

CHAPTER 14

Gastroesophageal Reflux Disease

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In 2004, GERD was by far the most frequently first-listed digestive system condition at ambulatory care visits (Table 1), constituting 17.5 percent of all digestive system diagnoses. There were at least 6 outpatient visits with a GERD diagnosis listed per 100 persons in the United States. GERD was a common diagnosis in all age groups, although the highest rate was for those age 65 years and older. Age-adjusted ambulatory care visit rates were higher among blacks than whites and were similar for females and males. As the first-listed diagnosis, hospitalizations with GERD were not especially common relative to the frequency of outpatient visits. However, GERD was the first-listed diagnosis on only 5 percent of hospital discharges on which it was mentioned. As a result, GERD was the most common digestive system disease noted at hospital discharge and was found on 23.5 percent of hospitalizations at which a digestive system condition was listed at discharge. The pattern by race and sex of rates of hospitalization with a diagnosis of GERD were similar to the rates of ambulatory care visits. About half of all hospital diagnoses were recorded at age 65 years and older.

Rates of both all-listed ambulatory care visits and hospital discharges increased several-fold from the early 1990s to 2004 (Figure 1). Among other digestive system diseases, only viral hepatitis C saw a similar increase in medical care, but much of that increase was a result of the fact that hepatitis C was not recognized as a disease with its own ICD code until 1992. The increases in medical care for GERD began at least as early as the mid-1970s.¹ Between 1975 and 2004, the rate of all-listed ambulatory care visits for GERD increased approximately 2,000 percent. It was in the mid-1970s that better means to diagnose (flexible endoscopes) and treat (histamine-2 receptor blockers) became available, both of which stimulated recognition of the condition. Nevertheless, it is quite unlikely that all the increases in GERD-related statistics can be attributed solely to increased recognition.

Despite not being considered a fatal disease, GERD was listed as the underlying cause of more than 1,000 deaths in 2004 (Table 2), 83 percent of which occurred among persons age 65 years and older. GERD was much more often listed as a contributing cause of death, with the large majority at age 65 years and older. Mortality rates differed little by race and sex. Rates of GERD as a first-listed or contributing cause of death increased by 115 percent from 1979 to 2004, with the majority of the increase occurring during the last 9 years of that period (Figure 2).

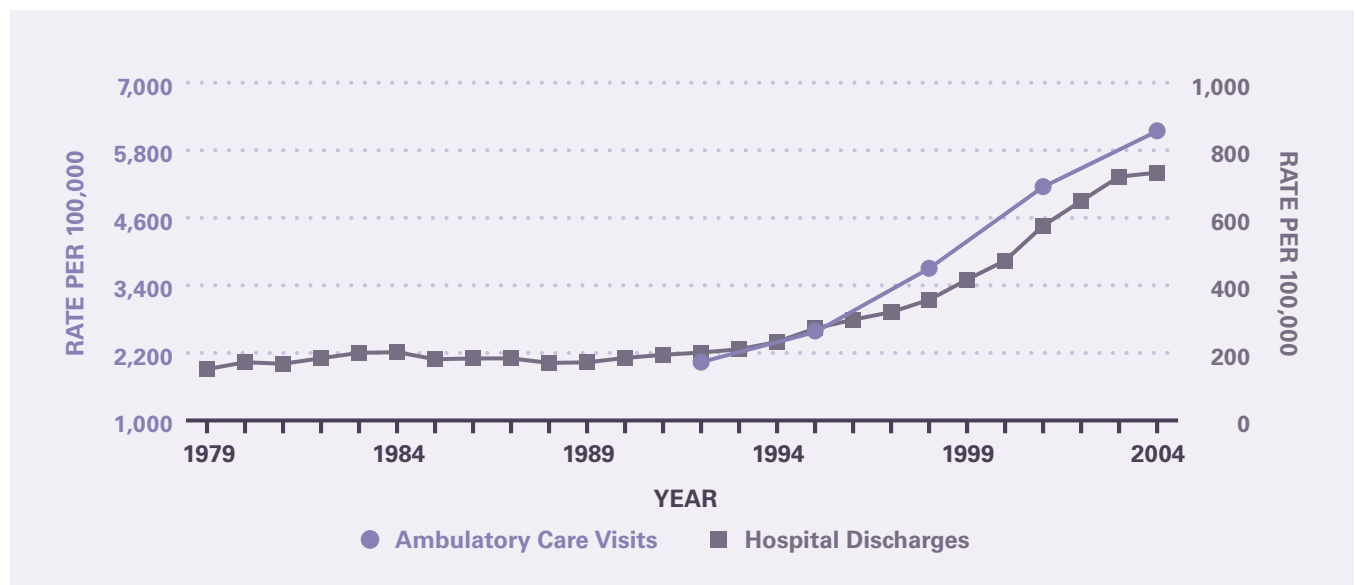
More than 60 million prescriptions for GERD were estimated to have been filled at retail pharmacies in 2004 (Table 3), representing 48 percent of all prescriptions for digestive system disorders and more than 50 percent of their cost. The large majority of prescriptions and their cost were for proton pump inhibitors, which were the five most commonly prescribed and costliest medications. Because over-the-counter medications were not included in this tabulation, the total medication cost may have been considerably higher.

¹ Sonnenberg A. Esophageal diseases. In: Everhart JE, editor. *Digestive diseases in the United States: epidemiology and impact*. US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases. Washington, DC: US Government Printing Office, 1994; NIH Publication No. 94-1447 pp. 299–355.

Table 1. Gastroesophageal Reflux Disease: Number and Age-Adjusted Rates of Ambulatory Care Visits and Hospital Discharges With First-Listed and All-Listed Diagnoses by Age, Race, and Sex in the United States, 2004

DEMOGRAPHIC CHARACTERISTICS	AMBULATORY CARE VISITS				HOSPITAL DISCHARGES				
	First-Listed Diagnosis		All-Listed Diagnoses		First-Listed Diagnosis		All-Listed Diagnoses		
	Number in Thousands	Rate per 100,000	Number in Thousands	Rate per 100,000	Number in Thousands	Rate per 100,000	Number in Thousands	Rate per 100,000	
AGE (Years)	Under 15	693	1,139	1,504	2,473	20	33	110	182
	15–44	2,083	1,656	4,064	3,230	28	22	463	368
	45–64	2,463	3,484	6,961	9,847	53	75	1,050	1,486
	65+	1,611	4,433	5,813	15,999	58	159	1,565	4,307
RACE	White	5,567	2,267	14,964	6,002	122	49	2,513	987
	Black	1,028	2,872	2,603	8,075	21	65	342	1,107
SEX	Female	3,388	2,209	10,624	6,733	87	54	1,936	1,183
	Male	3,462	2,462	7,718	5,506	71	51	1,252	937
TOTAL		6,849	2,332	18,342	6,246	158	54	3,189	1,086

SOURCE: National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) (3-year average, 2003–2005), and Healthcare Cost and Utilization Project Nationwide Inpatient Sample (HCUP NIS)

Figure 1. Gastroesophageal Reflux Disease: Age-Adjusted Rates of Ambulatory Care Visits and Hospital Discharges With All-Listed Diagnoses in the United States, 1979–2004

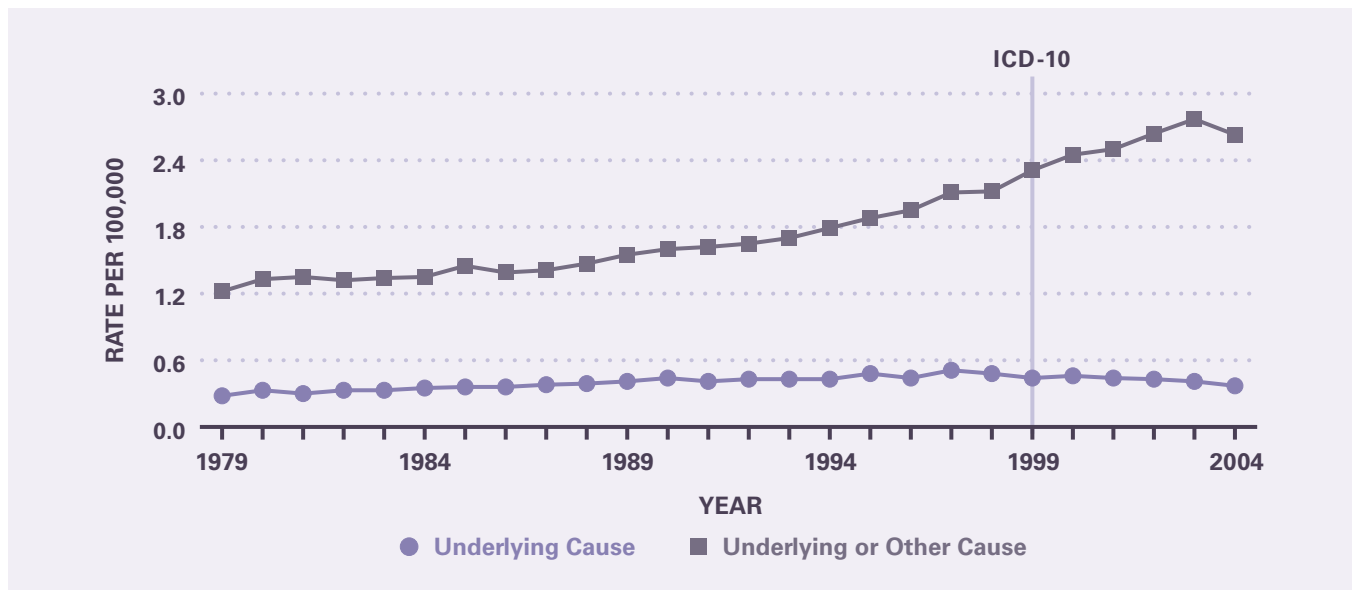
SOURCE: National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) (averages 1992–1993, 1994–1996, 1997–1999, 2000–2002, 2003–2005), and National Hospital Discharge Survey (NHDS)

Table 2. Gastroesophageal Reflux Disease: Number and Age-Adjusted Rates of Deaths and Years of Potential Life Lost (to Age 75) by Age, Race, and Sex in the United States, 2004

DEMOGRAPHIC CHARACTERISTICS		UNDERLYING CAUSE			UNDERLYING OR OTHER CAUSE	
		Number of Deaths	Rate per 100,000	Years of Potential Life Lost in Thousands	Number of Deaths	Rate per 100,000
AGE (Years)	Under 15	18	0.0	1.3	106	0.2
	15–44	43	0.0	1.6	228	0.2
	45–64	135	0.2	2.5	1,034	1.5
	65+	954	2.6	0.6	6,669	18.4
RACE	White	1,033	0.4	4.7	7,273	2.7
	Black	97	0.4	1.1	649	2.5
SEX	Female	653	0.3	2.2	4,470	2.4
	Male	497	0.4	3.8	3,567	3.0
TOTAL		1,150	0.4	6.0	8,037	2.7

SOURCE: Vital Statistics of the United States

Figure 2. Gastroesophageal Reflux Disease: Age-Adjusted Rates of Death in the United States, 1979–2004



SOURCE: Vital Statistics of the United States

Table 3. Gastroesophageal Reflux Disease: Costliest Prescriptions

DRUG	Prescription (#)	Prescription	Retail Cost	Cost
Lansoprazole	14,233,183	22.0%	\$2,187,235,735	28.4%
Esomeprazole	14,250,281	22.1	2,180,756,920	28.4
Pantoprazole	9,995,074	15.5	1,224,174,329	15.9
Rabeprazole	5,954,447	9.2	914,472,545	11.9
Omeprazole	6,630,268	10.3	840,514,740	10.9
Ranitidine	8,771,688	13.6	202,788,663	2.6
Famotidine	1,527,991	2.4	51,413,838	0.7
Metoclopramide	2,326,992	3.6	34,416,702	0.4
Nizatidine	187,276	0.3	26,124,573	0.3
Sucralfate	112,698	0.2	11,892,069	0.2
Other	622,786	0.8	15,976,940	0.2
TOTAL	64,612,684	100.0%	\$7,689,767,054	100.0%

SOURCE: Verispan