CASUALTY ESTIMATION AND
THE STATE MEDICAL/HEALTH RESPONSE TO DISASTERS

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Introduction

The purpose of this paper is to outline specifications for a model capable of providing detailed estimates of the casualty related impact of major earthquakes. The paper focuses on using this model for disaster medical planning and response, although it would also assist policy development and mitigation and prevention efforts. The model would help to bridge the information gap that invariably occurs in the response to major earthquakes. It would also support medical and health preparedness by providing casualty data needed to develop detailed response plans.

California's experience in exercises and during the Loma Prieta Earthquake has shown that the lack of disaster information inhibits the optimal allocation of resources immediately following an earthquake. This experience, along with studies of other disasters, leads to the conclusion that information management problems may be ameliorated through improved planning and communications, but are unlikely to be completely resolved. Response decision makers will continue to face inadequate information. A casualty estimation model of the type described below would help reduce that information deficit.

Additionally, and perhaps more significantly, a casualty estimation model would prove to be an invaluable planning and preparedness tool. By providing detailed casualty information for various scenarios, it would help planners to improve pre-event planning, more efficiently target mitigation efforts, and improve the effectiveness of citizen and community education programs.

The Medical/Health Response to the Loma Prieta Earthquake

On Tuesday evening, October 17, 1989, California's disaster medical preparedness community was required by a singular event to transition in role from planning to response. The magnitude of the Loma Prieta earthquake, its proximity to the Bay Area, and reports of fire in the