

Table of Contents

Acknowledgment	ii
Preface	iii

I. Disease and Risk Factor Clustering in the United States: The Implications for Public Health Policy

Introduction.....	1
Risk Factors for the U.S. Population	6
The Evidence for High-Risk Subpopulations	9
Trauma.....	9
Cigarette Smoking	14
Air Pollution	15
Dietary Excess.....	15
Dietary Deficits.....	16
Alcohol and Drug Abuse	17
Hypertension.....	17
Cardiovascular Disease Risk Factor Clusters.....	17
Summary	26
Intervention Issues	26
Costs of Identifying the High-Risk Population	31
Self-Identification of High Risk	31
Risk Factor Synergism.....	33
"Significant" Versus "Important" Associations	33
"Tailored" Versus "Targeted" Interventions.....	34
Addressing Low Socioeconomic Status Groups	34
One Risk Factor or Many?.....	36
Using Active and Passive Approaches Synergistically.....	36
Summary	38
A Potential Intervention Strategy	38
A Health Promotion Paradigm	38
The Consensus To Be Promoted	42
Unanswered Questions	46
Summary and Conclusions.....	46
References	48
Table 1. Causes of Death by Life Stages, United States, 1977	2
Table 2. Priority Areas for Health Promotion and Disease Prevention	3
Table 3. Selected Risk Factors and Estimates of the Percentage of Their Contributions to All Annual Deaths	7
Table 4. Selected Risk Factors and Estimates of the Percentage of Their Contributions to All Annual Illness (Associated Days of Disability in Parentheses)	10

Table 5.	Reported Correlations of Risk Factors in Cross-Sectional Studies of Adults	22
Table 6.	Reported Correlations of Risk Factors in Cross-Sectional Studies of Children	23
Table 7.	Observed Risk Factor Changes in Clinical Trials and Risk Factor Modification Studies	28
Table 8.	Levels for the 75th and 90th Percentiles of Three Risk Factors for the United States Railroad Cohort of the Seven Countries Study (2,529 Men With All Three Risk Factors Recorded at Baseline)	29
Table 9.	Projected Effects and Costs of Five Interventions in the United States Railroad Cohort of the Seven Countries Study (2,571 Men Followed Five Years)	30
Table 10.	Distribution of Population, Death Rates, and Distribution of Deaths by Number of Risk Factors in the United States Railroad Cohort of the Seven Countries Study	33
Table 11.	Projected Effects of Risk Factor Changes: Large Changes in Single Risk Factors Versus Moderate Changes in Multiple Risk Factors in the United States Railroad Cohort of the Seven Countries Study (Five-Year Risk of Death From Any Cause X 100)	37
Figure 1.	Death Rates From Injury by Age, per 100,000 Population	13
Figure 2.	Conceptual Model for Developing a Disease Prevention and Health Promotion Program for the U.S. Population	39
Figure 3.	Health Promotion Interventions and Messages Tailored to the Groups Represented by the Shaded Cells	40
Figure 4.	Example of a Health Promotion Message That Focuses on Dietary Excess Among Black Adolescents	41

II. Single Versus Multiple Risk Factor Interventions: An Examination of the Issues

Introduction	63
Distribution and Selection of Risk Factors for Change in the General Population	64
Selection of the Target Population	64
Relationships Among Risk Factors	67
Clinical Outcomes of Large-Scale Single and Multifactor Interventions	68
Single Factor Interventions	68
Multifactor Interventions	69

Recruitment: The Social Marketing Model70
Success in Altering Behavior: Compliance, Adherence, and
Generalization72
The Problem of Compliance and Adherence in Risk Factor
Modification72
Factors Affecting Compliance and Adherence.....73
Implications for Multifactor Interventions.....74
Generalization of Behavior Change: Implications for Single
Versus Multiple Risk Factor Interventions.....75
Conclusion.....76
References78