

ICED: Incident Command for Emergency Departments. Results of a customer satisfaction survey for a novel command and control tool

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INTRODUCTION: Disaster management for emergency departments is often problematic. Although an organized system of command and control is often needed to manage the additional chaos brought on by the disaster, emergency physicians are often ill prepared for the situation. Although several current systems exist for command and control structure, including Incident Command System (ICS) and Hospital Incident Command System (HEICS), these systems are extremely comprehensive, and simulation physicians often comment that the systems are too complex. The Incident Command for Emergency Departments (ICED) system represents a novel instrument for emergency department management during disasters. This simplified incident command system consists of an introductory text, a simplified organizational chart with only thirteen color coded positions, job actions sheet for each position, and a set of only five forms.

METHODS: A customer satisfaction survey was administered to four groups of participants of a computerized simulation program (SurgeSim, Edmonton, AB, Canada) to assess their satisfaction with ICED. Participants were given a short lecture (approximately 30 minutes) about the ICED system and then partook in a group simulation lasting approximately one hour where the ICED system was used for command and control. During the simulation, participants had access to the ICED documents including organizational chart, job action sheets, and forms. Following the simulation, participants completed a short questionnaire regarding the use of ICED during the simulation. The survey instrument consisted of five statements rated on a five-point Likert scale to assess perceived needs, nine questions rated on a seven point scale to assess satisfaction with the ICED product, and as series of open and closed ended questions regarding potential future product features.

RESULTS: Seventy-nine surveys were collected. This included 19 staff physicians, 50 residents, and 10 who did not specify occupation. Most participants agreed strongly with the statement: "An organized command-and-control structure is needed during a disaster": 67/79 (85%) scored strongly agree while, while 5/79 (6%) scored agree. 71/79 (90%) respondents agreed that ICED had helped the group to manage the simulated disaster. 58/79 (73%) agreed that they would be comfortable using ICED in a true disaster, and 69/79 (87%) participants agreed that they would encourage their

department to adopt the ICED system. Overall Satisfaction with the ICED program was high, with 67/79 (85%) of participants scoring 5 or higher on the 7 point scale. Among the various components of the ICED system, the satisfaction score was highest for the job action sheet component (mean=5.7/7) and lowest for the introductory text (mean=5.2/7). The most frequently requested additional features were an electronic (tablet) based version of ICED program (29/79 participants)(37%), inclusion of positions outside the emergency department in the organizational structure (26/79)(33%), online training in ICED (25/79)(32%), and a longer training session in ICED (24/79)(30%).

CONCLUSIONS: The ICED system, a simplified version of incident command system, was well received by staff physicians and emergency medicine residents for use during a computerized disaster simulation. Potential development of an electronic tablet based version of the system, and inclusions of additional positions within the organizational structure may help improve the product.