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#### **Drills' After-Action Reports analysis in relation to Emergency Management Cycle**

Emergency Management (EM) Cycle -prevention, preparedness, response, recovery, and mitigation-was established in early 20th century. This study aims to clarify each phase's role and how data-driven decision improve outcomes. A retrospective review of 200 After-Action Reports (AAR) from 2023 - 2024 drills at Johns Hopkins ARAMCO was conducted. AAR deficiencies were classified as minor or major. Nineteen drills AAR showed major Deficiencies. Using Excel, variables were analyzed (1 = Yes 0 = No) to assess central tendency. In the prevention phase, reporting was key to risk management (68%). In Preparedness phase, drill participation contributed 68% to success. In Response phase, Capacity, Capability and Competency were identified as the primary surge success driver with a 96% central tendency. In Recovery phase, redundancy in systems and cross-training supported continuity. Based on the extracted data from the AARs, EM cycle implementation and understanding is vital in pre incident, during incident and post incident management. Conducting drill, collecting AAR, and classifying deficiencies (gaps) to minor and major is a promising way that guide emergency managers to engage leaders and enhance identifying potential key success elements. This analysis supports key

critical actions must be a focus of emergency managers to consider is each phase of the EM cycle.

**Presentation Theme:** Research, experience, practice

**Collaborators, Advisor(s) and Department(s) that assisted with this research:** Dr. Abdullah Alhadhira. Co-Researcher