

## Mass Casualty Incident Consensus Statement Rationale

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**Background:** While the US homicide rate has decreased over the last 40 years<sup>i</sup>, mass casualty incidents (MCI) have unfortunately become increasingly common<sup>ii</sup>. A feature of any MCI is that existing capacity is rapidly overwhelmed in the early phases of an event. The MCI challenge is defined by the rate at which victims needing life-saving resources are generated by the event. This rate is termed “event velocity”. The response to an MCI is not only the triage of resources to primary life saving but also the rapid development of “surge capacity”. Lessening the gap between event velocity and surge capacity development is the life-saving problem to solve.

While the bulk of experience with MCIs is military, the growth of civilian MCI frequency has exposed several key weaknesses in the civilian system:

- Civilian hospitals have minimal “surge capacity” because to remain economically viable, personnel and supplies are scaled to be nearly 100% utilized on a “normal day” volume.
- Hospital systems such as registration, computerized order entry, blood bank, radiology, and electronic health records systems are developed for maximal reimbursement, not scalability.
- Altered standards of care commonly occur in MCIs but are neither taught nor openly discussed in the commercial medico-legal context.

These structural weaknesses cause “brittle” failures in the normal operating systems of civilian hospitals. A brittle failure refers to the collapse of a needed functionality due to the inability of the system to adapt to the event velocity. A modern computer driven hospital is particularly at risk for brittle failures.

### MCI Consensus Statement Goals:

- An MCI consensus statement, authored by leading emergency and trauma physicians involved in the recent spate of MCI events; directed at addressing the key problems and areas of improvement for civilian hospitals; is in the public interest.
- An MCI consensus statement process used to compile empirical data and experience from recent events to better characterize critical system failures, may generate a solution set organized around identifying and solving the issue of brittle hospital system failures.
- An MCI consensus statement of this sort would inform the planning of multiple Federal agencies to include: the National Disaster Medical System (NDMS), The Department of Homeland Security (DHS), The Agency for Healthcare Research and Quality (AHRQ), and the Hospital Resources and Services Administration (HRSA) to set funding priorities and identify needed regulatory changes to address this new public health threat.
- Without data, the planning for these high acuity, low frequency MCIs will be guided by supposition. While in any single location, these events will hopefully remain low frequency, nationally, they represent a new public health threat.

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<sup>i</sup> Homicide in the US Known to Law Enforcement, 2011, Erica L. Smith and Alexia Cooper, Ph.D., US Dept of Justice, Office of Justice Programs Bureau of Justice Statistics, NCJ243035 December 2013, pg 3-4

<sup>ii</sup> US mass shooting becoming more frequent-and more deadly, The Guardian US edition, Mona Chalabi, Dec 2 2015, 18:46EST <https://www.theguardian.com/us-news/2015/dec/02/mass-shootings-in-america-numbers-more-frequent-more-deadly>