

Appendix G

Recommendations and Estimated Five-Year Implementation Costs

No.	Recommendation (Immediate Priority in Bold)	In Millions of 1994 Dollars
Biological Processes		
1.1	Molecular Mechanisms of Cell Proliferation	12.10
1.2	Molecular Biology of Immune Response Decline	16.80
1.3	Molecular Biology of Type II Diabetes	15.00
1.4	Molecular Biology of Vascular Aging and Vascular Disease	2.75
1.5	Genetics of Longevity	3.00
1.6	Ovarian Hormonal Loss in Menopause	11.55
1.7	Molecular Biology of Aging	6.70
1.8	Cell Growth and Trophic Factors	8.40
1.9	Pathobiology of Articular Cartilage	3.90
1.10	Integrative Systems Physiology	3.00
1.11	Neurobiology of Sleep in Aging	4.00
1.12	Biomarkers of Aging	8.40
1.13	DNA and Stability of the Genome	7.50
1.14	Role of Free Radicals and Antioxidants in Aging	13.80
1.15	Damage to Long-Lived Proteins	7.95
1.16	Biomarkers for Drug Development for the Brain	2.00
1.17	Age- and Sex-Related Changes in Drug Metabolism	8.70
1.18	Recovery from Stroke	4.50
1.19	Dietary Supplements for Older Persons	8.00
1.20	Hormonal Influences on Osteoporosis	11.25
1.21	Age-Related Laryngeal Tremor	3.00
1.22	Presbycusis	4.60
1.23	Hair Cell Regeneration in the Inner Ear	8.50
1.24	Loss of Muscular Strength and Bone Mass	5.40
1.25	Impaired Barrier Function of Aged Skin	1.60

Diseases and Disabilities

Cancer

2.1	Cancer Prevention and Detection in Older People	12.50
2.2	Identification of Biomarkers for Early Detection of Cancer	7.40
2.3	Contributions of the Environment to Cancer in Older Persons	7.00

Cardiovascular / Renal / Pulmonary

2.4	Coronary Heart Disease and Stroke Prevention	17.65
2.5	Disability Due to Heart Failure	3.20
2.6	Environmental Contributions to Pulmonary Disease	5.25
2.7	Aspiration Pneumonia	2.05
2.8	Environmental Contributions to Renal Diseases	9.50

Neurologic

2.9	Causes of Alzheimer's Disease	28.00
2.10	Diagnosis and Treatments for Alzheimer's Disease	13.80
2.11	Non-Alzheimer's-Type Dementias	6.80
2.12	Down's Syndrome and Alzheimer's Disease	5.00
2.13	Treatment of Stroke	11.50
2.14	Parkinson's Disease and Other Motor System Disorders	12.80
2.15	Environmental Contributions to Neurotoxicity in Older Persons	5.00

Gastrointestinal / Metabolic / Endocrine

2.16	Nutrition and Dietary Disorders	18.70
2.17	Clinical Pharmacology and Pharmacokinetics	9.40
2.18	Impaired Glucose Tolerance and Non-Insulin-Dependent Diabetes Mellitus	13.70
2.19	Oral Health	3.80
2.20	Hypothyroidism	2.30
2.21	Primary Hyperparathyroidism	2.00

Genitourinary

2.22	Diseases of the Prostate	17.90
2.23	Urinary Incontinence	4.80
2.24	Impotence	2.80

Musculoskeletal		
2.25	Prevention and Treatment of Osteoporosis and Paget's Disease	17.00
2.26	Exercise, Strength Training, and Skeletal Metabolism	9.00
2.27	Loss of Joint Function	3.70
2.28	Rheumatic Diseases that Strike Older Persons	5.00
2.29	Effect of Aging on Biomechanical Efficiency	0.80
2.30	The Effect of Early-Life Injury/Disease on Age-Related Limitations	3.90
Skin		
2.31	Skin Cancer and Keratoses	6.50
2.32	Photoaging	1.80
2.33	Wound Healing	7.20
2.34	Asteatosis / Xerosis	0.40
Special Senses		
2.35	Prevention and Treatment of Cataracts	3.30
2.36	Cause and Risk Factors of Glaucoma	2.00
2.37	Role of the Vestibular System in Aging	11.80
2.38	Age-Related Macular Degeneration	4.90
Functional Status		
2.39	Disability	11.98
2.40	Functional Rehabilitation	16.68
2.41	Frailty Prevention	27.68
2.42	The Final Phase of Life	1.30
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Mental Disorders		
3.1	Prevention of Mental Disorders	2.30
3.2	Prevention and Reduction of Alcohol-Related Problems	10.60
3.3	Abuse and Misuse of Psychoactive Drugs	8.30
3.4	Relationship between Physical Illnesses and Mental Disorders	4.30
3.5	Mental Health of Older Women	1.20
3.6	Mental Health among Racial and Ethnic Minorities	1.50
3.7	Diagnosis and Treatment of Depression and Anxiety	5.20
3.8	Behavioral Symptoms and Functional Disability in Alzheimer's Disease	7.00
3.9	Suicide in Late Life	3.50
3.10	Sleep Disturbance	9.90
3.11	Effects of Crime and Victimization	2.00
3.12	The "Failure to Thrive" Syndrome	3.00

Health Care

Health Promotion

4.1	Effectiveness and Efficiency of Health Promotion and Disease Prevention Measures	11.30
4.2	Compliance with Health Promotion/Disease Prevention Measures	9.60
4.3	Breast Cancer Screening in Older Women	8.40
4.4	Smoking Cessation Among Older Adults	2.20
4.5	Prevention of Falls and Other Accidents	7.40

Delivery of Care

4.6	Coordinated Health Care Delivery	4.50
4.7	Financing and Reimbursement of Acute and Long-Term Care	4.20
4.8	Quality of Long-Term Care	5.10
4.9	Eligibility of Cognitively-Impaired Persons for Long-Term Care	0.85
4.10	Mental Health Services in Nursing Homes	3.10
4.11	Primary Care	7.80
4.12	Post-Acute Care	4.00
4.13	Home Health Care	4.48
4.14	Infection among Homebound Older Persons	1.30
4.15	Medical Effectiveness / Outcomes Research	5.90
4.16	Assessment of Health Care Technology	3.20
4.17	Surgical Interventions with Older People	0.80
4.18	Effects of Prolonged Bed Rest	1.80
4.19	Effective Dissemination of Information from Aging Research	3.30
4.20	Personnel Needs in the Field of Aging	2.90
4.21	Autonomy in Health Care Decision-Making	3.10

Recipients of Care

4.22	Health Care in Racial and Ethnic Minority Populations	8.43
4.23	Health Care Needs of Older Women	11.63
4.24	Cancer Treatment, Rehabilitation, and Supportive Care	2.80
4.25	Health and Long-Term Care Services for Persons with Alzheimer's Disease	4.60
4.26	Health Care Services for Older Persons with Arthritis	4.90
4.27	Rehabilitation for Older Persons with Vision and Hearing Deficits	13.10

Behavioral and Social Function		
5.1	Health, Cognition, and Aging	4.08
5.2	Basic Cognition and Neuropsychology	9.00
5.3	Social Influences on Cognition	0.90
5.4	Information-Processing Demands in Everyday Life	0.80
5.5	Improving Cognitive Function through Training and Environmental Support	3.80
5.6	Behavior Measurement in Older People	4.35
5.7	Anticipating Functioning in Future Generations of Older People	2.00
5.8	Predictors of Health Behavior and Behavior Change Across the Life Course	15.75
5.9	Sexuality and Sexual Behavior	2.80
5.10	Behavioral Interventions to Improve Independence and Health Status	15.40
5.11	Impact of Visual and Auditory Loss on Daily Function	4.70
5.12	Older Adults Who are Mentally Retarded or Developmentally Disabled	2.00
5.13	Older Drivers	2.00
5.14	Elder-Friendly Environments	1.30
5.15	Maintenance of Work into Late Adulthood	1.10
5.16	Successful Adaptation to Aging	4.10
The Aging Society		
6.1	The Economic and Social Impact of an Aging Population	2.60
6.2	Cross-National Research on Aging	2.40
6.3	Geographic Migration	0.70
6.4	Immigration and Aging	1.55
6.5	Social and Psychological Factors in Illness	4.50
6.6	Making Health Care Policy	0.78
6.7	Intergenerational Family Support	16.58
6.8	Impact of Family Patterns on Health and Retirement	2.00
6.9	Age Discrimination in the Workplace	1.30
6.10	Labor Force Experience of Older Women	1.98
6.11	Caregivers' Competing Demands of Work and Elder Care	4.78
6.12	The Changing Caregiving Roles of Grandparents	1.90
6.13	Elder Abuse	1.20

Economic Security		
7.1	Monitoring Economic Well-being	4.30
7.2	Economic Impact of Diseases, Chronic Conditions, and Injuries	5.18
7.3	Economic Impact of Disability	3.80
7.4	Economic Impact of Long-Term Institutional and In-Home Care	2.80
7.5	Economic Costs of Aging-Related Diseases	3.50
7.6	Insuring Against the Costs of Health Care	0.90
7.7	Economics of Retirement and Work	2.80
7.8	Labor Market Trends and Flexible Work Arrangements for Older Workers	0.98
7.9	Financing Mechanisms for Meeting Service Needs	0.40
Social and Supportive Services		
8.1	Aging in Place	1.10
8.2	Housing Options that Meet Long-Term Care Needs	1.25
8.3	Housing and Supportive Services to Poor Elderly Persons	0.88
8.4	Elder Abuse and Neglect Services	1.20
8.5	Legal Mechanisms for Making Decisions for Cognitively-Impaired Older People	0.40
8.6	Community Care Systems	4.40
8.7	Evaluation of Social Services	1.40
8.8	Nutrition Services	7.10
8.9	Transportation Services	1.70
8.10	In-Home Services for Older People	2.40
8.11	Formal Services for Family Caregivers	3.68
8.12	Informal Services in the Family and Community	2.28
Special Populations		
9.1	Inclusion of Women, Minorities, and Rural Residents in Study Populations	6.60
9.2	Design of Surveys of Racial and Ethnic Minorities	8.30
9.3	Training and Development of Minority and Women Researchers	5.90
9.4	Projecting the Size and Composition of the Oldest Old Population	3.38
9.5	Older Persons with Disabilities	6.80
9.6	Health Care and Social Services for Older Rural Residents	1.80
9.7	Women's Health and Late-Life Disability	12.30

9.8	Menopause	14.90
9.9	Heart Disease and Associated Comorbidities in Older Women	4.55
9.10	Cancer Prevention and Detection in Older Women	1.80
9.11	Older Women and Health Care	2.50
9.12	Caregiving among Older Women	3.40
9.13	Economic Status of Older Women	2.25
9.14	Family Support among Minority Elders	2.10
9.15	Chronic Illness and Disability in Older Minority Populations	8.80
9.16	Mental Health among Minority Elders	0.70
9.17	Utilization of Medical, Social, and Economic Support Programs by Minority Elders	1.20
9.18	National Data Sets on the Status of Older Minority Populations	7.10

Research and Data Resources

10.1	Increase the Supply of Research Personnel	15.05
10.2	Develop New Animal Models for Aging Research	19.25
10.3	Provide Critical Infrastructure and Technologies for Research on Aging	12.80
10.4	Models for Health Forecasting	5.00
10.5	Microsimulation Studies	2.80
10.6	Qualitative Research and Methodology	1.80
10.7	Methods Appropriate for Research with Racial and Ethnic Minorities	3.95
10.8	Strengthen Measurement of Quality of Life in National Data Systems	6.95
10.9	Strengthen National Statistics on Cognitive Capacity and on Loss of Functional Capacity	2.68
10.10	Enhance National Data Systems on Family Relationships and Caregiving	5.45
10.11	Measures of the Severity of Individual Disease Processes	2.80
10.12	Conduct Surveillance and Epidemiologic Studies of Health Conditions Important to Older Persons	4.30
10.13	Values and Long-Term Care Preferences	1.20
10.14	Strengthen Quality of Death Certificate Data	1.55
10.15	Strengthen National Data Resources	7.50
10.16	Systematic Collection and Accumulation of Data	7.70
10.17	Expanding Access to, and Analysis of, Data Collected with Federal Funding	3.90
10.18	Enrichment of Longitudinal Surveys including Data Linkage	9.60