This paper proposes an integrative framework of methods for generating possible events as part of a formal analysis of a decision problem under risk. First, the overall process of decision problem structuring is briefly discussed. The way knowledge is represented cognitively is modeled with an associative network model. The model suggests general strategies for searching through an individual s associative network. Next, specific methods for generating events and modeling procedures for aiding probabilistic thinking are presented. Event-generating methods fall into four categories: general creativity methods, event-based, alternative-based, and probability-based procedures. The paper concludes with a discussion of future research directions and implications for the development of decision aids.