Average Charges for a Radical Prostatectomy and a Transurethral Resection of the Prostate (TURP): Geographic Variations, 1994*

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More American men are living longer. An estimated 13,850,000 were over age 65 as of July 1, 1996 [1]. This total represents a 1.01% increase over that in 1995, a 10.3% increase over the 1990 total and more than a 34% increase over the number of these men in 1980 [1,2]. By the year 2020 one in every six American men, a projected 23.8 million, will be over 65 years old--72% more than in 1996 [1].

These population statistics have major social, political, and economic ramifications for the health and welfare agencies of this country. As the population continues to age, more people will, no doubt, become aware of and demand technologically advanced screening and treatment modalities to further improve longevity and quality of life. Thus, geriatric health problems are expected to increasingly consume larger amounts of medical care resources. In addition, the potential for overutilization of screening tests will no doubt increase despite incomplete documentation of therapeutic efficacy and the possible increased identification of clinically unimportant conditions [3-7].

Screening for prostate cancer in asymptomatic men and performing prostatectomies are current illustrations of this point. The number of radical prostatectomies increased more than sixfold between 1984 and 1990 and by 141% between 1990 and 1993 [3,4,8]. This rise mirrors the trend in US prostate cancer incidence rates, which increased by about 2% each year between 1973 and 1986 and more than doubled between 1986 and 1992 [9]. This latest increase averaged 16% a year and has been attributed in large part to increased medical surveillance and more aggressive detection efforts, specifically to an increased use of the prostate-specific antigen (PSA) test [4,6,10-11].

Of the prostate cancers diagnosed in 1984, only 5.8% were associated with a PSA test; by 1990, however, this proportion had increased almost 12 times to 68.4% [12]. Needle biopsies of the prostate are also increasing as an important procedure for detecting prostate cancers [13].

Prostate Cancer Statistics

The American Cancer Society estimates that prostate cancer will account for 41.5% of all new cancers in men in 1996, affecting over 317,000 [14]. It has now become the leading cancer diagnosis in men (surpassing lung cancer in 1994) and the second leading cause of male cancer deaths [9,12-15]. Age-adjusted incidence rates continue to rise, increasing some 65% between 1980 and 1990, with a dramatic 46.2% increase noted between 1989 and 1991 alone [15]. Rates increase with each decade over 50, with more than 80% of cases diagnosed in men over age 65. Although there is no known etiology of this disease, it is thought to be hormone related [16]. There is extraordinary geographic variation in the detection of and surgery for prostate cancer, indicating lack of consensus about the efficacy of screening in asymptomatic men and subsequent aggressive treatment of the disease, particularly among the older segments of the population [6,7,17-19].

Prostate cancer is usually considered to be a slowly progressing disease, but in approximately one-third of newly diagnosed cases, the tumor has spread beyond the prostate gland itself [11,12]. Early forms of the disease are often discovered during the surgical treatment for benign prostatic hyperplasia (BPH). BPH is usually seen in men over age 50 who complain of varying degrees of bladder outlet obstruction. Like prostate cancer, it is of unknown etiology but may be related to
changes in the hormonal balance associated with aging [16]. Surgery is the definitive therapy for this condition, and the preferred operation has historically been the transurethral resection of the prostate (TURP). BPH is even more common than prostate cancer, with histologic evidence apparent by age 60 in more than half the men at autopsy and in more than 90% by age 85 [20]. Its absolute frequency and rate of occurrence have been decreasing since 1990 at the same time prostate cancers have increased (Fig. A). BPH was diagnosed among 375,000 men in 1993 (the latest data available), a decrease of 137,000 cases, or 26.8%, from the 1983 total. This decrease is reflected in the declining rates of TURPs that are performed in nonfederal short-stay hospitals across this country [8]. In 1983, 321,000 TURPs were performed, whereas in 1993, 250,000 such surgeries were recorded. Clearly TURPs and radical, or open, prostatectomies have a substantial impact on the health-care system. First-year costs of treating the extra cases of prostate cancer detected through mass screenings have been estimated to range between $11.9 and $27.9 billion; costs for TURPs, in 1990 alone, were estimated at $2.2 billion [21,22]. Because of such costs, because these procedures continue to be the leading surgeries performed on US men over age 65, and because the PSA test and other newer, less invasive screening tests are growing in popularity, cost-effective screening strategies and interventions need to be developed [11]. In addition, monitoring the frequency of and costs associated with open prostatectomies and TURPs is warranted and gains in importance with the aging of our population. These reasons prompted MetLife researchers to review claims data for these two procedures during 1994 and to investigate the average hospital charges associated with them by state and region.

Metropolitan Life Study

In 1994 MetLife processed close to 342,000 hospital claims from employees and dependents of companies covered under group health policy contracts. Of these, 42% were from men, among whom 7.6% (10,796) were 30 years old or older, hospitalized for conditions coded as Major Diagnostic Category (MDC) 11, "Diseases/disorders of the kidney and urinary tract," or MDC 12, "Diseases/disorders of the male reproductive system." Over 1,000 radical prostatectomy patients were identified from this subset, defined by CPT-4 codes* 55810-55815 and 55840-55845. Another 1,600 men had claims for a TURP, defined by CPT-4 code 52601. The TURP patients were substantially older than the prostatectomy group--modal ages of 70 and 64 and median ages of 68.7 and 62.4, respectively. Ninety-eight percent of the radical prostatectomy patients were diagnosed with cancer of the prostate; prostatic hyperplasia was the primary diagnosis for three-quarters of the TURP patients, followed by prostate cancer for 12.6%. Data are presented for all with more than five procedures but discussed and highlighted for those in which 20 or more were performed.

Geographic Variation in Charges for a Radical Prostatectomy

For the 1,004 radical prostatectomies, the average total hospital and physician charge to Metropolitan Life insurance Company in 1994 was just over $18,600. These charges differed by 61%, ranging from a high of $20,790 in the Pacific states to a low of $12,910 in the East South Central geographic area (Table 1). The Pacific charge exceeded the US average by 11.3%; the low East South Central charge was 31% below the norm. The total charge in the Middle Atlantic area was the second highest (10.3% above the norm); only two other areas--the South Atlantic and the West South Central--reported charges above the average, each just 1% higher. The Mountain area had the second lowest area total charge ($16,220), more than $4,500 below that in the Pacific states and 13% below the norm.

· Between-State Variation--Among the 19 study states, the variation in radical prostatectomy charges was even wider (Figure B). The highest total charge was reported in Pennsylvania, almost $25,000, 32% above the norm. This total was almost three times the lowest charge reported in Tennessee, under $9,000 or 53% below the average. Only five other study states (California, Illinois, Florida, Louisiana, and New York) had charges 10% or more above the norm. At the other end of the scale, three of the study states (Washington, Michigan, and Oklahoma) reported average total charges more than 20% below that for the country as a whole.

· Hospital Charges--The hospital charges accounted for almost two-thirds of the total charge to insurance for a radical prostatectomy. Ancillary fees accounted for 63% of this total, averaging $7,720 across the country. The room and board normative charges were $4,510 and ranged from $8,010 in California (78% above the norm) to $1,080 in Tennessee (76% below the norm). Room and board charges similarly high to those in California were evident in Pennsylvania and Florida, 75% and 64% above the average, respectively.

· Physician Charges--Physician charges accounted for about one-third of the total radical
prostatectomy bill in 1994, averaging $6,450. This total differed by as much as 114% between the fees in New York ($8,710--35% above average) and those in Tennessee ($4,080--37% below the US norm). The physicians' charge in Pennsylvania ($7,560) was the second highest of the study states and averaged 17% above the norm. Washington reported the second lowest charge, $4,390--32% below the average; the Colorado and Michigan doctors' fees each averaged 20% or more below the national norm.

- Length of Stay--On average, radical prostatectomy patients remained in the hospital just under 6 days. These hospitalizations differed by almost 3 days; New York patients' stay was 7.02 days, whereas in Missouri, it averaged 4.42 days. These stays were 26% above and 21% below the average, respectively.

Transurethral Resection of the Prostate (TURP) Charges

Total hospital and physician charges for the 1,597 TURPs performed in 1994 averaged $7,600 (Table 2). The pattern of these charges differed somewhat from that for radical prostatectomies. While the average in the East South Central area was the lowest in the country (as with the radical surgeries), the highest average was recorded in the South Atlantic area followed by the Pacific (14.6% and 13.9%, respectively, above the norm).

By state the average totals differed by 95% (Figure C). The North Carolina total was the highest (31% above the US total) and that in Washington, the lowest (33% below). Georgia, California, and Illinois were the only other states with totals 20% or greater above the average, each over $9,500. Tennessee and Ohio had equally low charges (30% below the norm), followed closely by the average in Alabama and Oregon (28% and 25%, respectively, below the US average).

- Hospital Charges--As with radical prostatectomies, over two-thirds of the average total TURP charges were attributed to the hospital part of the bill. These charges averaged $5,160, with the proportion of the total costs ranging from 74% in Arizona to 59% in Ohio. Total hospital charges varied by 132% between those in North Carolina ($7,290) and Ohio ($3,140).

Ancillary fees made up 62% of the hospital bill, with substantial variation evident between states. These fees accounted for just under half of the hospital charges in California to 80% in Alabama. Ancillary fees were the highest in Georgia, 62% above the norm, and the lowest in Ohio (36% below the average).

Room and board charges varied even more, ranging from a high of $3,540 in California (80% above average) to lows under $1,000 in Washington, Wisconsin, and Alabama (more than 50% below the norm).

- Physician Charges--As with the radical prostatectomy procedures, the physician charge was just under one-third of the total TURP bill. The national average was $2,440 and differed by 95% between states. Again, the New York doctors' charges were the highest (33% above the US average), but those in Michigan were the lowest (32% below the norm). The physician charges in the three East Coast geographic areas were the highest of all nine, ranging from $2,670 in the South Atlantic to $2,830 in the New England states.

- Length of Stay--The average hospital stay for a TURP in 1994 was 3.66 days. Patients in Indiana remained in the hospital the longest (5.58 days), followed by New York and New Jersey (4.90 and 4.24 days, respectively). In contrast, TURP patients stayed in the hospital for an average of 2.29 days in Oregon and 2.49 days in Colorado.

Discussion

The differences in charges for and distribution of prostatectomies and TURPs are consistent with earlier SB [Statistical Bulletin] analyses. The causes for the noted variations continue to be perplexing but may reflect the fairly widespread confusion and debate surrounding the optimal approach to the early detection and management of prostate diseases. Because prostate cancer and BPH generally affect older men, many of whom are expected to die of unrelated diseases, the decision to pursue aggressive medical or surgical therapy or a regimen of watchful waiting remains controversial [23-25]. Although consensus is lacking, some argue that there may be a "cultural component" to the choice of treatment that promotes early and aggressive treatment [24]. Regardless of the reason, randomized clinical trials or the further refinement of predictive tumor markers or host features would benefit all and help make the treatment/screening decision easier.

While the debate continues over the efficacy of surgery for early prostate cancer and the influence of screening tests on incidence as well as mortality, monitoring of outcomes by various treatment regimens is also necessary. These goals gain in importance given the increasing numbers of older-aged men in this country and the need to control rising health-care expenditures.
References:
