

Production and Operations Management Call for Papers Special Issue: Managing Pandemics: A POM Perspective

Extended Abstracts due **Through Manuscript Central till September 21, 2020**

Invited Formal Submissions due January 31, 2021

Guest Editors

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Background

The 21st century has seen a number of pandemics, including SARS, MERS, H1N1, and most recently COVID-19. The last is on an unprecedented scale and may ultimately infect upwards of a billion people and disrupt the lives of the majority of the world's population. Importantly, COVID-19 is revealing deep interconnections between pandemics and production, operations, and supply chain management in unforeseen ways. Examples of negative outcomes include, among many others, the difficulty of ramping medical product manufacturing capacity up, quick response to the crisis, an insufficient installed base of ventilators and related medical equipment that may keep critically ill patients from being treated, hoarding of foodstuffs triggering bullwhip effects, the critical path of vaccination development slowing the timing of vaccination deployment, as well as the fragility of supply chains contributing to overall economic chaos being faced by the world.

We are beginning to see new production and operations choices that are being developed as remedies including novel design of ventilators and localized production of protective gear. A variety of regulatory and de-regulatory responses are being brought to bear, not only to arrest the spread of the pandemic, but also to create healthcare capacity and to ramp up production and distribution of critical inventory. Digital information and connectivity are creating novel models of workflow. Tele-healthcare technologies, systems and procedures are becoming best practice in mitigating physical contacts between people. Collection and dissemination of information, and data analytics, are being used for policy design and for production and supply chain coordination.

This pandemic may beget a new normal, for social and business scenarios, regarding the manner in which supply and demand will be matched. Understanding the role of how Production & Operations Management can affect the development and remediation of pandemics is a critical, but understudied, area of research, both from descriptive and prescriptive perspectives. This special issue aims to begin to fill this gap with research of the highest creativity, relevance, and rigor in order to build a foundation for future work on this new, but critical, problem facing the world.

We welcome all methodologies, including analytical modeling, simulation modeling, operations research tool development, quantitative and qualitative empirical studies, and other rigorous research methods. Multimethod and multidisciplinary articles are especially welcome. We also welcome systematic description of production and operations methods, practices and experiments that relate to the management of pandemics (and, also to epidemics). There are a variety of strategies that are being employed in different parts of the world which are the result of local and cultural variations.

In this special issue, we are exploring the answers to the following question: *What could have been done to mitigate and thereby manage the pandemic created by COVID-19 from a POM perspective?* All papers should create knowledge of relevance to the practice, with a theory base, of involved industrial, government and public or healthcare sectors.

This special issue cuts across many POM research areas that are important to manage pandemics. These include but are not limited to:

1. **Public Policy Issues:** Public policy that supports balancing the demand and supply for healthcare supplies, foodstuffs, and other critical items; testing and quarantine protocols; coordination among the government agencies.
2. **Public-Private Partnership:** Development of public-private partnership to improve rapid response of public health and other government operations; new business ventures' ability to improve production and supply chains in response to a pandemic.
3. **New Product Development:** Accelerated development and production of medicines, vaccines and equipment; coordination among scientists, researchers, doctors and politicians. Innovations in testing for the virus to determine the extent of the spread along the critical timeline.
4. **Supply Chain Configurations:** Operations and supply chain continuity; sourcing issues, managing supply chain disruptions, in healthcare supplies, foodstuffs, and other critical areas, created by a pandemic.
5. **Capacity Planning:** Short-term (including mobile) and long-term capacity for health care and hospital personnel, beds, medicines and critical care equipment; healthcare operations during a pandemic. There is an opportunity to develop flexible manufacturing and service systems that can switch from "peace time to war time outputs.
6. **Disease Spread:** Short- and long-term forecasting of the pandemic spread, warning signals, information technology, role of social media, public and national cultures in containing the spread of disease. POM practices that cater for critical differences between epidemics and pandemics.

Note: Knowledge Sharing: We will make this issue available to the general public free for five years after publication.

We wish to fast track the development of this special issue through the following steps.

1. Initial Submission. This will be an extended abstract (8 Pages, 12 Font, Line Spacing 1.5, Plus Figures and Data Tables). The first page of the abstract should describe the relevance, theory and practice of the research to one of the topics listed above. This should be submitted to manuscript central (<https://mc.manuscriptcentral.com/poms> - while submitting please be sure in Step 1 to identify in that abstract is being submitted for the special issue). Due date for submission: September 21, 2020. Decision due date: November 30, 2020.
2. If the abstract is accepted, the authors will be invited to submit the full-length paper. A virtual mini conference may be held with the authors of accepted abstracts in December, 2020. This conference will focus on the development of the promising submissions.
3. Submission of full-length paper (Round 1): Due date: January 31, 2021. Decision due date: April 1, 2021.
4. A special feedback session for the promising papers will be organized at the POMS 2021 Conference, Atlanta, GA, USA, April 29-May 3, 2021.
5. Final Submission (round 2): Due date: May 31, 2021, Acceptance decision due date: July 31, 2021.