

Impact of COVID-19 to PPE supply

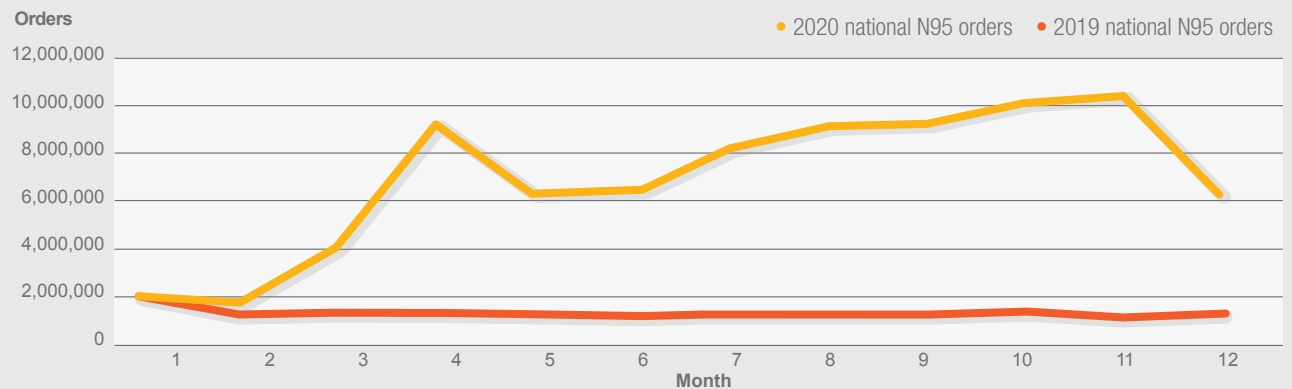
The COVID-19 pandemic is the known cause of the shortage of personal protective equipment (PPE) like N95 respirators. Lesser known or discussed are the underlying dynamics that prevented the healthcare supply chain from quickly recovering from a generational spike in demand.

This Fact File takes a chronological approach to comparing COVID-19 infections as reported by the Centers for Disease

Control and Prevention (CDC) and member purchase orders for N95 respirators from more than 600 Vizient health system members. The N95 respirator orders function as a signal of available supply and the monthly COVID-19 infections represent a signal for PPE. The objective of this review is to highlight what went wrong and identify where key strategies could have led to a different outcome.

N95 respirator orders

Historically, N95 respirator orders from providers have been relatively stable month to month as indicated on 2019 provider order data. Through 2020, as we were in an unstable environment due to COVID-19, providers experienced not only an unpredictable demand, but that demand surged at different times during the year.



COVID-19 infections vs. N95 respirator orders (January–June 2020)

In the first half of 2020, it is clear that the increase of reported infections directly impacted the significant increase of orders for N95 respirators by healthcare providers.

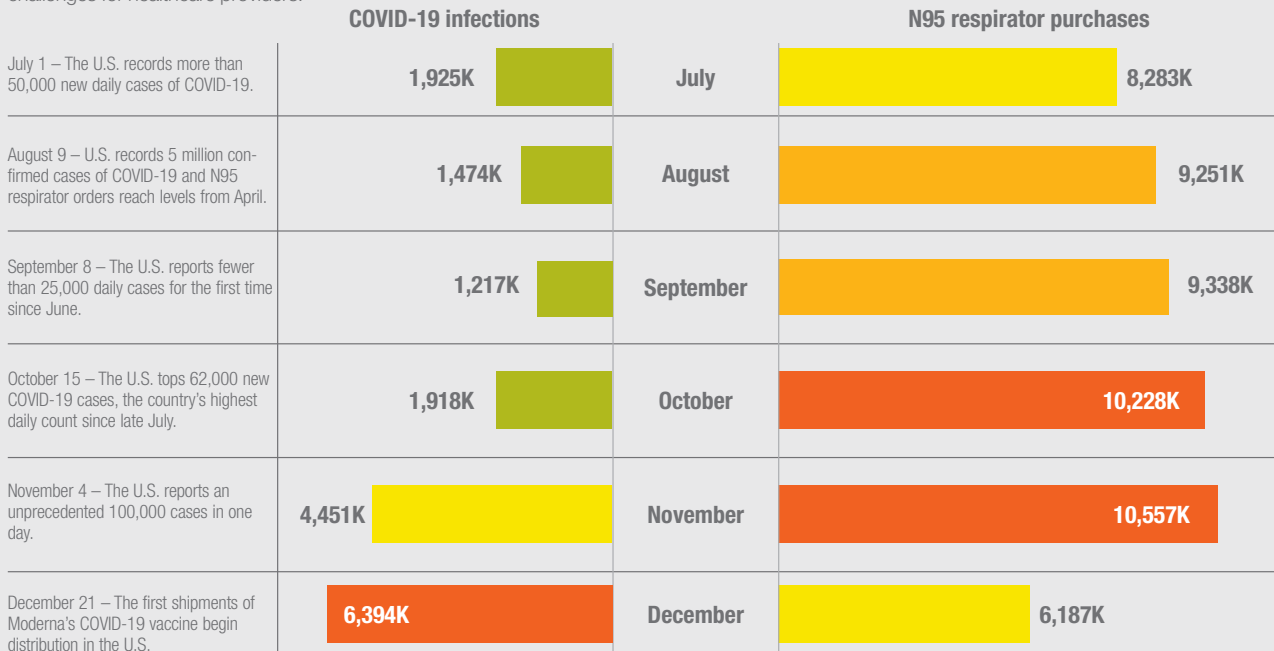
	COVID-19 infections		N95 respirator purchases
January 21 – A 35-year-old man presents to an urgent care clinic in Snohomish County, Washington, with a four-day history of cough, following a trip to Wuhan, China. This patient is widely believed to be the first positive case of COVID-19 in the United States.	OK	January	2,034K
February 3 – U.S. declares public health emergency. The Trump administration declares a public health emergency due to the coronavirus outbreak. The announcement comes three days after WHO declared a global health emergency.	OK	February	1,542K
March 10 – CDC loosens guidelines on N95 use, allowing surgical face masks. Citing an inability for the supply chain to meet the demand for N95 respirators, the CDC identified surgical masks as an alternative.	186K	March	3,949K
April 12 – FDA authorizes sterilization process to allow N95 respirators to be re-used. As N95 respirator orders double again, for the second month, COVID-19 infections increase by almost 10 times.	876K	April	9,308K
May 18 – Moderna announces positive interim phase 1 data for its mRNA vaccine against COVID-19. Orders for N95 respirators begin to fall, suggesting that members are following the guidance of the CDC and using alternative PPE.	725K	May	6,273K
June 10 – U.S. COVID-19 cases reach 2 million, as new infections continue to rise in 20 states. Orders for N95 respirators remain almost flat.	840K	June	6,486K

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COVID-19 infections vs. N95 respirator orders (July–December 2020)

In the second half of 2020, infections continued to rise and orders of N95 respirators continued to peak, causing significant supply chain disruption and challenges for healthcare providers.



Moving forward into the new normal

Supply chain disruptions in healthcare is nothing new; however, COVID-19 exposed what can happen when widespread, global events trigger sustained demand pressures over an entire system. As providers are still managing impacts of N95 demand through waves of COVID-19 infection rates, they are also thinking about ways to improve their response time for the next disruption with earlier warnings of risk. The events of 2020 provided insights and learnings that will have a lasting impact on how the healthcare supply chain of the future must improve and adapt. Evolving the healthcare supply chain will require providers, distributors and suppliers to embrace transparency of supply chain data and collaboration with trading partners.

Strategies to effect change

It's clear that the system failed in April and never quite recovered. From our work with the nation's leading healthcare systems, Vizient has identified three key strategies that when applied could minimize disruption and improve supply resiliency:

1. Expand domestic capacity. For example, plan for broader U.S. supply alternatives and production through non-traditional sources.
2. Synchronize federal and local guidelines. For example, make efforts to develop relationships and coordinate supply strategies with local state emergency management sources.
3. Increase transparency and predictability with data. There are two elements to supply chain transparency: visibility and disclosure. Providers and suppliers must accurately identify and collect data from all links in the supply chain. Additionally, there must be communication of that information internally and externally, and at the right level of detail that is required or desired.

The spotlight is now shining on the healthcare supply chain. As the pandemic continues, as an industry we must respond with agility and flexibility in the short-term, while also working to improve supply chain reliability over the long-term. Building supply chain reliability requires a new way of thinking. It requires trust, transparency and predictability by all trading partners—suppliers, manufacturers, distributors and providers. Email us at resilience@vizientinc.com to learn how Vizient can support your organization's supply chain resiliency initiatives.

About Vizient, Inc.

Vizient, Inc. provides solutions and services that improve the delivery of high-value care by aligning cost, quality and market performance for more than 50% of the nation's acute care providers, which includes 95% of the nation's academic medical centers, and more than 20% of ambulatory providers. Vizient provides expertise, analytics and advisory services, as well as a contract portfolio that represents more than \$100 billion in annual purchasing volume, to improve patient outcomes and lower costs. Vizient has earned a World's Most Ethical Company designation from the Ethisphere Institute every year since its inception. Headquartered in Irving, Texas, Vizient has offices throughout the United States. Learn more at www.vizientinc.com.

