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## COMPETITIVE DIVISION – ACADEMIC

### Volunteer Management Systems during Response and Recovery: Challenges and Opportunities

This study is concerned with volunteer management systems (VMSs) that seek to incorporate spontaneous volunteers into organized relief efforts. We use the term spontaneous volunteer management system to describe the process an organization follows to acquire spontaneous volunteers and assign them to duties. This definition includes (i) Points of Distribution (PODs), which can be thought of as the retailers of the humanitarian supply chain where relief supplies are distributed directly to beneficiaries; (ii) physical or virtual volunteer reception centers (VRCs) that focus on volunteer registration, training, and deployment; and (iii) the volunteer supply chain network which includes interactions among multiple PODs and/or VRCs.

We propose a comprehensive analysis of performance measurements for volunteer management systems that considers the perspective of all stakeholders: the organizations (or volunteer supply chain), the volunteers, and the beneficiaries. Data on VMS were collected during three events, namely Hurricane Florence in North Carolina, the 2019 February 23<sup>rd</sup> tornado in Columbus, Mississippi and the March 3<sup>rd</sup> tornadoes in Lee County, Alabama. During these events data were collected through semi structured interviews and participant observations. Semi structured interviews with stakeholders helped to determine perceptions of what the key performance indicators should be and also the key VMS decisions that

influence the performance indicators of interest. Findings will provide suggestions and discuss challenges and opportunities for improvement of VMS. Understanding and measuring performances of VMS is important in order to better incorporate volunteers into official response and therefore shorten both response and disaster recovery.

**Collaborators:**

Maria Mayorga, Professor, Department of Industrial and Systems Engineering North Carolina State University; Lodree Emmett, Associate Professor, Department of Information Systems, Statistics and Management Science, University of Alabama

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