

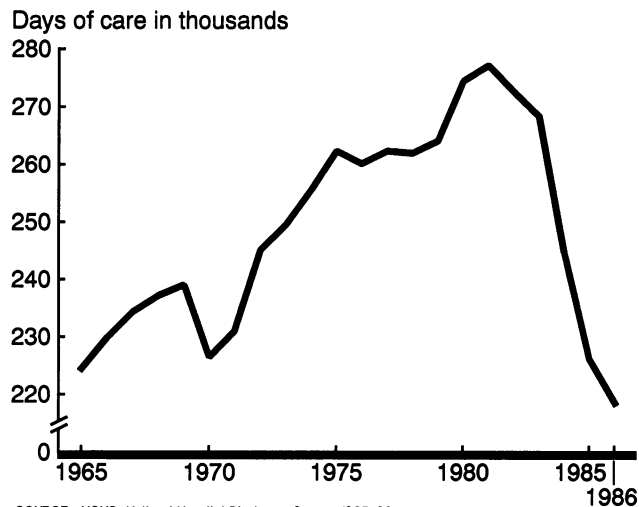
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Trends in Hospital Utilization, 1965-86*

ROBERT POKRAS, LOLA JEAN KOZAK, EILEEN MCCARTHY, AND EDMUND J. GRAVES

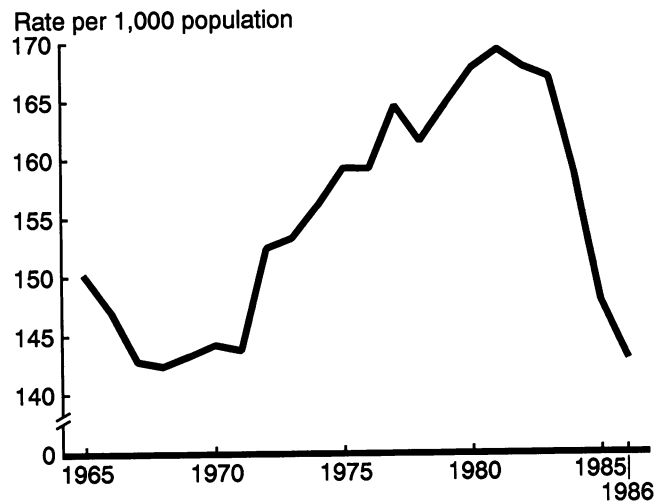
Short-stay hospitals in the United States provided 218.5 million days of care for inpatients in 1986. That was about 6 million fewer days of care than such hospitals had provided in 1965 (Figure 1). The decrease occurred despite the addition of 47.8 million people to the US population, an increase of 3.6 years in the median age of the US population, and an increase in the median age of inpatients of almost 11 years—from 36.1 to 46.7 years. The decline in discharge rates in recent years (Figure 2) and a decline in the average length of stay throughout the period (Figure 3) accounted for the reduced number of inpatient days. If age- and sex-specific discharge rates and average length of stay had been the same in 1986 as they were in 1965, there would have been 308 million days of inpatient care in 1986 instead of 218.5 million days.

The crude discharge rate, a rate that does not account for population change, rose from 150.0 per 1,000 population in 1965 to 169.3/1,000 in 1981, and then declined to 143.1/1,000 in 1986. When the aging of the population is taken into account, the decrease was larger; the 1986 rate age-adjusted to the 1965 population was only 131.2/1,000.



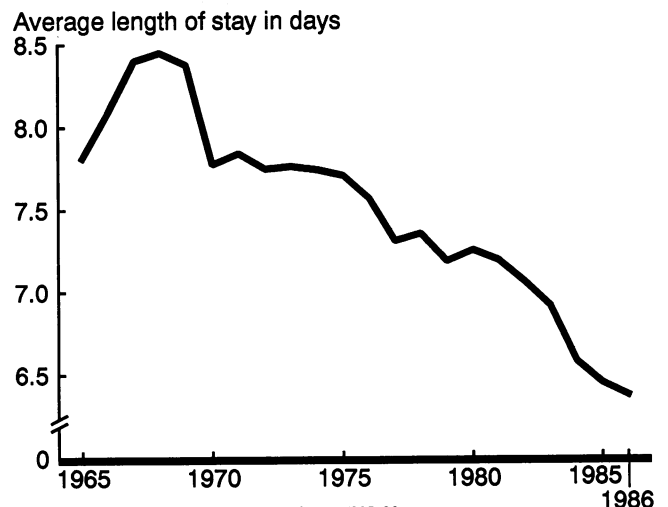
SOURCE: NCHS, National Hospital Discharge Survey, 1965-86

FIGURE 1—Number of Days of Care for Patients Discharged from Short-stay Hospitals, United States, 1965-86



SOURCE: NCHS, National Hospital Discharge Survey, 1965-86

FIGURE 2—Rate of Discharges from Short-stay hospitals, United States, 1965-86



SOURCE: NCHS, National Hospital Discharge Survey, 1965-86

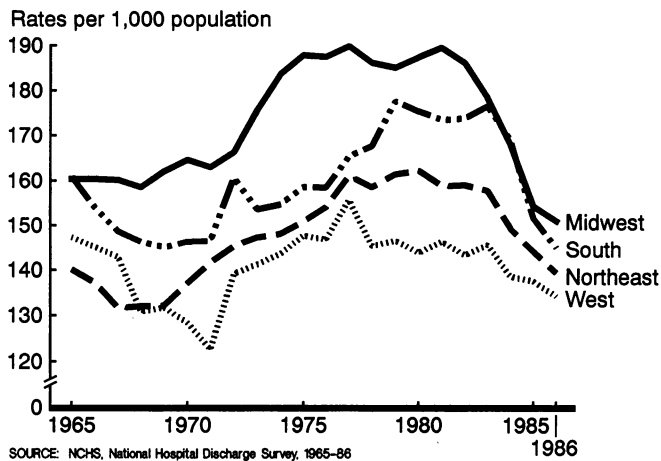
FIGURE 3—Average Length of Stay of Patients Discharged from Short-stay Hospitals, United States, 1965-86

*Copies of the report, *Trends in Hospital Utilization, United States, 1965-86*, by R. Pokras, L. J. Kozak, E. McCarthy, and E. Graves, Vital and Health Statistics Series 13, No. 101 are available from the US Government Printing Office, Washington, DC 20402. Order stock No. 017-022-01091-7; price is \$3.25.

For more information about this and other reports and data from the National Center for Health Statistics, write to the Scientific and Technical Information Branch, NCHS, 3700 East-West Highway, Hyattsville, MD 20782, or call (301)436-8500.

From 1965 to 1983, discharge rates increased for people of all ages but more for older than for younger people. With the implementation of the Prospective Payment System in 1983, discharge rates declined for all ages but the decline was greater for those under 65 years of age than for older persons.

Patterns of discharge rates in each region were similar, rising during the 1970s and then declining dramatically after



SOURCE: NCHS, National Hospital Discharge Survey, 1965-86

FIGURE 4—Discharge Rates by Region, United States, 1965-86

1983 (Figure 4), but during the 1970s there was substantial variation among regions. During the 1970s, the discharge rate in the Midwest was generally higher than the rates in the other three regions, but by the mid-1980s differences in the rates for the four regions were not statistically significant. Also, the 1986 discharge rates were not significantly different from the 1965 rates in any of the regions.

This information is from a recently published report on trends in inpatient hospital utilization for the years 1965 through 1986. The report documents the influence of changes in legislation and medical practice during this period by showing data from the 22 years of the National Hospital Discharge Survey (NHDS). The NHDS, which has been conducted continuously since 1965, is based on a sample of approximately 200,000 discharges annually from short-stay non-federal hospitals. In addition to trends in discharge rates by age, sex, and geographic region, the report shows trends in discharge rates for selected diagnoses and surgical procedures.

Diagnosis

Diagnoses in the report were chosen for their importance to a particular age group and comparability over three revisions of the International Classification of Diseases. For example, for children less than 15 years of age the discharge rate for pneumonia increased by 40 percent from 1965 through 1986, and the rate for fractures decreased by 25 percent. The rate for diseases of the ear and mastoid process tripled for children from 1965 to 1980 then dropped by half from 1980 through 1986.

For patients 15-44 years of age, the discharge rate for appendicitis fell 45 percent from 1965 through 1986; patients in this age group accounted for 50 to 60 percent of all appendicitis discharges. The discharge rate for patients 15-44 years of age with mental disorders increased over 80 percent during this period. Hospitalizations for alcoholism made up a significant part of the discharges in this category. For this age group the discharge rate for intervertebral disc disorders increased over 50 percent.

For patients 45-64 years of age, the discharge rate for malignant neoplasms increased 55 percent from 1965 to 1983 then decreased 14 percent from 1983 through 1986. The discharge rate for acute myocardial infarction increased 36 percent from 1965 through 1986 for patients 45-64 years of

age, while the rate for cholelithiasis was essentially unchanged. This age group had a decrease of 64 percent in the discharge rate for ulcers of the stomach and small intestine.

For patients 65 years of age and over, the discharge rate for malignant neoplasms increased 78 percent from 1965 to 1983 then decreased 13 percent from 1983 through 1986. The discharge rate for acute myocardial infarction increased 57 percent for the elderly during the 22-year period. The rate for fracture of the neck of the femur increased by one-third. Patients 85 years of age and over accounted for over a third of the discharges for this condition in the 65 years and over age group.

Surgery

Patients who had surgery during their hospitalization made up 38 percent of all discharges in 1965 and 46 percent in 1986. The number of inpatient surgical procedures rose from 15 million to 25 million during the period 1965 through 1986 and the average number of procedures per surgical patient rose from 1.36 to 1.59, but the average length of stay for patients who had surgery decreased from 8.2 days in 1965 to 6.6 days in 1986. As with diagnoses, specific procedures were selected for study based on consistency of coding and importance of the procedures to a particular age group.

Among the nine common surgical procedures examined, two declined significantly from 1965 through 1986. The rate of tonsillectomies with or without adenoidectomies dropped from 63.4 procedures per 10,000 population in 1965 to 11.7 in 1986, with 60-80 percent of these procedures performed on patients under 45 years of age. Hemorrhoidectomies decreased 68 percent from 14.9 to 4.8 per 10,000; almost one-half were performed on patients 45-64 years of age.

Inpatient rates for four procedures increased. The rate of cesarean sections per 100 deliveries increased from 4.5 in 1965 to 24.1 in 1986. Prostatectomies increased from 20.6 to 31.7 per 10,000 male population. Beginning in 1970, the number of procedures on the heart grew dramatically. Coronary bypass surgery increased from 14,000 to 284,000 in 1986; cardiac catheterizations increased from 77,000 to 775,000 in 1986.

Inpatient volume for three other procedures increased and then decreased. Lens extractions rose from 142,000 in 1965 to 630,000 in 1983 but then declined sharply. By 1986, the number of inpatient lens extractions was down to 122,000. The number and rate of hysterectomies increased from 1965 to 1975 but declined slightly in the 1980s. The number of cholecystectomies increased from 1965 through 1986, but the rate of cholecystectomies increased only for persons 65 years of age and over.

Summary

The trends presented in this report document a period of major change in providing medical care. Some changes reflect new or modified legislation while others reflect changes and advances in medical practice. Medicare was implemented shortly after the NHDS began and the Medicare Prospective Payment System was implemented in 1983. Treatment changes were usually gradual and new surgical procedures were introduced and became more widely used. In addition, during the 1980s ambulatory surgery reduced the role and scope of inpatient surgery.

Some of these influences are evident in the data. For example, the increase in the rate of hospitalization for older people during the early years of the NHDS reflects the

implementation of Medicare. Declines beginning in 1983 reflect both the implementation of the Prospective Payment System (PPS) (and its adoption by private insurers) and the shift toward ambulatory surgery. Declines in hemorrhoidectomies and lens extractions may represent a move to ambulatory surgery. The decline in tonsillectomies and increases in cesarean sections, coronary bypass surgery, and cardiac catheterizations may reflect changes in medical practice and advances in technology.

Projections, while always tenuous, are especially difficult in regard to hospital utilization. In 1980, if one had used data on numbers or rates of discharges or days of care from the 1970s to predict hospital utilization for the 1980s, conclusions would likely have tended toward vast increases in

inpatient care. Examination of recent declines in hospital utilization invite predictions of continued decline. The most recent data available from the NHDS (unavailable at the time the report was published) indicate that the number of discharges and days of care have continued to decline: number of discharges in 1987 was 33.4 million, and number of days of care was 214.9 million. Average length of stay in 1987, 6.4 days, is unchanged from 1986 and may indicate a leveling off after over a decade of decline.

ACKNOWLEDGMENTS

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'The Playful City' Conference at Stanford University July 29–August 1

"The Playful City" is a national effort to create a new vision for urban areas—one which will meet the needs of children, youth, and families. As cities attempt to solve the problems of growth, planning and design, solutions must include ways of rebuilding the urban community, reducing youth alienation, and attracting and keeping families. A multi-disciplinary working conference—to be held at Stanford University, July 29–August 1, 1990—will develop guidelines for creating livable urban communities which are sensitive to children and youth. "The Playful City" guidelines are expected to have policy-making implications for the design of the urban environment in the next decade and beyond.

Prior to the conference, focus groups of children, youth and families will participate in discussions about their urban experiences in 10 selected cities from all regions of the United States. These discussions will facilitate preparation of draft guidelines for conference review. Conference topics will include:

- Neighborhoods and Housing: Creating Places for People
- City "Greens": Land and Water as Family Resources
- Childhood Institutions: Quality and Availability
- Streets and Transportation: Accessing the City
- Making the Most of Public Buildings: Libraries, Museums and More
- Commercial and Industrial Uses: Meeting Family Needs in the Workplace
- The Modern Bazaar: The Adventure of Shopping.

Participants in the conference will come from the fields of: community design, landscape architecture, politics, child development, disability, public administration, law, education, recreation, public health, urban economics, business, real estate development, community development, city planning, and transportation planning. For further information about the conference, contact the host group: PLAE, Inc. (Play and Learning in Adaptable Environments), 1802 Fifth Street, Berkeley, CA 94710 USA. Tel: 415/845-7523.