**HERE I AM SUBMITTING THE ARTICLE TO ANSWER THE QD 2...**

**Make sure to focus your answers on recommendations for nursing education that have to do with the role of an APN or APRN**

WASHINGTON – In response to the devastating impact of COVID-19 on the American health system, the National Academy of Medicine (NAM) has convened experts in nine sectors of health, health care, and biomedical research to review how each sector responded to COVID-19, identify challenges encountered in combating the pandemic, and outline opportunities to reinforce, revitalize, and transform the health system including improving health equity for all. These insights are being released as nine *NAM Perspectives* discussion papers, and then bundled into a NAM Special Publication titled *Emerging Stronger After COVID-19: Priorities for Health System Transformation,*which is scheduled to be released in Spring 2022. The NAM Special Publication will include all nine previously published papers and a new concluding chapter that reviews cross-cutting themes and opportunities from the individual papers.

The final two papers in this series, focused on health product manufacturers and innovators and on digital health, were published January 18, 2022. [*Health Product Manufacturers and Innovators COVID-19 Impact Assessment: Lessons Learned and Compelling Needs*](https://nam.edu/health-product-manufacturers-and-innovators-covid-19-impact-assessment-lessons-learned-and-compelling-needs/)focuses on the experience of organizations that research, develop, and manufacture products and services to support health and health care. The discussion paper focuses specifically on five product types: diagnostics, hospital equipment, medical devices, therapeutics, and vaccines.

“We were all impacted early in the pandemic. However, our respective cultures of innovation and our collective mission to make a positive impact on the health and well-being of people around the world helped us remain resilient and flexible, and creatively respond to the challenges that came our way,” said Mathai Mammen, Executive Vice President, Pharmaceuticals R&D, Johnson & Johnson, one of the paper’s co-leads. “The unprecedented collaboration across organizations and between sectors – in particular, to expedite vaccine and therapeutic options to tackle the pandemic, while also continuing to deliver innovation for other unmet medical needs – has been a silver lining to the challenges of COVID-19 and a strength we’ll strive to carry forward.”

The paper identifies how each sub-sector of the health product manufacturers and innovators sector responded to COVID-19, including challenges they faced, creative solutions employed, and areas of focus to strengthen health product manufacturing and services, as well as a focus on ensuring that all activities within the sector prioritize health equity.

“The pandemic has revealed opportunities for leaders and organizations to come together across sectors to strengthen health systems and preparedness and ultimately secure a healthier future for humankind. For example, we must minimize disruption to patient care during crises like this and ensure there is adequate capacity for medicines to continue to be produced and delivered across supply chains around the world,” said Vas Narasimhan, Chief Executive Officer of Novartis and one of the paper’s co-leads. “Most importantly, the pandemic has revealed the need to invest in and support biomedical research, as science-based action has proven once again to rise to the occasion when humanity is most in need.”

The final paper in the series focused on digital health. Digital health tools have become ubiquitous in fields outside of health and health care, and hold significant promise to transform how health care is practiced and how individuals stay well. However, the authors of this paper acknowledge that the pandemic arrived in the midst of a promise that did not entirely deliver.

“Our ability to respond to the COVID-19 pandemic efficiently and effectively was greatly enhanced by the investments our nation has made in digital health,” noted Peter Lee, Corporate Vice President, Research and Incubations, Microsoft, one of the paper’s co-leads. “Unfortunately, we also learned that using these digital capabilities in pandemic response too often required ad hoc and often wildly inventive mobilization of thousands of independent digital systems. While we laud such valiant efforts, a coherent and accessible data infrastructure in the United States would have made it possible to support rapid response to the pandemic without the need for such technological heroism. The successes of digital health were and continue to be significant, but the pandemic experience also has exposed more clearly than ever the need for progress toward this infrastructure.”

[*Digital Health COVID-19 Impact Assessment: Lessons Learned and Compelling Needs*](https://nam.edu/digital-health-covid-19-impact-assessment-lessons-learned-and-compelling-needs/) details successes digital health helped enable across all health care sectors during the pandemic, and identifies opportunities for future innovation, research, development, and implementation. The discussion paper emphasizes the ubiquity of digital health across all sectors of the health care system, and reinforces that it is in the best interest of all sectors to ensure that health data is standardized, secure, private, and easily shared.

“Truly harnessing the full power of digital health and data can help transform how we conduct clinical research and deliver care in this country,” said Amy Abernethy, President, Clinical Studies Platforms at Verily, and one of the paper’s co-leads. “We have learned so much over the last year and a half, and now our priorities are clear — quality longitudinal health data can inform our understanding of which interventions work, and for whom, and ultimately enable a continuously learning health system to ensure every person gets the care they need. We must address health disparities and improve health equity. Security and privacy are also fundamental. To achieve the promise of digital technologies and tools, we’ll need collaboration across every facet of the healthcare system — it’s now upon us to advance this opportunity.”

The two papers, published January 18, 2022, and all other papers in the series, are available at [nam.edu/TransformingHealth](http://nam.edu/TransformingHealth).

The NAM Special Publication*, Emerging Stronger After COVID-19: Priorities for Health System Transformation*, will be released in Spring 2022 and will be available at [nam.edu/publications](http://nam.edu/publications).