

Appendix A. List of outcomes and their definitions	
Outcome disease group	Definition
Diabetes mellitus without complication	AHRQ-CCS 49
Diabetes mellitus with complication	AHRQ-CCS 50
Obesity	ICD-9-CM codes: 2780, 27800, 27801, 27802, 27803, 2781, 2788, and 7831, which were selected from AHRQ-CCS category 56
AHRQ-CCS = Clinical Classification Software Category of the Agency of Health Research and Quality ¹⁷	

Appendix B. Definitions of diseases used in baseline characteristics	
Disease group	Definition
Thyroid diseases	CCS 48
Diabetes mellitus without complication	CCS 49
Diabetes mellitus with complication	CCS 50
Gout	CCS 54
Deficiency anemia	CCS 59
Headache	CCS 84
Cataract	CCS 86
Valvular heart diseases	CCS 96
Pericarditis, myocarditis, endocarditis	CCS 97
Hypertension	CCS 98
Hypertension with complication	CCS 99
Acute myocardial infarction	CCS 100
Non-specific chest pain	CCS 102
Cor pulmonale	CCS 103
Nonspecific heart diseases	CCS 104
Conduction disorders	CCS 105
Cardiac dysrhythmias	CCS 106
Acute cerebrovascular disease	CCS 109
Peripheral and visceral atherosclerosis	CCS 114
Aortic; peripheral; and visceral artery aneurysms	CCS 115
Chronic obstructive pulmonary disease and bronchiectasis	CCS 127
Asthma	CCS 128
Gastroduodenal ulcer	CCS 139
Gastritis and duodenitis	CCS 140
Inflammatory bowel diseases	CCS 144
Non-infectious gastroenteritis	CCS 154
Gastrointestinal hemorrhage	CCS 153
Nausea and vomiting	CCS 250
Abdominal pain	CCS 251
Nephritis and nephrosis	CCS 156
Chronic kidney disease	CCS 158
Osteoporosis	CCS 206
Pathological fracture	CCS 207
Rehabilitation care, fitting of prostheses, and adjustment of devices	CCS 254
Osteoarthritis and other non-traumatic joint disorders	CCS 203 and 204
Spondylosis, intervertebral disc disorders, other back problems	CCS 205
Trauma-related joint disorders and dislocations; sprains and strains	CCS 225 and 232
Immunization and infectious disease screening	CCS 10
Obesity	ICD-9-CM codes: 2780, 27800,

	27801, 27802, 27803, 2781, 2788, and 7831
Family history of cardiovascular disease	V171, V1749, V174, V1741, and V173.
Smoking	ICD-9-CM codes: 3051 and V1582
Cardiac arrest and ventricular fibrillation	CCS 107
Acute and unspecified renal failure	CCS 157
Syncope	CCS 245
Alcohol abuse/dependence	CCS 660
Illicit Drugs use	CCS 661
Cardiovascular procedures	CCS procedural codes categories:
Electrocardiography	202
Echocardiography	193
Stress test	201
Cardiac catheterization	47
Percutaneous coronary intervention	45 and 46
Coronary artery bypass graft surgery	44
Pacemaker/defibrillator implantation	48
Peripheral arterial revascularization procedures	51, 55, and multilevel code 7.18
CCS = Clinical Classification Software Category of the Agency of Health Research and Quality ¹⁷	