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Sommario/riassunto	The ability to measure emergency preparedness - to predict the likely performance of emergency response systems in future events - is critical for policy analysis in homeland security. Yet it remains difficult to know how prepared a response system is to deal with large-scale incidents, whether it be a natural disaster, terrorist attack, or industrial or transportation accident. This research draws on the fields of systems analysis and engineering to apply the concept of system reliability to the evaluation of emergency response systems. The authors describe a method for modeling an emergency response system; identifying how individual parts of the system might fail; and assessing the likelihood of each failure and the severity of its effects on the overall response effort. The authors walk the reader through two applications of this method: a simplified example in which responders must deliver medical treatment to a certain number of people in a specified time window, and a more complex scenario involving the release of chlorine gas. The authors also describe an exploratory analysis in which they parsed a set of after-action reports describing real-world incidents, to demonstrate how this method can be used to quantitatively analyze data on past response performance. The authors conclude with a discussion of how this method of measuring emergency response system reliability could inform policy discussion of emergency preparedness, how system reliability might be improved, and the costs of doing so. --From publisher description.