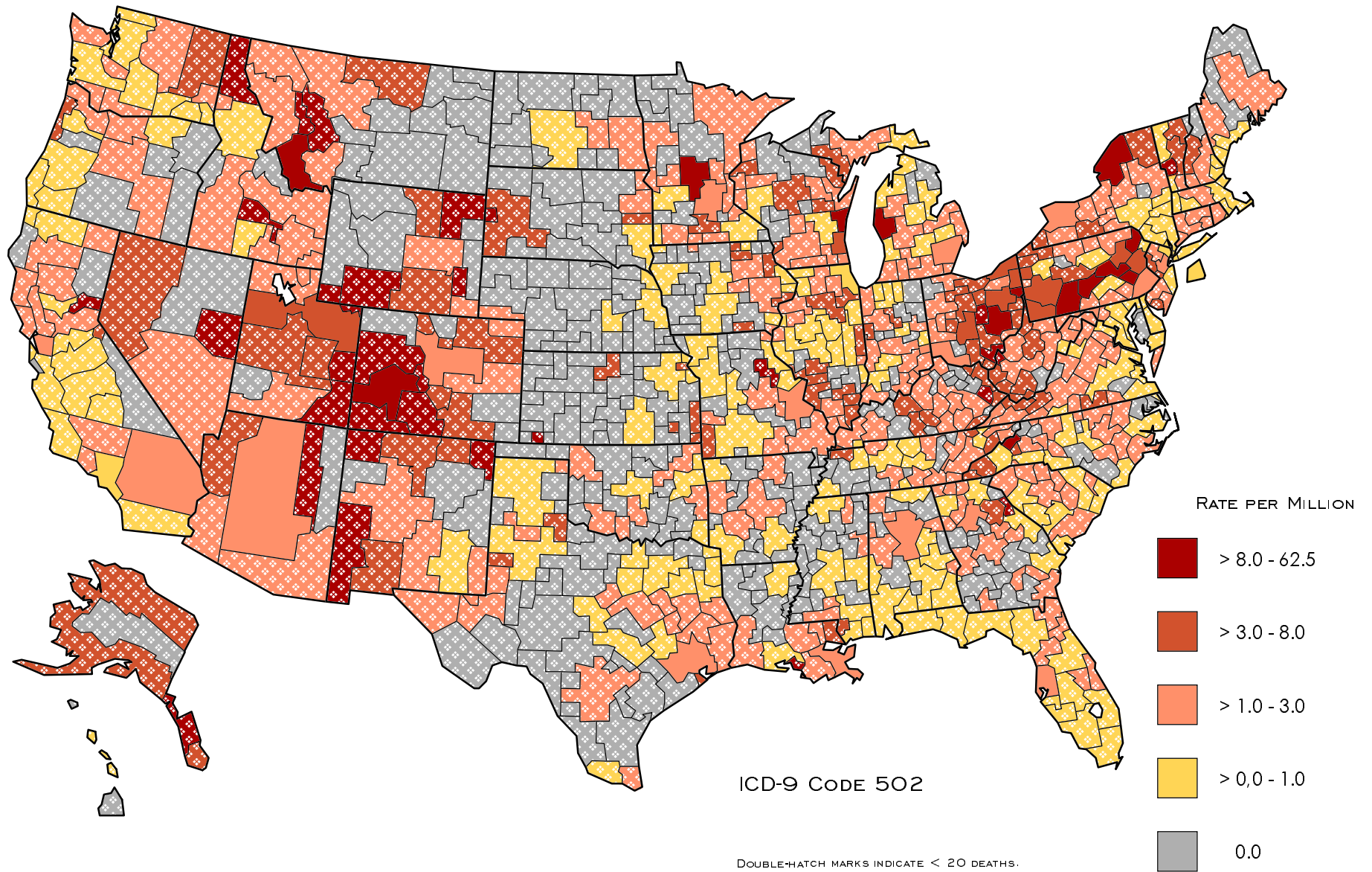
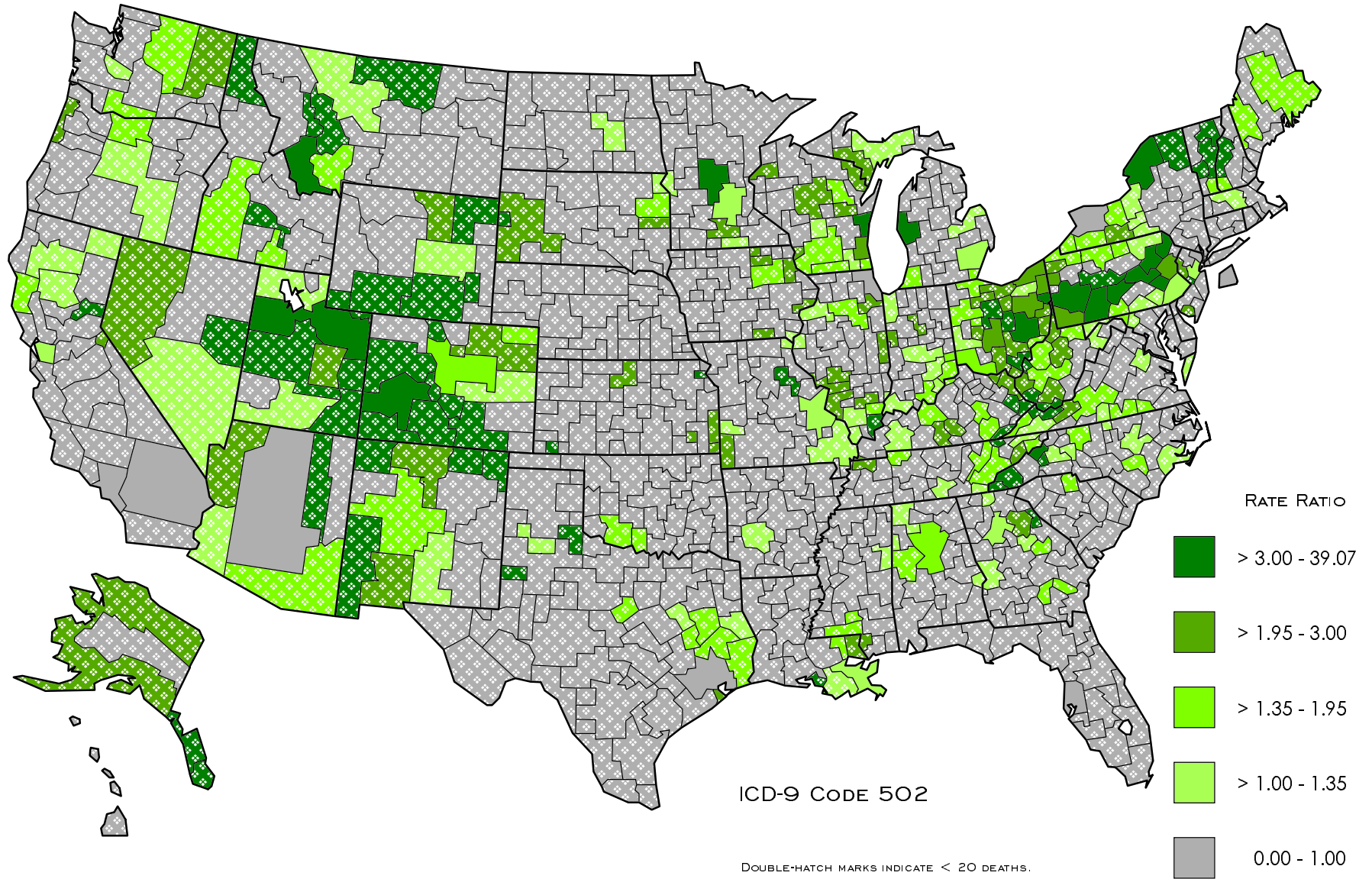


SILICOSIS  
AGE-ADJUSTED DEATH RATES BY HSA  
U.S. RESIDENTS 15 YEARS OF AGE AND OLDER, 1982-1993



SILICOSIS  
DEATH RATES OF EACH HSA COMPARED WITH U.S. RATE  
U.S. RESIDENTS 15 YEARS OF AGE AND OLDER, 1982-1993



## Silicosis (ICD-9 Code 502)

Pneumoconiosis due to other silica or silicates (ICD-9 code 502) includes other conditions (e.g., talcosis) in addition to silicosis. Silicosis is a fibrotic disease of the lungs caused by the inhalation, retention, and pulmonary reaction to crystalline silica dust of respirable size (aerodynamic diameter of 0.5 to 5 microns). Quartz, the predominant mineral in the earth's crust is the major form of crystalline silica, or silicon dioxide. Occupational exposure to crystalline silica particles is associated with various industrial processes, including mining, quarrying, drilling, tunneling, and abrasive blasting with quartz-containing materials (sandblasting) [Beckett et al. 1997]. Silica exposure also poses a hazard to stonecutters and pottery, foundry, ground silica, and refractory workers [Beckett et al. 1997]. Because crystalline silica exposure is so widespread, and silica sand is an inexpensive and versatile component of many manufacturing processes, millions of workers remain at risk of silicosis. This serious and potentially fatal occupational lung disease remains prevalent throughout the world [Parker and Wagner 1998].

Chronic, accelerated, and acute forms of silicosis reflect differing exposure intensities, latency periods, and natural histories. The common chronic form usually follows one or more decades of exposure to respirable dust containing quartz and may progress to progressive massive fibrosis. The accelerated form follows shorter and heavier exposures and progresses more rapidly. The acute form may occur after intense exposures to high levels of respirable dust with high crystalline silica content for periods often measured in months rather than years [Banks et al. 1983]. Tuberculosis is a well-known and serious complication of silicosis [Snider 1978].

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## **Other/Unspecified Pneumoconiosis (ICD-9 Codes 503, 505)**

Pneumoconiosis due to other inorganic dusts (ICD-9 code 503) and unspecified pneumoconiosis (ICD-9 code 505) includes chronic beryllium disease (also known as berylliosis), graphite fibrosis of the lung, bauxite fibrosis of the lung, and aluminosis, as well as any pneumoconioses not further specified on the death certificate. Numerous inorganic dusts have been associated with pneumoconioses.

Chronic beryllium disease is associated with airborne beryllium exposures during melting, casting, grinding, machining, and drilling beryllium products [Sprince and Kazemi 1992]. Current exposures to beryllium have occurred in beryllium-copper alloy production, refining, and reclamation from scrap metals [Cullen et al. 1987], beryllium machining or casting in aerospace application plants, ceramic manufacturing [Newman et al. 1989], and ceramic production [Rossman et al. 1988]. A genetic marker of susceptibility has been demonstrated in individuals with beryllium disease [Richeldi et al. 1993].

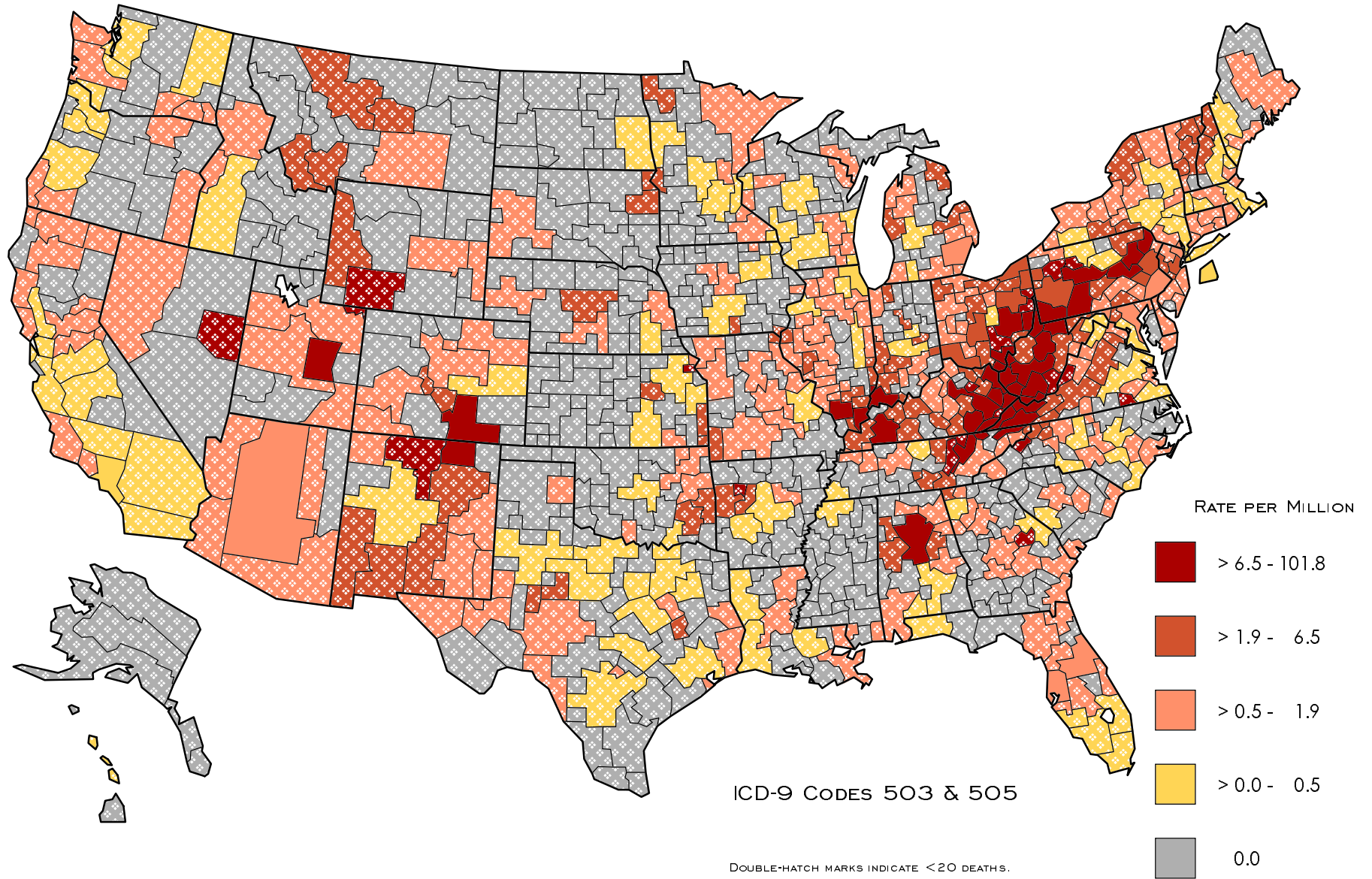
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