Workshop Paper: Building on the Fly by Design

Issue:

1. The United States faces an urgent need to develop agile, scalable, and innovative healthcare response mechanisms to manage catastrophic events, particularly in worst-case scenarios such as large-scale combat operations with a near-peer adversary.
2. The current emergency response framework is constrained by existing operational models and lacks the ability to rapidly scale resources and infrastructure to meet extreme mass casualty events.
3. Building on the Fly by Design is a federal interagency initiative led by the National Institute for Defense Health Cooperation (NIDHC)) and supported by the University of Nebraska Medical Center (UNMC) aimed at preparing our nation for catastrophic events.
4. Building on the Fly by Design aims to develop a **more effective and efficient process** for imagining requirements, determining potential solutions, and developing operationally feasible plans for rapidly building capacity to address needs during worst-case scenario events when needs far exceed what can be sustained under steady state operations.
5. Department of Defense and federal interagency partners were convened in Omaha in March 2025 to discuss scenario elements intended to test and validate the Building on the Fly by Design process during the broader stakeholder meeting in December.

Purpose:

1. The December Meeting in Bethesda will convene stakeholders from the federal government, civilian healthcare, academia, industry, and non-governmental organizations to **test a process that moves beyond incremental adaptations** to develop bold, transformative solutions that dynamically adjust to extreme healthcare crises.
2. The meeting will provide a unique opportunity to observe **decision-making under extreme stress** and capture insights that will inform the development of a decision framework for guiding decision processes in future catastrophic healthcare events.

Problem:

1. Current healthcare and emergency response systems operate within the constraints of pre-existing infrastructure and traditional response protocols. These **models do not sufficiently address large-scale, high-intensity emergencies** that overwhelm the nation's capacity. Existing solutions rely heavily on steady-state operations and do not leverage non-traditional resources. Without a proactive, structured approach, emergency response efforts will continue to be reactive and ad hoc, leading to inefficiencies and gaps in care delivery.
2. Decision-making during crises operates outside typical, structured methodologies. Senior leaders must make critical choices with limited information, constrained resources, and evolving threats. T**here is no unified framework to evaluate and anticipate these**

decision-making processes, yet high-pressure environments demand rapid and effective decisions by senior leaders holding unique authorities. Understanding how, when, and why these decisions are made is essential for developing a systematic approach that ensures coordinated, effective responses.

Goals/Outcomes of the Workshops:

1. Test the foundational technique for executing the Building on the Fly by Design process, ensuring it is adaptable, operationally feasible, and supports innovative problem-solving in extreme crises.
2. Assess decision-making in high-pressure environments under conditions of uncertainty.
3. Identify critical operational and policy gaps across the 4S framework (Space, Staff, Stuff, Systems).
4. Generate a small but focused set of actionable, cross-sector solutions for rapid healthcare surge capacity.
5. Produce a blueprint for action during health emergency catastrophes that provides a roadmap for federal, civilian, and industry partners.

Conclusion:

This meeting represents a unique opportunity to **redefine how the nation prepares for catastrophic healthcare challenges**. Through collective expertise and cross-sector collaboration, we can lay the groundwork for a strategic, proactive, and scalable healthcare response model that meets the demands of future crises.