

Hospital Pandemic Surge Management Plans

Project Summary:

Under surge conditions, such as due to natural disasters pandemics, a hospital system is faced with many-fold increases in urgent care needs, resulting in extreme demands for and shortages of patient space, critical supplies and equipment (for care delivery and personal protection), and various types of staff. In response typically hospitals respond by repurposing patient and non-patient space to meet demands, adapting makeshift equipment policies, expediting supply chains, and invoking emergency staffing policies. Often these decisions are made in near real-time in response to emerging conditions without the benefit of sufficient scenario planning.

The objective of this project is to develop a simulation model of appropriate type, scope, and detail to help analyze the performance and effectiveness of a hospital's surge planning policies under a variety of potential future events and conditions. Results will be piloted for at least one hospital system in detail and verified for utility by input from a few others, such as by seeking input during preliminary, mid-stage, and final design reviews in the standard engineering lifecycle manner. Deliverables include a working analysis model, results of its use to analyze and compare existing and potential surge management policies under a representative range of potential future conditions, and policy improvement recommendations.

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Project Aim

- Develop and apply a simulation model of to help analyze the performance and effectiveness of a hospital's surge management planning policies under a variety of potential future events and conditions.

Background

- Under surge conditions, a hospital system is faced with many-fold increases in urgent care needs, resulting shortages of patient space, critical supplies and equipment, and various types of staff.

Deliverables

- A working simulation analysis model, results of its used to analyze and compare existing and potential surge management policies under a range of potential scenarios, and policy improvement recommendations

