

It has been developed two large scale computerized emergency health care simulation models that can be used to simulate and study the health related consequences of nuclear warfare.

Both of these models, the Local Model and the Aggregate Model, use survivors and fatalities as summary measures of emergency health care system effectiveness. Such measures, while an important first step in determining the crude effects of an emergency health care system, are relatively limited in their value when attempting to assess the effectiveness of survivors.

The purpose of this study was to develop an alternative measure of effectiveness that deals with the nature and extent of physical disability among survivors of nuclear attack and, as such, provides a measure of their economic utility.

Using Korean War casualty data, disability insurance compensation data, expert opinion, and data gleaned from related studies, cumulative distribution functions were developed for the length of hospital stay (days) and time to recovery (days) associated with each injury category considered in the Local and Aggregate Models.

Using the physical recovery functions and the job function ability matrix, it was thus possible to formulate a measure of effectiveness, the Physical Demands Potential, that can be used to evaluate alternative health care systems in terms of the

number of survivors who are capable of functioning effectively in a given job category at any given point of time in the one-year postnuclear attack period.