positions, and freeze hiring, all while being expected to continue functioning at a high level and maintain the normal day-to-day operations.\(^6\) Injury prevention coordinators, nurse registrars, quality and safety program personnel, and trauma program managers were reallocated and required to perform bedside care in lieu of solely focusing on their primary roles. For trauma centers, discharging patients to acute care rehabilitation and long-term care facilities was challenging even before the pandemic, but COVID-19 dramatically disrupted the process, making it hard for facilities to accept patients in the midst of outbreaks. Workforce shortages, shortages related to medical transportation services and institutional capacity, and an increased demand related to the number of COVID-19 patients requiring long term care were contributing factors in the crisis.\(^7\)\(^8\)\(^9\)
These shifts quickly hindered trauma centers’ ability to provide crucial services, including community violence prevention and survivor support programs, and meet requirements for maintaining verification, such as having dedicated trauma registrars and timely chart closures.\textsuperscript{10} \textsuperscript{11} \textsuperscript{12} Finances were further threatened as many specialists strategically prioritized procedures and surgery, while outpatient visits were postponed or moved to telemedicine. Despite the benefits of telemedicine for some, not all persons needing care had the capacity to participate and patients had to visit the emergency department or skip care altogether. Many trauma programs went to a remote working model, which increased the need for new expensive technology, such as enhanced bandwidth for large staff meetings and training. While virtual platforms allowed on-site and remote staff to meet and collaborate, they also hindered connections between staff, decreased engagement and participation, and limited meaningful and important interprofessional conversations.\textsuperscript{13} These many issues further strained an already stressed workforce, leading to higher rates of secondary traumatic stress, burnout, emotional exhaustion, compassion fatigue, depression, and suicide.\textsuperscript{14} \textsuperscript{3}

2. Logistics and Supply Chain
Logistics and supply chain management practices were also challenged in an unprecedented worldwide scale. Existing and new limitations in personnel, general and specialty supplies, and equipment occurred and were magnified across the globe.\textsuperscript{15} \textsuperscript{16} Imposed quarantine and physical-distancing protocols resulted in unparalleled workforce and production shortages across numerous industries. A decades-long shift towards Just-In-Time manufacturing and procurement of goods from narrow overseas supply chains exacerbated demand shock brought on by sudden utilization increased during the pandemic.\textsuperscript{17} Many organizations within government and private industries adopted novel manufacturing strategies to meet needs, both small and large. Inter-organizational sharing of resources and a reevaluation of lean inventory management systems common in many healthcare organizations are being reevaluated.

3. Trauma Survivors and Their Families
Although overall trauma cases declined during the COVID pandemic\textsuperscript{18} \textsuperscript{19}, the trauma survivor population was negatively affected in multiple ways. Access to care was reduced as the increase in non-trauma patients overwhelmed the capacity of the health care system across the continuum, while the nation’s blood supply was depleted due to decreased donations and greater need. These effects shifted critical human, material, and financial resources away from severely injured patients, increasing their risk of poor outcomes and placing more stress on providers.\textsuperscript{20} \textsuperscript{21} \textsuperscript{22} \textsuperscript{23} \textsuperscript{24} Higher rates of impaired driving and speeding led to more motor vehicle accidents\textsuperscript{25} more mental health stressors and financial hardships further burdened individuals and communities, increasing the rates of intentional gun violence\textsuperscript{26} \textsuperscript{27}, and lock-downs and quarantines forced more abuser-victim couples into closer confinement at home.\textsuperscript{28} \textsuperscript{29} The attempt to protect patients, family, and staff from the virus, the disruption to the workforce and supply chain, a lack and inconsistency of information regarding the virus and our response, and a rapidly changing environment complicated person-centered care delivery. Psychosocial support programs for survivors were put on hold or cancelled as visiting restrictions kept families and peer visitors from the bedside and lockdowns and quarantines forced social isolation after returning home. This resulted in disconnection and isolation from typical support systems and limited communication between survivors, their loved ones, and members of the care team.\textsuperscript{30} \textsuperscript{31} \textsuperscript{32} \textsuperscript{33} \textsuperscript{34} \textsuperscript{35}

According to the U.S. Department of Health and Human Services (HHS), many of the impacts the pandemic has had on the health care system are cumulative and may not resolve quickly.\textsuperscript{3} Additionally,
while COVID-19 is now endemic and the federal Public Health Emergency declaration is expiring\(^3\) the threat of future pandemics is real.

**Therefore, the American Trauma Society endorses several specific measures to support trauma centers during a global public health emergency, such as the COVID-19 pandemic:**

- Federal, state, and local governments should prioritize funding, research, and legislation that support the needs of a fully functional and resilient health care workforce and supply chain. These efforts should include advancing support programs for providers that reduce their burden of secondary traumatic stress and bolstering the nation’s blood supply through more drives and community donor partnerships.

- Health care organizations, public health departments, and academia should collaborate to prioritize and fund projects aimed at improving supply chain resilience that ameliorate supply and demand shock and shortages.

- Trauma center leadership should work with their institutions to develop and implement pandemic response protocols that will proactively prepare the trauma team for possible staffing and supply issues and guide mitigation strategies when problems occur. These include protocols that 1) set, fund, and enforce minimum short-term thresholds for essential trauma staff requirements during crisis operations designed to maintain patient care safety and quality, 2) evaluate resource utilization to inform appropriate staff and equipment reallocation in times of need (reallocating other clinic staff instead of trauma staff), and 3) ensure injury prevention programs remain fully functional to help mitigate pandemic-related rises in traumatic injury.

- The ACS-COT and state governments should develop and implement pandemic response plan models that enable trauma programs to continually meet all verification standards.

- Federal, state, and local governments, academia, and the private sector should work together to prioritize funding, research, and legislation that further supports rapid development of telehealth and technology for easy, safe, continuous, and effective communication between the trauma center, survivors, and their loved ones. This includes developing and implementing adaptable in-person and virtual support programs that help survivors and families maintain connections with peer visitors and members of the care team during and after hospitalization.

**References**


