High blood pressure is a clinical problem of epidemic proportions in Western societies (Julius & Schork, 1971). It is a physiological state which, if sustained, leads to vascular damage and cardiomegaly. Among its eventual sequelae are such catastrophic effects as renal parenchymal damage, cerebral vascular accidents or myocardial infarctions. Furthermore, sustained high blood pressure accelerates the development of atherosclerosis and the complications of diabetes mellitus. Because a number of investigators have shown that the autonomic nervous system plays a role in the expression of the elevated pressure (Engel & Bickford, 1961; Frohlich, Tarazi, & Dustan, 1969; Esler, Julius, Zweifler, Randall, Harburg, Gardiner, & DeQuattro, 1977), a number of behavioral scientists and behaviorally oriented clinicians have tried to bring their skills to bear on the management of hypertensive patients. Some of the questions that have been addressed include the role of social stressors in the development (Gutman & Benson, 1971) or morbidity of hypertension (Henry, Ely, Stephens, Ratcliffe, Santisteban, & Shapiro, 1971); the role of behavioral management techniques in improving patient adherence to medical advice (Haynes, Sackett, Gibson, Tayler, Hackett, Roberts, & Johnson, 1976); and the role of behavioral techniques in the control of blood pressure (Frumkin, Nathan, Prout, & Cohen, 1978; Seer, 1979; Shapiro, Schwartz, Ferguson, Redmond, & Weiss, 1977). Before one can undertake to investigate the role of behavioral modification techniques in the control of hypertension, he needs first to establish a reliable method for assessing blood pressure. Clearly, before one can hope to measure the effectiveness of an intervention, he first must define a set of outcome measures.
on which to base his conclusions about therapeutic effectiveness, and he must then establish a baseline for these measures so that the effectiveness of his intervention can be assessed accurately. It will be the purpose of this paper to consider these two questions.

OUTCOME MEASURES

Two kinds of outcome measures have been extensively analyzed in the epidemiological literature: one is morbidity and the other is mortality (Kannel, 1974). Such epidemiological studies have been extremely valuable since they have shown how important it is to reduce blood pressure; however, these outcome measures are of limited value to a clinician since they are the outcomes he wishes to prevent. Clinical intervention in hypertension has focused primarily on strategies for reducing blood pressure, or in patients in whom morbid events already have occurred, on minimizing the progression of organ damage. Therefore, in this article I will limit my discussion to a consideration of blood pressure itself.

Blood pressure is difficult to assess because it is so variable. This fact has been documented in longitudinal studies carried out over many years (Engel & Malmstrom, 1967), in clinical studies carried out over many months (VA Cooperative Study Group, 1975) and in evaluative studies carried out over several weeks (Hypertension Cooperative Group, 1977). Findings such as these have caused investigators to focus on the definition of high blood pressure (Julius & Schork, 1971). For example, epidemiological studies have shown that blood pressure rises with age (Engel & Malmstrom, 1967; Julius & Schork, 1971) so that any arbitrary definition of high blood pressure, e.g., 140/190 mm Hg., is likely to include age as an implicit correlate of blood pressure. Furthermore, because blood pressure is variable from occasion to occasion in the same person, it is possible to find that someone who is diagnosed as hypertensive on one visit will be judged normotensive on a second visit. At one time this so-called labile hypertension was thought to be a precursor of fixed hypertension. However, it is now known that not all "labile hypertensives" develop fixed hypertension (Julius & Schork, 1971). This condition of lability often is called borderline hypertension, but it is neither a sufficient nor a necessary stage in the natural history of the disorder.

There are several studies which indicate that blood pressure varies considerably through the day (Miller-Craig, Bishop, & Raftery, 1978; Littler, West, Honour, & Sleight, 1978), and varies also depending upon the circumstances of measurement (Hammarstrom, 1947). In particular, it has been reported that physicians obtain higher estimates of blood pressure than do non-physicians (Sokolow, Werdegar, Kain, & Hinman, 1966), and that blood pressure fluc-