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**EFFECTIVE CHANGES IN HOSPITAL PATIENT ACCOUNTING
SINCE THE PROSPECTIVE PAYMENT SYSTEM (PPS)**

by

Carol L. Francke

**A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Public Administration
School of Public Affairs and Administration**

**Western Michigan University
Kalamazoo, Michigan
August 1994**

EFFECTIVE CHANGES IN HOSPITAL PATIENT ACCOUNTING SINCE THE PROSPECTIVE PAYMENT SYSTEM (PPS)

Carol L. Francke, D.P.A.

Western Michigan University, 1994

This is a multiple case study that examined three hospital patient accounting departments since the adoption of the prospective payment system (PPS). The cases were chosen based on similarities such as their size and dependence on government programs for reimbursement. Interviews were conducted and documents were reviewed from 1985 and 1990. Measures of gross revenue days in accounts receivable and the ratio of the number of full-time equivalents (FTEs) to patient encounters were used to determine whether these patient accounting departments were more efficient in 1990 than in 1985.

Despite their selection of different forms of adaptation, all three hospitals became more efficient. The three hospitals chose markedly different strategies to cope in the PPS environment. One hospital focused on efficiency changes, the second zeroed in on customer relations, and the third opted for an organizational-development approach.

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ACKNOWLEDGMENTS

The completion of this dissertation would not have been possible without the assistance and encouragement of many individuals.

The members of my doctoral committee provided guidance, encouragement, and unending review throughout this process. Many thanks to Dr. Kathleen Reding, the School of Public Affairs and Administration, Western Michigan University, who chaired the committee. She suffered through reading many drafts before this dissertation came to completion. Her patience and encouragement have been greatly appreciated.

Dr. Peter Kobrak, Professor in the School of Public Affairs and Administration, has been a mentor and has continually offered encouragement and support since we first met at the beginning of the DPA program. It was his encouragement, and not fear of his threats, that gave me the initiative to complete this project. Sincere thanks, Dr. Kobrak.

A special thanks to the third member of this committee, Robert Nicholson, M.D., F.A.A.P., who willingly gave of his time to help with this dissertation.

A project of this nature requires a research expert. Barb Kormelink, Medical Records Librarian at Bay Medical Center, filled this role. Many thanks to Barb for sharing her knowledge of database searches and requesting many articles from other libraries.

Acknowledgments--Continued

I also thank Nan Lewandowski and Barb Lopez, who assisted throughout the process with their expert knowledge of word processing.

Lyn O'Connor, also a DPA student and friend, provided support and encouragement along the way. This favor will be returned as Lyn also completes her dissertation in the near future.

This whole process began with a suggestion from Rose Collamer-Bauman, a friend and a retired professor from Saginaw Valley State University. Rose introduced me to the DPA program and has provided encouragement throughout the program.

I would also like to express my gratitude to my husband, Don, and the rest of my family. They have sacrificed a few home-cooked meals during the seven years I have been involved in the DPA program. Thanks for your support, gang!

A final thanks to Sue Miller, who did an excellent job of typing the final draft of this paper.

Finally, I dedicate this dissertation to the memory of my mother, Alta B. Wynne, and my brother, Richard E. Schmidt.

Carol L. Francke

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CHAPTER I

BACKGROUND

A Major Public Policy Issue

The high cost of health care is a major public policy issue. Expenditures for hospital care reached \$37 billion in 1982, an increase of \$32 billion over the 1970 figure of \$5 billion. Figures published by the Health Care Financing Administration Office of the Actuary (1992) show that, in 1980, the United States spent \$249.1 billion or 9.1% of the gross national product on health care. By 1990, these figures had increased to \$666.2 billion or 12.2% of the gross national product.

Woolhandler and Himmelstein (1989) reported that Americans spent an average of \$2,270 each for health care in 1988. Of this \$2,270, \$500 per person or \$125 billion went to the health care bureaucracy. The authors compared the American system to the Canadian system and concluded that the American system would save \$55 billion by simplifying or eliminating most billing, eligibility determination, and marketing by health insurance firms.

In 1965, a new era of government involvement in the cost of health care was launched through the Medicare and Medicaid programs. These two government entitlement programs pay for the largest portion of health care in the

United States. Entitlement programs are difficult to manage because they are open-ended programs. In the case of Medicare, virtually all citizens over the age of 65 and some disabled citizens are eligible for benefits. In the case of Medicaid, many individuals who have insufficient funds to cover the cost of their health care are eligible for benefits. The number of people who are eligible for benefits under Medicare and Medicaid continues to grow, making funding of the programs a major challenge to government leaders.

Medicare is funded through federal funds, whereas Medicaid is funded through federal and state funds. In 1981, in the United States, 54% of all hospital revenues were paid by federal- and state-funded programs. Hospitals received 42% of all Medicare and Medicaid benefits (Curtin & Zurlage, 1984). These programs supported and promoted institutional "hospital" inpatient care, a costly proposition. In addition, health care that is funded by the private sector represents a tax deduction. Items allowing a deduction reduce in this case both state and federal government coffers. Premiums paid for health care are not taxed by either the state or the federal government.

Medicare and Medicaid

Medicare, Title XVIII, is federally funded under the Social Security Act. Medicare consists of two parts, part A and part B. Medicare part A is financed directly through Social Security taxes. Claims are processed by fiscal intermediaries (FI) designated by the Health Care Financing Administration

(HCFA). Part A pays for four kinds of medically necessary hospitalization: inpatient acute hospital care; inpatient care in a rehabilitation facility; some home health care (up to 80 hours); and since November 1, 1983, hospice care. In general, people are automatically eligible at 65 years of age or if they are collecting disability benefits. Russell (1989) reported that hospital costs account for approximately 70% of the total Medicare budget.

Medicare part B is a voluntary supplemental medical insurance. It is financed by payments from the federal government and by monthly premiums paid by the people enrolled in the plan (50/50). In addition, a deductible and co-pay are required. Services provided under part B include physician services, both inpatient and outpatient; some home health care not covered by part A; physical, speech, and occupational therapy; outpatient hospital services; ambulance; and blood transfusions starting with the fourth pint of blood.

Medicaid, Title XIX of the 1965 amendments of the Social Security Act, is funded by federal and state monies. The federal government pays 50% to 83% of the cost, depending on the economy of the state. Medicaid provides medical assistance on behalf of families with dependent children and aged, blind, or disabled individuals whose income and resources are insufficient to meet the costs of necessary medical services.

Both Medicare and Medicaid represent an attempt to give elderly and indigent citizens who meet specified criteria access to health care that would not otherwise be available. One major difference between the two programs is that

Medicare is available regardless of income, whereas Medicaid eligibility is based on financial need. Another difference is that Medicare employs a fiscal intermediary (FI) to administer its program, whereas Medicaid administers its own program. In Michigan, the FI is Blue Cross and Blue Shield of Michigan.

Change in Reimbursement Methodology

Because hospitals represent the largest cost to the Medicare and Medicaid programs, initial legislation in the early 1980s was targeted at reducing hospital reimbursement. Although hospital costs are expensive, other factors also have contributed to the cost of health care. Technology, the aging of the population, medical liability, and administrative costs have been cited as additional causes of the rise in the cost of the health care system in the United States.

From the beginning of the Medicare and Medicaid programs until 1982, hospitals were reimbursed on a cost basis. Hospitals had no incentive to reduce costs because these government-funded programs would cover costs in their entirety.

The cost-reimbursement methodology was deemed to be largely responsible for the spiraling cost of inpatient hospital services. Policy makers responded to the high cost by changing the reimbursement methodology for inpatient hospital services from a cost-based to a per-case payment methodology

through the enactment of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA).

TEFRA

TEFRA established a new reimbursement methodology, commonly referred to as the prospective payment system (PPS). Under the PPS, Medicare pays a fixed rate per discharge for each hospital stay. The rates are established in advance, based on diagnostic related groups (DRGs). If the hospital can treat the patient for less than the amount specified in advance, it will receive a profit. If the hospital spends more than the established rate to treat the patient, it will lose money. The federal government used hospital-specific data to establish the initial rates.

Development and Explanation of DRGs

DRGs were initially conceived by two health care researchers, Robert Fetter and John Thompson, at Yale-New Haven Hospital in the late 1960s (Bentley & Butler, 1980). Later, in 1979, Yale University was awarded a grant by the Department of Health and Human Services to develop an improved set of DRGs. Parameters used in developing DRGs include the patient's principal diagnosis, the principal surgical procedures, the presence or absence of complicating conditions, and the gender and age of the patient.

DRG payment rates were determined through information gathered primarily through a 20% nationwide sample of patient bills and cost reports drawn from each hospital. Briefly, PPS reimbursement specified the following:

1. The unit of payment is the case.
2. Inpatients are classified using the DRG classification system.
3. DRG prices are payment in full.
4. DRG prices are paid on the basis of a hospital market basket price index.
5. DRG payment rates are based on information currently available to the Health Care Financial Administration (HCFA).

In addition, over a period of time, the HCFA intended to expand the PPS rationale to include:

1. Direct capital and education costs, which are currently passed through on a reasonable cost basis. In the future, a factor will be included in the DRG rate.
2. Outpatient care is reimbursed on a reasonable-cost basis until methods are developed to pay for this prospectively.
3. Psychiatric, long-term care, and pediatric hospitals are excluded from PPS.
4. Beneficiary cost sharing is limited to deductible and coinsurance (Curtin & Zurlage, 1984).

Since the initial legislation in 1983, DRGs have been developed to include chemical dependency units of the hospital, beginning with cost-reporting periods on or after October 1, 1987 (CCH Editorial Staff, 1988). Psychiatric and rehabilitation units continue to be reimbursed on a per diem basis. However, outpatient laboratory and radiology services currently are paid on a predetermined fee screen, and ambulatory surgeries are paid at a prospectively established rate.

The Intention of PPS

The intention of PPS was to reduce the cost of health care by encouraging productivity and introducing competition among hospital providers. It was believed that cost-effective health care would result, thereby reducing the government's share of the national health care bill. Furthermore, this cost savings would occur without limiting access to, or the quality of, hospital services. The intention of the legislation was not to limit the availability of inpatient hospital services to the beneficiaries of the Medicare or Medicaid programs. The purpose was to limit payment to the hospital provider.

Medicare PPS became effective for hospital cost-reporting periods on or after October 1, 1983. Medicaid PPS followed on February 1, 1985, and Blue Cross adopted the PPS form of reimbursement in 1986. These three payors account for the majority of inpatient hospital reimbursement. Because most hospitals are highly dependent on Medicare, Medicaid, and Blue Cross for

reimbursement, they were forced to adapt new strategies to survive in the new reimbursement arena or risk extinction. Until the enactment of PPS, hospital providers had no reason to worry about the cost of providing services because they were reimbursed on a cost basis. In the new PPS environment, hospitals needed to examine their cost and service mix before making changes to adapt.

Russell (1989) reported that, from the perspective of government policy makers, PPS has achieved its primary goal of slowing the growth of Medicare spending. Furthermore, the savings to the Medicare program do not appear to be gained at the expense of other payors.

McCarthy (1990) had a different perspective. She stated that the costs of underfunded public programs were shifted to business and other private payors. She further stated that, in addition to the underfunding by government programs, nearly 6 of every 10 people with incomes below the federal poverty levels are not covered by Medicaid. The costs of underfunding and of paying for the underinsured are passed on to private payors in the form of a 20% mark-up.

Other changes that have occurred as a result of prospective payment are not as easily measured. Because of the urgency to control the cost of health care for government beneficiaries, little thought was given to the cost of regulating and managing the new reimbursement system for government or to the administrative costs to the hospital providers.

All Share the Cost of Health Care

Business, government, consumers, and providers share the burden of the cost of health care. Historically, business has provided health care benefits to employees as a tax-exempt fringe benefit. Since the advent of the Medicare and Medicaid programs in the mid-1960s, government has assumed the responsibility of paying the health care bill for the retired, the disabled, and some indigent citizens. The privately insured consumer is paying an increasingly large share of the health care bill through larger deductions and co-pays. Providers of health care, particularly the inpatient hospital, have been the target of budget cuts. Initial legislation to control the cost of health care has centered on the hospital provider rather than the consumer. No attempt has been made to limit services to the health care consumer.

The hospital provider and the government have limited resources. Both are trying to balance budgets and provide quality health care. PPS was enacted as a method to reduce the government's share of the hospital bill. This new reimbursement methodology was based on statistics gathered from the cost-based system. Initially, data were gathered from each hospital, and the per-case rates were individually hospital specific. Hospitals with higher costs received higher reimbursement per case than did hospitals with lower costs per case.

Developing Trends in Michigan Hospitals

In this study, the researcher focused on the problems experienced by Michigan hospitals in the patient accounting arena. Two time periods were considered: 1985, shortly after the introduction of PPS, and 1990. Current trends in hospital use and uncompensated care from 1985 to 1990 are shown in Table 1.

Table 1

Michigan Hospital Trends (in thousands)

	1985	1990
Occupancy (%)	66.8	65.5
Inpatient beds	37.5	34.0
Inpatient admissions	1,254.1	1,069.4
Inpatient hospital days	9,153.1	8,116.6
Outpatient visits	10,415.7	15,319.6
Total FTEs	125.4	135.2
Total operating expense	\$5,739,845.0	\$8,210,713.0

Source: American Hospital Association. (1992, April). Annual survey of hospitals, 1980, 1990. In Hospital trends (presentation materials produced by Health Policy Analysis). [Lansing]: Michigan Health Care Institute.

In 1985, acute-care hospitals in Michigan had 37,500 inpatient hospital beds set up and staffed. By 1990, the number of beds was reduced to 34,000, for a net decrease of 3,500 beds. The number of inpatient admissions in 1985

was 1,254,100 compared to 1,069,400 admissions in 1990, for a decrease of 184,700 admissions. The number of inpatient days for Michigan hospitals in 1985 was 9,153,100 compared to 8,116,600 days in 1990. Clearly, the inpatient market was on a downward trend.

However, the number of outpatient visits increased at a substantial rate. In 1985, Michigan outpatient hospital visits numbered 10,415,700 compared to 15,319,600 in 1990, an increase of 4,903,900 outpatient visits. The decrease in inpatient admissions and the consequent increase in outpatient visits added to the burden of greater volume to the patient accounting department. The net effect of the trend to more outpatient services increased the volume of accounts flowing through the patient accounting department.

From 1985 to 1990 in Michigan, the net effect was an additional 3,867,300 patients accessing services at the short-term hospital. In addition, the number of full-time equivalents (FTEs) required to manage hospitals has increased dramatically, resulting in higher costs. Patient accounting departments have been forced to increase the sizes of their staffs to manage the added volume of accounts (American Hospital Association, 1990).

For patient accounting departments, the cumulative effect of the downward trend of inpatient admissions and the upward trend of outpatient admissions resulted in an additional 4,900,400 admissions to handle and an additional 4,900,400 bills to be processed. There was also an increase in the credit and collection personnel time necessary to arrange payment for the self-

pay portion of the bill and/or to write off bad debts. Little thought was given to the increased administrative effort required to cope with the additional volume or the cost involved.

Another event affecting Michigan hospitals and subsequently access to health care was the closing of many hospitals in Michigan. From 1985 through 1990, 19 hospitals closed their doors. Some were merged into larger hospital systems. Others were converted into specialty hospitals such as psychiatric or chemical dependency units, which were not initially subject to the PPS reimbursement limitations. The result was a reduction of 2,268 acute-care beds available in Michigan. The reduction in the number of inpatient hospitals should be considered a cost-effective measure on the part of the hospital provider because hospital census has been reduced. However, the closing of local acute-care hospitals required the patient to travel farther to access acute-care services.

Statement of the Problem

Rights-Limited Resources-Administration-Regulation

As the American society struggles to maintain current levels of health care, which many citizens consider a right of citizenship, the cost of administering a cumbersome and fragmented system continues to grow. As the government tries to change the reimbursement methodology to reduce payments to providers, more tax dollars are diverted to regulating the system. These are dollars that are not available for health care services. Providers of hospital

services are forced to react by spending more resources to comply with the regulations, thus increasing the cost of providing services.

The researcher's purpose in this study was to examine administrative costs in the patient accounting departments of three similar short-term hospitals. A large portion of administrative hospital resources is spent on the patient accounting function. Some patient accounting departments have been able to cope with the new reimbursement more efficiently than others. An examination of efficient hospital patient accounting departments should reveal strategies that other hospitals could use to reduce costs. A reduction in administrative costs would then make more resources available to provide health care services to the public. Or perhaps the more respected patient accounting departments simply appear more efficient because they use more hospital resources.

The Basis for PPS

PPS was enacted as a method to reduce the government's share of the inpatient hospital bill. This new reimbursement methodology was based on statistics gathered from the cost-based system. Initially, data were gathered from each hospital, and the per-case rates were individually hospital specific. Hospitals with higher costs received higher reimbursement per case than did hospitals with lower costs per case. Eventually, PPS rates would move toward a national average.

The Trend Toward Outpatient Services

Since the enactment of PPS, hospitals have changed their method of delivering services. Outpatient services have replaced lengthy inpatient hospital stays. Patients often recover at home rather than in the hospital bed. Russell (1989) reported that the number of people accessing home health care services paid for by Medicare increased from 16 persons per 1,000 in 1974 to 51 persons per 1,000 in 1985. Technological advances made the move to outpatient services possible. However, PPS encouraged hospitals to move inpatient services to the outpatient environment, which is still reimbursed on a cost basis. Many departments within the short-term hospital setting have been affected by technological advances and PPS. Different reporting requirements require hospitals continually to evaluate the way they do business. One greatly affected area is the patient accounting department of the hospital.

The Effect of PPS on Patient Accounting

For the purposes of this study, patient accounting was defined as the admitting, insurance billing, and credit and collection functions of the short-term hospital. More outpatient services equal more accounts. Increased regulations and billing requirements have increased the cost of patient accounting. More emphasis has been placed on the acquisition of information required during the admission and billing process. As payments from government sources shrink, there is a greater need for payment from other sources of reimbursement. The

need for more stringent credit and collection policies affects the relationship between the hospital and the patient.

In the current environment, the patient often is required to make advanced payment arrangements or risk being denied hospital services. Hospitals seem to be developing a new relationship with their patients, one that now resembles the relationship between other businesses and their customers. If one wants to buy a new automobile, one is expected to make a down payment. In the current health care environment, hospitals are beginning to collect down payments.

Inherent in the new rules affecting payments are protective provisions for Medicare and Medicaid recipients. Hospitals are mandated not to restrict services or collect payments in advance, unless they are definitely known to be services not covered by Medicare or Medicaid. On the other hand, hospitals have become increasingly aggressive in collecting payments in advance from patients who are not covered by the Medicare or Medicaid program in an effort to maintain an even cash flow.

Additional Regulations

In 1986, Medicare interim payments were eliminated. Previously, the hospital could depend on bi-weekly payments from the Medicare program. With the elimination of interim payments, there is greater pressure on the patient accounting function to maintain an adequate cash flow. Before the loss of interim payments, there was less incentive to bill the Medicare program in a timely

manner. Payments were received on a regular basis, regardless of when the bill was produced.

In the current environment, the account will not be paid until the bill is submitted. In addition, on October 1, 1988, HCFA mandated a 14-day hold on all "clean" claims (Mowll, 1989). The intention of the payment floor was to produce a savings to the Medicare program by delaying payments to hospitals. Thus, even when the hospital submits a properly coded electronic claim, the program will not pay the claim for 14 days. The payment floor for paper claims is 26 days, effective October 1, 1993.

More recently, in 1990, HCFA also instituted the 72-hour rule effective for services provided January 1, 1991, or later. If diagnostic services are provided within 72 hours of an inpatient stay and relate to the admitting diagnosis, they are considered part of the inpatient DRG reimbursement. Because these diagnostic services were not included in the initial DRG rates, reimbursement to hospitals is further reduced by bundling the outpatient diagnostic services to the inpatient claim. This has further complicated the billing process. Hospitals must identify these outpatient services before the inpatient claim is billed. If the hospital can identify the outpatient services in advance, those services can be combined with the inpatient claim before submission of the inpatient claim. If the hospital cannot identify the outpatient claim, the program will pay the smaller outpatient claim and subsequently hold on a pending basis the larger inpatient claim. The hospital must then rebill the outpatient claim, asking Medicare to take back the

outpatient payment. When the adjustment is made, the outpatient charges are added to the inpatient claim and resubmitted to Medicare for processing. This process is timely and results in a slow-down in cash flow to the institution. The outcome of this process is to put more pressure on the patient accounting department to identify these claims in advance to avoid tying up the inpatient reimbursement.

Research Questions

Two major areas affected by PPS were addressed in this research: the administration of the patient accounting department and the relationship between the patient and the patient accounting department. The major research questions that were addressed are:

1. How have patient accounting departments changed since the enactment of PPS?
2. Have patient accounting departments become more efficient in the new reimbursement climate?
3. Has the new reimbursement methodology changed the relationship between patient accounting and the patient?

Summary

The high cost of health care in the United States is a major public policy issue. The nation can no longer afford the present health care system, which

had its beginning during more prosperous economic times. During the mid-1960s, federal and state governments became more involved in health care costs through the Medicare and Medicaid programs. Because most tax dollars were directed toward inpatient care, legislators later responded during more stringent times by changing the reimbursement methodology for inpatient hospital admissions through the enactment of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA).

TEFRA changed the reimbursement methodology from cost-based reimbursement to the prospective payment system for inpatient hospital care in October 1983. As a result, the methods of delivering health care in the United States have been substantially changed. Although technological advances made the outpatient environment a more cost-effective setting for health care, few additional changes had taken place until the enactment of PPS. Acute-care hospitals, once the center of health care delivery, are being replaced with more cost-effective outpatient procedures and home health care. Hospitals are now challenged to provide services in a cost-effective manner without compromising the quality of care or limiting access to the acute-care hospital.

PPS has been successful in slowing the growth of health care spending. However, the reviews are mixed as to the effect of the over-all health care system. Russell (1989) reported that, from a cost-savings viewpoint, PPS seems to have been successful. Hospital bills are running below levels expected before PPS. Even if additional outpatient bills are considered, the net savings in 1990

was more than \$17 billion. Initial results do not seem to indicate that the quality of patient care has been compromised. Other services have replaced lengthy hospital stays. More services are provided in the outpatient setting and by home health care agencies.

McCarthy (1990) viewed the success of PPS as a cost shifting to other payors. The underfunding of government programs and the number of uninsured result in higher charges to other payors. She contended that PPS has merely shifted the cost of health care.

Although the government seems to be satisfied with the success of PPS, providers and consumers might not agree. Patient accounting departments are struggling to process increased volumes of admissions, more third-party bills, and a larger number of self-pay balances. The trend toward more outpatient services, increased regulations, and information requirements has increased the cost of the patient accounting function of the acute-care hospital.

As the revenue stream shrinks from government programs, the hospital looks to its patients to reduce the deficit by requiring payment arrangements in advance and enforcing stringent credit arrangements. In addition, many smaller hospitals have merged with larger hospitals because they could not survive financially under PPS. The mergers of small hospitals into larger hospital systems further restrict the choices available to patients. The local hospital that is within easy driving distance has been replaced. The patient often has to drive a considerable distance for services that were once provided nearby.

In this study, the writer focused on the hospital patient accounting department, a part of the health care provider. If some hospitals are able to administer the provider side of the equation more efficiently, legislators need to know how such cost effectiveness is being achieved. However, it may be that the only way a patient accounting department can remain efficient is by continually adding more resources because of the complexity of the HCFA regulations resulting from PPS, continuous changes in coding requirements, and other specific insurer requirements. Public administrators must determine whether these alleged efficiencies are apparent or real. This is particularly the case because resources devoted to the patient accounting function of the hospital represent a substantial portion of a hospital's administrative costs. Resources used to fund administrative costs are not available to provide hospital services.

CHAPTER II

REVIEW OF THE LITERATURE

A Changing Environment

The focus of this research was on changes in the patient accounting function of the short-term hospital and its effect on the relationship between the hospital and the patient. Two time periods were examined for the purpose of this study: 1985 and 1990. In 1985, hospitals were beginning to examine the effects of PPS. By 1990, most hospitals had strategies in place to cope with the myriad changes caused by PPS.

Many of the changes involve the patient accounting function and its relationship to the patient. As the government continues to minimize dollars spent on hospital reimbursement, more responsibility has been shifted to the patient accounting function to maintain adequate cash flow. Patient-pay portions of the hospital bill have become increasingly important to offset reductions in revenue provided by the government and other payor sources, even where hospitals have been able to reduce costs. Cost effectiveness cannot be achieved if the cost of administration continues to grow.

Administrative Costs of the American Health Care System

Woolhandler and Himmelstein (1991) suggested that the rising cost of health care spending can be largely attributed to the administrative costs of the American health care system. They compared the administrative costs of the American and Canadian systems. In 1987, administrative health care costs in the United States were between \$96.8 billion and \$120.4 billion. These dollars equate to between 19.3% and 24.1% of total health care spending or \$400 to \$497 per capita. Health care administration in Canada accounted for only 8.4% to 11.1% of the total health care budget or \$117 to \$156 per capita. The authors contended that the administrative structure of the American health care system is increasingly inefficient compared to the Canadian national care program.

The fragmented and complex payment structure of the American health care system has been cited as one of the reasons for the higher administrative costs. Preparing claims for numerous insurance companies requires determination of eligibility, which is not required in Canada's single-payor system. In contrast, Woolhandler and Himmelstein (1991) cited the Shriners hospitals in the United States as an example of administrative efficiency. Shriners hospitals bill neither patients nor third parties and devote only 2% of their revenues to hospital administration.

In a more recent study, Woolhandler, Himmelstein, and Lewontin (1993) stated that the 1990 nationwide average administrative cost for hospitals was

24.8%. Their report was compiled using Medicare data from 6,400 hospitals. These researchers also analyzed states with a high percentage of enrollment in health maintenance organizations (HMOs) and managed-care contracts. They concluded that managed-care contracts do not seem to lower hospital administrative costs. In states with a high percentage of HMOs and competition for managed-care contracts, hospital administrative costs are comparable to those in other hospitals in the United States.

The Healthcare Financial Management Association (HFMA) commissioned Lewin-VHI (Dobson & Berghelser, 1993) to study the literature and synthesize a best estimate of health care administrative costs. The purpose of the study was to determine the savings potential of the HFMA's proposal to reduce paperwork inefficiencies through the Healthcare Simplification and Uniformity Act of 1993.

Lewin-VHI reviewed studies conducted by four organizations: the United States General Accounting Office (GAO), the Congressional Budget Office (CBO), Lewin-VHI, and Cambridge Hospital/Harvard Medical School. The Lewin-VHI synthesis estimated the median 1991 health care administrative costs at \$125.6 billion, or 17% of total health care expenditures. The study concluded that the HFMA's proposal to reduce paperwork potentially could reduce health care administrative costs in a range of \$2.6 to \$5.2 billion.

The HFMA estimated the administrative cost of the 1991 American health care system at 17% (Dobson & Bergheiser, 1993). The Lewin-VHI study

eliminated many of the costs classified as administrative in the study by Woolhandler et al. (1993). For example, Woolhandler et al. prorated a proportionate share of depreciation, amortization, and leases and rentals, which were eliminated in the Lewin-VHI estimate.

The HFMA published letters to the editors, refuting the findings of the Woolhandler et al. study because the definition of administration used in the study was too broad ("HFMA in Action," 1993). The HFMA considers the Lewin-VHI study, which cited the administrative hospital costs at 17% of total hospital costs, to be more realistic.

Final PPS Rules

Udema (1990) summarized the HCFA's final PPS Year 8 rules. The final rules were presented in the September 4, 1990, Federal Register. The major provisions of the final rules were applicable to discharges occurring on or after October 1, 1990, for PPS hospitals. Proposed national adjusted standardized rates were increased for labor-related and non-labor-related amounts. The increases were based on a market basket increase of 5.2%. Russell (1989) defined the current market basket as the rate of inflation for hospital goods and services, hospital productivity, advances in technology, the quality of care, and the long-term cost effectiveness of hospital services.

Udema (1990) also reported on changes made in DRG classification and weighting factors. The HCFA has added 13 new DRGs to its classification

system. In addition, the DRG weights have been recalibrated using 1989 Medicare Provider Analysis and Review File (MEDPAR) charge data. However, neither the reclassification nor recalibration changes increase or decrease aggregate payments. Changes being made by the HCFA are attempts to make DRGs more equitable, not to increase payments.

Provider Perspective

Dalton and Crane-Morgan (1985) informally surveyed more than 300 hospital controllers, patient accounting managers, and supervisors of various patient account activities at the HFMA's Patient Accounting for 1985 seminar. These administrators came from hospitals ranging in size from 50-bed rural hospitals to 1,000-bed urban medical centers. The questionnaire requested information concerning practices in the admitting, billing, credit and collection, and accounting and management areas of the hospital.

Dalton and Crane-Morgan (1985) found distinct differences in the admitting policies for inpatient and outpatient admissions. Slightly more than half of the respondents would delay elective inpatient admissions until satisfactory financial arrangements were made. In contrast, relatively few hospitals delayed outpatient services until satisfactory financial arrangements were made. Decentralized admissions for outpatient services were postulated as a possible explanation. As early as 1985, significant changes were occurring in provider-

practice patterns. The authors concluded that the move toward more ambulatory patients will require sound fiscal policies in the future.

There was consensus among the respondents concerning the need for timely billing (Dalton & Crane-Morgan, 1985). Hospitals appeared to agree that 3 to 5 days is an appropriate lag time for inpatient and outpatient accounts. Longer delays were attributed to tardiness in medical record coding.

Credit and collection policies also have an effect on payor turnaround. In general, hospitals expect payment from Blue Cross, commercial insurers, and private payors within 30 days after discharge. In this study, however, payment action from Medicare and Medicaid was often found to be less timely, with a high percentage waiting 31 to 60 days. Follow-up activity on accounts depended on the payor (Dalton & Crane-Morgan, 1985).

Few hospitals turned accounts over to a collection agency until at least 60 days have elapsed (Dalton & Crane-Morgan, 1985). The average time before turning an account over to a collection agency was 90 to 120 days. Hospitals that used more than one collection agency were able to reduce collection costs by fostering healthy competition among collection agencies.

Most hospitals recognize the difference between their charges and the expected payment at the time of payment. However, hospitals that recognize the difference at the time of billing have the advantage of matching the write-off to revenue in the same time period. The disadvantage of recognizing the write-off allowance at billing is that the allowance must be estimated.

How hospitals rated their patient accounting function was also part of Dalton and Crane-Morgan's (1985) survey. Most hospitals rated their patient accounting function as extremely effective or above average.

Dalton and Crane-Morgan (1985) concluded that the major changes in patient accounts management have been in the admitting and registration areas. Most hospital personnel responding to the survey expressed the opinion that the billing area has become more problematic. Numerous factors affect the ability to bill in a timely manner. Strong policy support at the board and hospital executive level will be required for timely and effective billing in the future.

Insurance Billing Delays

Hackett (1985) emphasized that delays in timely billing are a function of many factors. He considered the UB-82 bill form required by Medicare and Blue Cross, peer review organizations (PROs), and PPS requirements to be major areas of concern to the patient accounting function in the hospital setting. The UB-82 billing format came into being in October 1984 for use in billing the Medicare program. In addition, as a requirement of PPS, a physician's attestation is required before billing. The physician must sign the attestation form to ensure that the codes submitted by the hospital on the billing form accurately reflect the diagnosis and treatment of the attending physician. PPS has increased the workload in the medical records department and affected the ability of patient accounting to bill in a timely manner.

The PRO requirements influence the number of admissions that will be paid by the Medicare program. The PROs monitor the appropriateness of the inpatient admission process as part of the quality assurance for Medicare beneficiaries.

Altman (1986) suggested that patient account managers will be required to take a proactive, rather than a reactive, stance to meet the challenges facing patient accounts. She suggested that the proactive patient account manager should monitor patient charts to ascertain how long they take to complete, obtain physicians' signatures when needed, and bill without the signature if the physician delays. This approach would require strong hospital administrative support.

To remain on the periodic interim payment (PIP) program, which advances payments from Medicare, timely billing is required. The proactive manager closely monitors claims to identify those that are delayed for more than a normal postdischarge hold day period. The patient account manager also helps the medical records department obtain physicians' signatures in a timely manner to avoid delays in the billing process.

There has been an increase in Medicare accounts receivable since the institution of PPS. Altman (1986) believed that post-DRG Medicare receivables should be the same as pre-DRG Medicare receivables. Working closely with medical records and improving communications with physicians are necessary

to maintain Medicare accounts receivable days at the same levels they were before the transition to PPS.

Altman (1986) further suggested the possibility of organizational change for success. The admitting office should report to the patient accounting manager. More and more patients are covered by prospective payment organizations (PPOs), HMOs, and other delivery systems. This information must be communicated from admissions to billing to effect timely and accurate billing.

Continuing to separate the accumulation and gathering of this information from the patient accounting function probably causes most of the delays in processing non-Medicare claims. Broadening the admitting functions to include information gathering, financial screening, financial counseling, and deposit collection, which are all financial functions of the admitting department, would simplify the hospital financial system.

Current Provider Policy Trends

Results of a survey of hospital chief executive officers (CEOs), which surveyed hospital administrators nationwide, included some of the current strategies being considered by acute-care health care providers ("CEO Poll," 1990). When asked whether financial pressures had forced hospitals to reevaluate admission, transfer, and discharge policies, 37% answered yes, whereas 63% answered no. When the same question was posed for the future, 52% answered yes, 41% answered no, and 6% were uncertain.

Those CEOs who said they had changed admission, discharge, and transfer policies noted policy changes to discharge patients sooner and to use more restrictive admission policies. More emphasis was placed on the appropriate use of outpatient services whenever possible. They also made more referrals and transfers, used more stringent guidelines for admitting uninsured patients or catered to paying patients, closed or transferred services, and restricted incoming transfers. These were all strategies to reduce losses or to increase income. The survey indicated that more CEOs would change policies in the future.

Government policy makers did not intend to limit access to Medicare recipients. However, limited access will result for other patients if hospitals alter admission policies. Only the Medicare and Medicaid populations are exempt from paying up front. Hospitals will require down payments from patients with other forms of insurance and those who have no insurance. If patients are discharged sooner, quality of care could be compromised.

Patient Accounting Changes Since PPS

Mowll (1989) summed up the changes that have occurred since PPS and its effect on the patient accounting function. Medicare is the largest payor of hospital services. Medicare secondary payor (MSP) issues require hospitals to search for other primary payor resources before billing Medicare. The admitting department must determine whether Medicare patients have other insurance

coverage available. Before PPS, little attention was given to MSP issues. If a patient was eligible for Medicare coverage, Medicare was billed. A patient who was 65 years of age with Medicare identification automatically was billed to Medicare for services rendered at a short-term hospital.

Medicare's PIP were eliminated as a result of the Omnibus Budget Reconciliation Act of 1986. Under cost-based reimbursement, hospitals received PIP on a bi-weekly basis. The patient accounting department had little incentive to bill accurately or in a timely manner. The elimination of PIP made timely and accurate billing necessary to maintain adequate cash flow.

Congress also enacted a payment "floor" for processing Medicare claims. Effective October 1, 1988, claims are not paid until 14 days after receipt by the fiscal intermediary. In addition, billing requirements have substantially affected the ability of the patient accounting department to bill promptly and accurately, resulting in an increase in Medicare receivables.

Medicaid receivables account for an average of 7% of hospital account receivables nationwide. The Medicaid program in Michigan also adopted the DRG reimbursement methodology in 1985. Although Medicaid has not formally adopted a payment "floor," payments are rarely received sooner than the 14-day period mandated by Medicare.

Managed care through HMOs, Blue Cross, and commercial insurance companies also has made hospital billing more complex, resulting in payment

delays. The health care industry must recognize that increased billing complexity raises the administrative cost of patient accounting.

Need for Specialized Education

Perhaps the costs in patient accounting could be reduced by providing more specialized education for patient accounting managers. Nemes (1991) stated, "If the chief executive officer is the hospital's Captain Kirk, the patient-accounts manager is its Scotty--the man who supplies the power" (p. 70).

The patient account manager must collect the cash before it is available to be used in operations. New roles are required of the patient accounting manager. The manager must work with many departments to obtain the information necessary for timely and accurate billing. Efficient work patterns must be established, and billers and collectors must be trained. The patient accounting staff generally possesses a high school education, with additional skills gained through on-the-job training.

Most patient accounting managers obtained their positions accidentally. They were either promoted through the ranks or excelled as professionals in finance or administrative positions. Salaries are not as high for patient accounting managers as they are in other hospital financial positions. The average base salary of a chief financial officer in 1991 was \$81,600, compared to patient accounting managers at \$42,000 in 1990, according to the Hay

Hospital Compensation Survey, done in conjunction with Modern Healthcare ("Hay Hospital," 1991).

The increased demands on the patient accounting or business office manager are fueling calls for more education to help patient accounting managers advance in their fields. Ongoing educational opportunities could be an important factor in the success of the patient accounting department.

Federal regulation of the new reimbursement system requires more detailed information. Many of the increased billing requirements are a function of the need to capture more detailed information to regulate and track the effectiveness of the new reimbursement methodology. Increased informational requirements add to the already high cost of health care.

A Viable Option to Cost Containment

One hospital provider recognized the increased cost of separate billing requirements before PPS. On an experimental basis, St. Alphonsus Hospital in Port Washington, Wisconsin, has been able to substantially reduce the billing function of patient accounting ("All-in-One Billing," 1979). With the approval of Blue Cross in 1976, the hospital began using an all-inclusive billing rate. A single rate per day was charged, no matter what services or products the patient had used.

St. Alphonsus, a 120-bed general-care facility, was the only hospital in Wisconsin to adopt the all-inclusive billing rate system. Cost savings of \$17,000

were realized during the first year of the program and were predicted to be \$20,000 the second year. Per diem charges were based on the cost per day, with the first days being the highest and charges after the 11th day being the lowest. After the 11th day, the charge was fixed until discharge. Special-care units such as cardiac or intensive care were not included in the all-inclusive rate. The savings were thus in administrative services. The \$17,000 savings consisted of \$13,000 in personnel reductions, \$2,700 in paperwork costs, and \$1,070 in postage and data mailers.

The St. Alphonsus experiment could be an avenue used to reduce administrative costs in the acute-care hospital. Good cost data would be essential to the financial success of the hospital.

As a follow-up to the St. Alphonsus case, a telephone call was made. Sister R. Rose, President and CEO of St. Mary's Hospital Ozaukee, informed the researcher that St. Alphonsus Hospital was purchased from the Sisters of the Sorrowful Mother and renamed St. Mary's Hospital Ozaukee at the end of 1985. The hospital continues today as a wholly owned subsidiary of St. Mary's Hospital of Milwaukee (R. Rose, personal communication, June 3, 1994).

In a follow-up letter, C. C. Lobeck (personal communication, June 13, 1994), Senior Vice-President of St. Mary's, informed the researcher that the all-inclusive rate was discontinued in 1986 for two reasons. Primarily, insurance plans continually requested detailed breakdowns of charges by traditional departmental areas. Second, St. Mary's had some difficulty with a computer

conversion as a result of the hospital acquisition. Lobeck also mentioned that now their computer system could accommodate an all-inclusive rate in the current managed-care environment. It would appear that St. Alphonsus was ahead of its time.

Business Office Redesign

In a cover story featured in Modern Healthcare, Nemes (1993) reported on a successful redesign of the business function at Maricopa Medical Center in Phoenix, Arizona. According to C. LeMay, chief financial officer, the redesign was a year-long process. Maricopa wanted a long-range solution rather than a quick fix. Andersen Consulting was retained on a contingency basis to help with the new design. Work flows were studied to identify where the bottlenecks, duplication of services, and inefficiencies existed. The second phase of the process was to design a more streamlined work flow. Before the redesign process, clerks were assigned to separate aspects of the billing process and often were unaware of the global process. The business office staff was then organized into cross-functional teams. Each team was specialized by payor class. Each team was responsible for billing, follow-up, and cash posting for its particular class. A new computer system was also purchased to replace the manual process, which had not been updated since the late 1970s.

The results proved worthwhile. Before the redesign, Medicaid bills were delayed from 30 to more than 60 days. After the changes, the number of days

had been reduced to 12 to 25 days. LeMay added, "There was a real concern that the hospital would have to cut back services, but the extra cash and other improvements have so far kept us from limiting services" (Nemes, 1993, p. 60).

Patient Accounting in 1990

By 1990, patient accounting personnel were beginning to recognize the effect of the shift to more outpatient services. Anderson (1991) interviewed patient account managers and summarized several approaches used to cope with the changes in patient accounting. He interviewed M. McCarthy of Franciscan Health Systems, H. Castner of Halifax Medical Center, and R. Longo of Good Samaritan Hospital. All of these hospitals had experienced significant increases in outpatient business. The effort to collect outpatient accounts is as time consuming as collection of inpatient accounts. The higher volume affects productivity in patient accounting.

M. McCarthy, vice-president for consulting services, reported on the strategy used by the Franciscan Health Systems to reduce net days in receivables from 67 days to 56 days and to cut bad debt by \$8 million (Nemes, 1993). Franciscan Health Systems created a new subsidiary, Franciscan Receivables Management. Each of the 12 hospitals in the system transfers unpaid outpatient self-pay balances to the central office 45 days after the date of service. The central staff uses a computerized "auto-dialing" system, which dials patients. The auto-dialing system also displays a collector's message,

which is written by each participating hospital. Each patient is called three times during a 60-day period. The system also alerts the collector when it is time to place the next follow-up call. Studies by Franciscan have shown that the sophisticated follow-up system has more than doubled the collection rate.

Franciscan also used a team of internal consultants from its corporate office to revamp the business offices of each of its hospitals (Nemes, 1993). The consultants worked with each hospital's staff to streamline the business office function. Changes that were made included creating a structured, centralized approach to collections; implementing electronic billing; improving insurance verification efforts at admission and requesting cash deposits on self-pay accounts; and requiring physicians to sign attestations within 72 hours or risk losing their staff privileges. The efforts that Franciscan made have been successful in reducing net days in receivables.

According to H. Castner, manager of patient accounts at Halifax, a different approach was used by Halifax Medical Center, Daytona Beach, Florida, to reduce accounts receivable (Nemes, 1993). He fostered a team approach to improve receivables. Castner believed that "people are our most important asset." His approach included the following:

1. The entire business office staff meets monthly to hear progress reports and view motivational videotapes.
2. Supervisors meet twice a month for updates, hold quarterly retreats outside the hospital, and visit another hospital in the state monthly.

3. Once a month, every staff member is cross-trained in another specialty.

4. Staff members regularly earn rewards for jobs well done, ranging from meal tickets at the hospital cafeteria to ice cream socials and other outings.

5. Slogans are used to reinforce department goals, including "Be the Best" lapel pins and the code "GTM" on charts to remind staff of their objective to get the money.

Business office employees are given the opportunity to participate in interviews for new staff members so that they have a voice in who is being hired. Halifax also implemented electronic billing with most payors and electronic fund transfers with Medicare, Medicaid, and Blue Cross. Since the implementation of the team strategy, Halifax has reduced its net accounts receivable from 100 days in 1987 to 45 days in 1990.

Automation and restructuring the business office proved successful in reducing accounts receivable at Good Samaritan Hospital in Lebanon, Pennsylvania (Nemes, 1993). Good Samaritan Hospital has 220 beds at two sites. The hospital linked up with a computer clearing house, which processes most claims. In addition, the collections effort was enhanced by using software to prioritize the handling of claims. Two full-time financial counselors verify insurance coverage, explain coverage to patients, and request deposits at the time of admission. These counselors set up payment plans and help the

uninsured apply for Medicaid or other programs. The hospital accepts credit cards and has an arrangement with a local bank to provide loans for patients.

Good Samaritan has reduced its net revenue days in receivables from 65 days to 54 days in 9 months. Consumers now expect to pay for services when they are rendered.

The Increased Importance of Patient Accounting

Puhala and Barrett (1987) cited PPS as the main reason to pay more attention to the patient accounting function of the hospital. The financial stability of the hospital has been threatened by the new payment system, and survival in the new competitive health care environment will depend on adequate cash flow through accounts receivable management. Increasing charges to make up for bad debts is not feasible when more than 50% of all revenue for many hospitals is prospectively established.

Puhala and Barrett (1987) cited several factors that contribute to the growing importance of patient accounting: loss of interim payments from Medicare, a growing proportion of self-pay balances, the increasing use of contractual agreements and resulting preauthorization requirements, the importance of medical records to finance, dependence on physicians' cooperation, and the need for integrated systems.

The elimination of PIP has a severe effect on hospital cash flow because Medicare accounts for 30% to 40% of hospital patient revenue. PIP provided bi-

weekly payments whether the accounts were billed or not. PPS regulations have made billing more complicated, especially because the physician must attest to the correctness of the diagnosis before billing.

Employers and third-party carriers have raised deductibles and co-payments to discourage use and control insurance costs. Self-pay balances are harder to collect.

Preauthorization requirements have shifted the emphasis of patient accounting from the back end to the front end. If preauthorization requirements are not followed, payment for the entire hospital stay can be denied. Preadmission processing has become increasingly important in the new environment.

Before PPS, the medical records department was primarily responsible for maintaining clinical data bases for patient care, internal research, statistics, and complying with physicians' requests. Currently, medical records has the ability to affect reimbursement by assigning correct diagnosis and procedural codes. Inaccurate coding can result in lower reimbursement. Medical records must code in a timely fashion before timely billing can occur.

The role of the physician has become more important. Regardless of the extent to which the coding process is expedited in medical records, billing cannot occur until the physician attests to the appropriateness of the coding for Medicare inpatient beneficiaries.

PPS has increased the need for hospital systems to be integrated to provide efficient and accurate patient accounting data. The data that flow between the admission process, the medical records process, and the billing process must be accurate and timely.

Puhala and Barrett (1987) advocated thoroughly evaluating the current status of departments that affect the patient accounting process. They suggested a need for organizational change to promote accurate and timely billing. Medical records should report to the chief financial officer because he or she is accountable for the financial survival of the hospital.

Summary

Many studies have been conducted to determine the administrative costs of the American health care system since the initiation of PPS. Woolhandler and Himmelstein (1991) compared American administrative health care costs with those in Canada. They found that the American costs are between 9.9% and 13% higher than Canadian costs, using 1987 data. They repeated their study using 1990 data and arrived at similar conclusions.

Dobson and Bergheiser (1993) reported on a study commissioned by HFMA and conducted by Lewin-VHI. The Lewin study synthesized estimates from four other studies using 1991 data and concluded that the administrative cost of the American health care system was 17%, which is considerably lower than the 24.8% estimated by Woolhandler et al. Each study used a different

rationale for measuring administrative costs, which accounts for at least part of the 7.8% discrepancy. However, administrative costs are a major concern in the health care community.

Updata (1990) summarized the final PPS rules. HCFA has added more DRGs to its classification system and recalibrated the DRG weights. These changes were made in an attempt to make the system more equitable. However, the result of these changes would not increase payments to hospital providers.

Several authors have reported on the effect of PPS on the hospital provider. Dalton and Crane-Morgan (1985) surveyed hospital patient accounting managers and concluded that there are major differences in admitting policies, depending on the type of service, acknowledgment of the increased complexity of the billing process, and the need for strong fiscal policies in the future. Hackett (1985) reported on factors that contribute to billing delays, such as the UB-82 bill form, PRO requirements, and the physician-attestation requirement. Altman (1986) noted the fact that Medicare receivables are higher since PPS. She advocated organizational changes to smooth out the billing process.

Other authors such as Mowll (1989) and Puhala and Barrett (1987) summarized the changes in patient accounting since PPS. They generally concluded that the patient accounting function is more important, especially since the loss of interim payments. They also emphasized the need for timely and accurate billing in the new reimbursement environment and the need to provide specialized training to patient accounting managers.

Other writers have reported on successful strategies used by hospitals to reduce administrative costs and enable their patient accounting departments to be more efficient. Health Care Week ("All-in-One Billing," 1979) reported on the experimental use of an all-inclusive billing rate by St. Alphonsus Hospital in 1976, before PPS, because it recognized the cost of separate billing requirements. Anderson (1991) interviewed managers from three hospitals that have managed to become more efficient since PPS. Each hospital used different strategies, but all were successful in reducing their revenue days in accounts receivable. The one common theme at all three hospitals was that each increased its collection efforts.

The literature showed that PPS has increased administrative costs for hospital providers. Hospitals are trying to minimize these costs by making organizational changes. Patient accounting has assumed a more important role in the new reimbursement environment and requires more specialized training. However, just what kind of training is needed was not mentioned.

The literature addressed changes in policies and procedures, the increased responsibility for patient accounting, and broad strategies employed by patient accounting to maintain adequate cash flow since PPS. However, little has been reported on other changes that have been taking place in patient accounting or its relationship with other departments, which may be more important to successful operations than other factors. In addition, little has been

reported concerning the resources devoted to successful patient accounting departments.

CHAPTER III

METHODOLOGY

Change in Reimbursement

The change in the reimbursement methodology for the Medicare program was initiated because government programs could no longer support the spiraling cost of health care. A major reason for the prospective payment system (PPS) was therefore to reduce the government's share of the cost of health care.

Russell (1989) stated that the primary intention of the change in reimbursement was to make federal expenditures under Medicare more predictable. Congress also expected that hospitals would become more efficient under PPS. The peer review organizations were created as part of the 1982 legislation to ensure that hospitals would not profit at the expense of the quality of care rendered to the patient.

In this study, the researcher addressed the effect of PPS on the patient accounting department of the short-term hospital. A short-term hospital has an average length of stay for all patients of fewer than 30 days, or more than 50% of all patients are admitted to units where the average length of stay is fewer than 30 days (American Hospital Association, 1990). Each of the hospitals included in this study had inpatient beds dedicated for use other than acute-care beds,

such as substance abuse or long-term skilled care. However, the hospitals chosen for this study qualified for the definition of short-term hospitals.

The researcher also examined survival strategies employed by three patient accounting departments in the new reimbursement environment. Further, the effect of the survival strategies on their relationship with patients was analyzed. Patient accounting was defined here as the admitting, billing, credit, and collection functions of the short-term hospital.

The change to PPS reimbursement has forced hospitals to examine their admission, credit, and collection policies to avoid the risk of bad debts. Billing must take place in a timely manner to maintain a steady stream of cash flow. Credit and collection efforts continue to be monitored in an effort to collect self-pay portions of the bill to subsidize the shrinking reimbursement from third-party payment sources.

A Multiple Case Study Approach

The method chosen for this research was the multiple case study. The case study is designed to answer "how" and "why" questions about a contemporary set of events over which the investigator has little or no control (Yin, 1989). The primary questions that were addressed in this research were as follows:

1. How have patient accounting departments changed since the enactment of PPS?

2. Have patient accounting departments become more efficient in the new reimbursement climate? In this study, efficiency was defined as the ability to maintain adequate cash flow by minimizing the dollars tied up in accounts receivable.

3. Has the new reimbursement methodology changed the relationship between patient accounting and the patient? If so, how?

Two points of time were considered for this research, 1985 and 1990. Data for the study were gathered through interviews and a review of documents at the study sites.

The Cases

Three Michigan hospital patient accounting systems were selected for this study. The three systems are referred to as Hospital A, Hospital B, and Hospital C so that their identities remain anonymous. These hospitals were selected for this study based on the following criteria: the number of inpatient beds, provision of a fairly wide range of outpatient services, dependence on government programs for reimbursement, a fiscal year ending on June 30, and minimal competition with other hospitals.

In 1985 and 1990, each hospital in the study had more than 275 but fewer than 425 inpatient beds, and each provided an array of outpatient services. These services included, at a minimum, emergency and outpatient departments, physical therapy, occupational therapy, and ambulatory surgery. The increase

in the volume of outpatient accounts has brought about changes in patient accounting. Since the 1983 change to PPS for hospital reimbursement, outpatient services have increased.

Most Michigan hospitals rely heavily on government reimbursement as a source of income. Source of revenue has a major effect on hospitals because reimbursement differs among payors. The three hospitals selected for the study received at least 50% of their income from government programs, specifically Medicare and Medicaid.

Using hospitals with a fiscal year ending on June 30 helped make comparisons valid. PPS was phased in for hospitals on the first fiscal year end after October 31, 1983. Each hospital in this study came under the new PPS reimbursement methodology on July 1, 1984. Each hospital in this study was affected by the new reimbursement methodology at the same time.

Because competition plays a major role in policy changes, hospitals that compete directly with other local hospitals in the same area must consider such competition before making major policy changes. Using hospitals with minimal competition reduced any spurious effects caused by the need to consider the effects of direct competition. Comparative data for the three hospitals included in the study for 1985 and 1990 are shown in Table 2.

Table 2
Case Study Statistical Data

	1985	1990
Hospital A		
Inpatient beds	378	420
Occupancy (%)	69.8	63.5
Admissions	15,093	15,465
Personnel	1,277	1,522
Total payroll expense (000's)	\$28,098	\$38,280
Hospital B		
Inpatient beds	307	307
Occupancy (%)	73.0	71.3
Admissions	11,418	10,706
Personnel	1,031	1,442
Total payroll expense (000's)	\$23,277	\$38,296
Hospital C		
Inpatient beds	286	328
Occupancy (%)	73.9	73.9
Admissions	11,903	13,577
Personnel	1,010	1,252
Total payroll expense (000's)	\$19,837	\$37,240

Source: American Hospital Association. (1992, April). Annual survey of hospitals, 1980, 1990. In Hospital trends (presentation materials produced by Health Policy Analysis). [Lansing]: Michigan Health Care Institute.

Changes

Both Hospital A and Hospital C increased the number of inpatient beds since 1985, whereas Hospital B reported the same number of beds. Hospital A purchased a small hospital in 1988, which increased its inpatient bed component. Hospital C added an alcohol/drug abuse or dependency inpatient unit. Hospital had the same number of inpatient beds for both periods, of which 48 were a long-term skilled-care facility.

Although Hospital B maintained the same level of occupancy for 1985 and 1990, the number of admissions increased because the average length of stay decreased. Both Hospital A and Hospital C had experienced a decrease in occupancy by 1990; however, admissions also increased. Hospital B admissions decreased by 712 admissions, whereas Hospital A and Hospital C admissions increased by 372 and 1,674 admissions, respectively.

All three hospitals reported an increase in personnel, with Hospital B showing the largest increase in personnel. Hospital C had the largest increase in payroll expense, even though it had the smallest increase in personnel. At least part of the increases in personnel and payroll expense can be attributed to the patient accounting function.

Measures of Efficiency

This researcher sought to determine whether some patient accounting departments had managed to increase their efficiency in the new reimbursement

environment better than others. As previously stated, efficiency was defined in this study as the ability to maintain adequate cash flow by minimizing dollars retained in accounts receivable or, restated, to minimize gross revenue days in accounts receivable. Gross revenue days in receivables is a recognized industry standard.

Gross revenue days in accounts receivable were calculated by dividing the total accounts receivable by average daily revenue over a period of time. Usually the time period was the previous 3 months' revenue divided by the number of days in the period. Historically, Michigan hospitals have higher gross revenue days in accounts receivable than the national average because of the complexity of Michigan billing. Computer vendors struggle with the programming required for separate bill formats required for Medicare and Medicaid in Michigan. Most other states use the same bill format for both programs. Only recently, in January 1994, has Michigan Medicaid allowed the use of the same bill form for inpatient accounts.

The number of gross revenue days in accounts receivable shows the amount of working capital tied up in accounts receivable. However, the number of gross revenue days does not reflect the number of resources used to maintain an acceptable level of accounts receivable. For example, if Hospital A devotes more resources to the patient accounting function than does Hospital B, gross revenue days should be lower at Hospital A. However, if Hospital A and Hospital B devote an equal number of resources to patient accounting, then the most

efficient patient accounting department should be the one with the lowest gross revenue days in accounts receivable.

Purpose of the Study

The researcher's purpose in this study was to identify successful strategies to keep the cost of patient accounting at a minimum but still allow the hospital to maintain an acceptable level of gross revenue days in accounts receivable. All patient accounting management personnel and the chief financial officer were interviewed at each hospital included in this study.

Financial data gathered for this study are reported as a percentage of change rather than actual dollar amounts where the data would reveal the identity of the individual institution. The patient accounting departments included in this study were chosen on the basis of their similarities. Each had taken a different path to survive in the new reimbursement environment created by PPS. This researcher attempted to pinpoint the most successful changes without identifying the individual subjects or the institutions involved in the study.

The Interviews

A semistandardized interview schedule was developed. Berg (1989) explained that this type of interview schedule falls somewhere between the extremes of completely standardized and completely unstandardized interview schedules. The interviewer begins with a predetermined set of questions, which

are asked in a consistent manner. The initial questions of a semistructured interview are organized around broad categories intended to answer the research questions—the objective of the study. The interviewer has the freedom to probe beyond the initial questions to gain additional information. The semi-structured interview schedule construction begins by listing variables or broad categories considered important to the study. Initial areas of inquiry for this study were identified as follows: organizational structure, experience, resource commitment, policies and procedures, payor mix, and gross revenue days in accounts receivable.

A hospital similar to the three in the study was used as a pretest site to refine the initial interview schedule. After the pretest phase of this study, the interview schedule was refined, based on information gathered before the case study interviews were conducted. A copy of the final interview schedule is included in Appendix A.

To ensure valid comparisons among hospitals, information was gathered on a uniform basis from all cases. Although the description of patient accounting varied from hospital to hospital, this problem was overcome by giving all interviewees the same definition of the scope of patient accounting used for the purpose of this study. A copy of this explanation is included in Appendix B. A total of 16 interviews were conducted.

Document Review

In addition to the interviews, documents from each of the three hospitals for 1985 and 1990 were examined. A list of the documents deemed important for this study is as follows: (a) organizational charts, (b) job descriptions, (c) admission policies, (d) credit policies, (e) collection policies, (f) statistical admission data, and (g) financial data by payor class.

A comparison of the organizational charts and job descriptions for 1985 and 1990 also helped to identify changes that had taken place operationally since PPS. This was particularly important because the literature did not address these more finite changes that have been taking place in hospital patient accounting. Altman (1986) and Anderson (1991) suggested changes in the organizational structure but did not address how to rearrange staff to cope in the new reimbursement environment. Admission, credit, and collection policy changes were reviewed to support or refute the assumption of a changing relationship between patient accounting and the patient.

Changes in patient accounting personnel and statistical admission data were used to develop a measurement of resource use, which was used in conjunction with gross revenue days in accounts receivable to measure efficiency. Financial data by payor class have a major effect on the ability of the patient accounting department to make changes. Dependency on PPS as a major source of reimbursement limits the choices available to patient accounting

to maintain adequate cash flow. The findings from the interview transcripts and the document review were the basis for the conclusions drawn in this study.

Summary

PPS has effectively changed the reimbursement for most short-term hospitals. Patient accounting departments were forced to reevaluate the way they performed in the new environment. Adequate cash flow is no longer a given in the current reimbursement environment. Patient accounting departments must bill in a timely manner and collect self-pay balances more efficiently to maintain adequate cash flow and thus ensure the financial stability of their institutions. The quest for efficiency could change the relationship between patient accounting and the patient to a more businesslike one. Access to hospital services could be restricted, at least for elective hospital services.

Some patient accounting departments seem to be coping better than others since PPS. The researcher's purpose in this study was to examine three patient accounting departments and to identify factors that contribute to their efficiency. A measure was developed that relates patient accounting personnel resources to the number of patient encounters. An accepted industry standard, gross revenue days in accounts receivable, also was used to measure efficiency.

The study was designed to explore where successful patient accounting departments have employed some of the strategies outlined in the literature but have also made other changes within the organization to succeed. Or perhaps

patient accounting departments that appear to be more efficient are not efficient at all but have added resources to achieve success, thereby increasing the cost of the patient accounting function rather than making it more efficient.

Either scenario has implications for health care. If there is a set of strategies that can be employed to enable patient accounting departments to perform efficiently in a cost-effective manner, these strategies will be useful to other patient accounting departments. However, if efficiency is achieved by devoting more resources to the administrative costs of patient accounting, perhaps the complexity of the patient accounting process should be examined.

The dynamic atmosphere brought about by PPS has greatly affected the patient accounting systems of short-term hospitals. Change has occurred rapidly. The once-static hospital system under cost-based reimbursement has changed. Hospitals can no longer rely on maintaining financial stability through interim payments and a guarantee of recovering their costs. The patient accounting department and its ability to manage accounts receivable are critical to the survival of most short-term hospitals.

The purpose of the interviews and the document review was to add to the literature those strategies used by successful patient accounting departments. These strategies enable the institutions to survive financially in the new arena. The interviews were conducted before reviewing the documents to minimize investigator bias during the interview process. Information obtained from the

document review was then collected to complement the information obtained during the interviews.

CHAPTER IV

RESULTS OF THE PATIENT ACCOUNTING INTERVIEWS

Purpose of the Study

In this study, the researcher examined the patient accounting function in three short-term hospitals since the prospective payment system (PPS) was initiated in October 1983. PPS changed the reimbursement methodology from a cost-based system to a prospective payment system for the major portion of inpatient reimbursement.

PPS heralded a new era for government funding of inpatient hospital services. The cost-based method was replaced with a financing method based on DRGs, which was explained in the introduction to this study. Initially, PPS did not have a profound effect on patient accounting because interim payments were being received on a periodic basis from Medicare, Medicaid, and Blue Cross. Hospitals were able to maintain adequate cash flow regardless of the level of accounts receivable. It was business as usual.

However, in 1986, interim Medicare payments, a steady stream of cash flow, ceased to exist, and the hospital patient accounting function became more important to the financial survival of the short-term hospital. The ability to maintain adequate cash flow in the PPS environment depends on timely and

accurate billing. The primary objective of the patient accounting function is to maintain adequate cash flow by minimizing the amount of revenue retained in accounts receivable.

Results of the Interviews

A semistructured interview schedule was used for the interviews. All patient accounting management personnel and the chief financial officer (CFO) at each hospital in the study were interviewed. Sixteen interviews were conducted. The questionnaire was pretested by six management people at a hospital that was not included in the study.

The three major themes identified as the driving forces for change are cash flow concerns, customer relations, and staff requirements. In this chapter, these changes are examined first in the case of each hospital. Changes among the three hospitals are then compared and contrasted. Each hospital made changes to adapt to the new reimbursement climate. Changes made at each of the hospitals in the study in the three areas identified as major areas of change are summarized in Table 3. In some areas, all of the hospitals made identical changes, such as billing by payor class rather than patient type, increasing payment options, and adding staff. Other changes were unique to each hospital. As the interview data will show, each of the hospitals had a different rationale for the changes that were made.

Table 3
**Patient Accounting Changes Since the Adoption of the
 Prospective Payment System**

Area of Concern	Hospital A	Hospital B	Hospital C
Cash Flow	Billing by payor class	Billing by payor class	Billing by payor class
	Considering up-front collection	More collecting up front	Considering up-front collections
	Payment options	Payment options	Payment options
	Credit policies enforced	Merged insurance billing and self-pay collections	Consultants to motivate collection staff
	Consultants for process review		
	Collection agency for precollections	Cross-trained financial counselors with registrars	Preadmission process moved to UR
	Monthly processing fee		
Customer Relations	Documentation with original claim		
	Central scheduling unit	A customer service unit A preadmission unit Financial responsibility during admissions	Patient advocate position
Staffing and Training	More staff	More staff	More staff
	Third-party seminars	Third-party seminars	Third-party seminars
	In-house training by staff	In-house trainer	In-house training by staff
		Networking with insurance carriers	Networking with other hospitals
		Incentive programs	Incentive programs
	Higher entry-level qualifications	Higher entry-level qualifications	

Hospital A

Length of Service

The respondents' length of service in their current management positions at Medical Center A ranged from 6 to 18 years. All of the managers and the CFO were in their current positions in 1985, when their hospital was subject to the new PPS reimbursement.

Cash Flow Concerns

The interviewees tended to address the concerns that they faced in the day-to-day execution of their areas of professional responsibilities, rather than addressing more broadly based issues. A major concern expressed by the interviewees focused on the importance of timely billing, citing the loss of interim payments. Most of the changes made at Hospital A were in direct response to the loss of interim payments. All of the respondents thought that patient accounting had assumed a more important role in hospital operations since PPS.

Billing by Payor Class

In 1985, at Hospital A, the insurance billing function was organized by patient type. Personnel were assigned to inpatient or outpatient billing. By 1990, billing assignments were based on payor class. The reasons cited most often for this change were the increased complexity of insurance and the increase in

the volume of accounts to be processed because of the move toward outpatient services. An often-heard response was, "The information required by each payor is substantially different. No one can possibly remember all the rules for each payor." These interviewees were referring to the different coding requirements, which are payor specific. Medicare requires one specific set of codes on the bill format, whereas Blue Cross, Medicaid, and other insurance payors have their own unique requirements. The management team thought that the number of rejections was reduced by reorganizing the insurance billing function from patient type to payor class.

Timely billing had also assumed greater importance at Hospital A. Hospitals are contractually obligated to bill each payor within a certain time period, usually counted from the discharge date. One respondent stated,

Under the cost-based system, it really didn't matter how timely the billing process took place. We were paid on an interim payment basis by Medicare, Medicaid and Blue Cross, so we had adequate cash flow regardless of the level of accounts receivables.

Hospital A had the largest component of Medicare receivables of the three hospitals included in this study. Since the loss of interim payments from Medicare in 1986, timely billing became critical to maintain adequate cash flow. The CFO remarked, "Previously, we could afford to have accounts receivable at 80 revenue days. In the current environment, we can only afford to have 70 revenue days tied up in receivables to maintain adequate cash flow."

Another change made by Hospital A to speed up the payment process was to submit required documentation with the original claim rather than waiting

for the third party to request the information after receiving the claim. Hospital A also took advantage of the ability to correct Medicare claims on-line through the direct data entry (DDE). Claims that were put on hold because of billing errors were corrected through DDE within 5 days of receipt of the claim. Before PPS, a paper denial was sent to the provider, corrections were made, and the claim was resubmitted for processing. This manual process added several days to the payment process.

Credit Policy Changes

In 1985, Hospital A had credit policies, but they were not stringently enforced. By 1990, these policies were being applied more diligently. The credit manager stated, "We now have credit policies which are enforced." She was referring to account balances more than \$500, which now required payments of 10% of the unpaid balance or \$100 per month, whichever was greater. On account balances of less than \$500, a payment of 20% was required monthly. Hospital A also had extended the payment options. Cash, personal checks, and major credit cards were acceptable as payment. Hospital A tried to implement a bank payment plan but was unsuccessful in this endeavor. Local banks were not willing to co-sponsor a bank loan policy with terms that were acceptable to Hospital A. An out-of-state bank loan program proved unsuccessful.

Changes in the Collection Process

Before PPS, Hospital A used existing staff for a precollection process. In 1986, the precollection function was contracted to an outside agency. This agency followed up on all accounts more than 90 days from bill date, based on the value of the account. Patients with account balances under \$500 received collection letters from this company. Patients with account balances over \$500 received a phone call in addition to the letters. The precollection agency received a flat fee, based on the dollar value of the account. Even with the help of an outside collection agency, Hospital A had added two additional FTEs to keep up with the increased volume of accounts.

Once the account was through the precollection process, it was returned to the collection staff for disposition. Hospital A used three collection agencies and in-house payment arrangements to collect accounts after the precollection process was completed. If the patient chose the monthly payment option, a \$3 service fee was added to the account every month. Hospital A was the only hospital in this study that charged a monthly service fee. The reason noted for the increase in self-pay balances by the collection manager was the increase in the amount of co-pays and deductibles because the high cost of health care has become a major issue to employers.

Changes in the Admission Process

All of the respondents noted that the admission process had a higher priority in the hospital and it had become more complicated. Often cited was the need for precertification by more payors, the need for more accurate insurance information, and the need to comply with regulatory changes demanded by the Medicare program, such as the requirement to bundle outpatient services within 72 hours of an inpatient stay with the inpatient bill form, the Medicare requirement to fill out the Medicare Secondary Payor questionnaire, and the diversified requirements of other payors.

Use of Central Scheduling to Improve Customer Relations

Hospital A had added a central scheduling process since PPS to help comply with the continually changing regulations and third-party requirements. More third-party payors were requiring hospital services to be preauthorized. One respondent thought that even more information would be required in the future. He stated, "The current mode is to look at the benefit to the employer rather than the patient or the provider of services. We are moving toward managed health care." He thought that more hospital services would require prior authorization in the future because employers would be less willing to give their employees unlimited choices for health care services.

The Move Toward Up-Front Collections

The CFO at Hospital A talked about the possibility of starting to require payments at the point of service. Before PPS, Hospital A required a down payment before elective services were rendered. Through changes in management over the years, up-front collections were eliminated. Hospital A was at least considering the possibility of reinstating some form of up-front collection policy. The manager of collections thought a collection policy at the time of admission would help alleviate the cash flow problem.

Changes in Staff and Training Requirements

All respondents acknowledged that they needed more staff since the change to PPS reimbursement. The most frequently cited reason for additional staff requirements was the increase in the number of accounts, followed by the need to meet regulatory changes. Also noted was the need for workers at the entry level to be more knowledgeable about computers, math, and communication skills. The increase in staff that was needed was a major concern. Two of the respondents were not only concerned about the increase in staff, but they also had ideas on how to curb the increase. One respondent stated, "We definitely have more staff. I believe we have maxed out on the number of full-time equivalents in billing. We will have to move toward more sophisticated computer equipment and programs and keep up with the changes." Another

respondent thought a reduction in paperwork would be an effective way to minimize staffing requirements.

Sources Used for Staff Training

Some of the respondents mentioned the use of consultants in staff training. Contradictory reviews of the usefulness of consultants was expressed. The CFO seemed to think that using consultants was valuable. He stated, "We use consulting firms to point out our weak points." Another respondent was less enthusiastic. She observed, "We have used consultants but not very effectively. They come in with canned programs that don't necessarily fit the situation."

The respondents agreed that in-house training and third-party seminars were the major sources of training. Hospital A used in-house training by experienced staff as the primary source of training for new employees. One respondent mentioned that the consultants did not agree with experienced people training new people, but it worked. One of the respondents thought that the third-party seminars were good training sources but that the networking with peers from other hospitals at these seminars gave their staffs the best information. As one respondent put it,

The best way to keep staff informed is through third-party seminars. The best information comes from the networking that occurs at these seminars. Our people talk to other billers and are able to solve specific problems. The leaders at the third-party seminars do not always give good information.

Managers most closely related to the staff preferred in-house training, third-party seminars, and networking with peers as primary sources of training, whereas the CFO at Hospital A favored the use of consultants.

Use of Incentive Programs

Hospital A did not use any formal incentive programs in the patient accounting area. The CFO stated, "Not-for-profit businesses do not work on incentives. This is contrary to my beliefs." This was an interesting comment because both of the other hospitals in this study used incentive programs. One other respondent mentioned a free breakfast given by administration after a particularly difficult computer conversion from one patient accounting software package to another. Two of the five respondents thought an incentive program would be a good idea; however, the other respondents did not seem to think a formal incentive program was a possibility. One respondent replied,

Our incentives are to try to keep the staff happy. We recently started a 9-hour, 4-1/2-day work week. We let the staff flex their hours for appointments as needed. We have few hard and fast rules. We try to maintain open communication between management and the staff. Our people are not afraid to bring problems to our attention. Through open communications we can quickly resolve most problems.

Other than the Employee of the Month and Employee of the Year awards, which are hospitalwide, formal incentive programs were not used at Hospital A.

Changes in the Relationship Between Patient Accounting and the Patient

All of the respondents indicated that the relationship between the patient accounting unit and the patient had changed since PPS. They reported that more patients questioned their bills because they did not understand them. Some respondents thought the hospital should educate patients to create a better understanding of hospital billing practices.

In general, respondents thought that the hospital had placed patient accounting in a defensive position in relation to the patient. The patient accounting staff had to defend the hospital's rationale for the billing. Furthermore, patients today were more interested in their accounts because co-pays and deductibles were larger. Often they did not understand the explanations of benefits provided by the insurer, and, according to one respondent, the media constantly inform the public about the many errors found in hospital bills.

Hospital B

Length of Service

At Hospital B, the range of years of service was from 1-1/2 to 12 years. All but one of the managers had been in their current positions from 1985 to 1990.

Hospital B had made more organizational changes since PPS than either Hospital A or Hospital C. It had reorganized insurance billing from patient type to payor class, merged insurance billing and self-pay collections, created a preadmission and a customer service unit, and cross-trained financial counselors and registrars. All of these changes required extensive staff education. Perhaps this was the reason for the frustration expressed by the interviewees because no formal training programs existed for patient accounting personnel.

Changes in Insurance Billing

One respondent summed up the changes in billing at Hospital B as follows:

We completely overhauled billing and collections. Before billing and collections were separate. Now we have teams according to payor class. There are special rules for each type of insurance, so one person can't keep up with all the changes. Each team works with a separate set of third-party mandates.

Before PPS, Hospital B had original billers according to patient type, follow-up billers, and a separate collection area. Most of the respondents referred to reorganization as a move to team billing. Previously, a unit billed an account and never saw it again. Then, if a correction was needed, it was made by another worker. Under the new team concept, the bill was returned to the original worker, who made the correction. The team approach was more efficient because billers learned from their mistakes, thus reducing the rejection rate.

Another reason that was given for the reorganization of the billing and collection area was the complexity of the billing process since PPS.

Changes in the Admission Process

Hospital B had established a customer service area. Reasons cited for this change were to shift phone calls from the billing area to this newly established unit, to deal with the increased complexity of the admitting process caused by third-party requirements, to reflect shorter lengths of stay for inpatient care, and to establish up-front collection processes. One respondent stated,

In 1985, we didn't have a preadmission process in place. Now we have a big preadmission department, which is very important. Currently, people can't come to the hospital as soon. Most surgery patients are admitted in the morning. The length of stay is much shorter. We need to get all the billing information before the patient comes to the hospital.

Another respondent added that the customer service area added credentialed medical records staff to the preadmission process. A third noted that the preadmission process at Hospital B was a step inserted in front of its previous admission process. Hospital B had also merged its admitting and collection process for inpatient encounters and cross-trained admission personnel with financial counselors. The addition of a customer service unit, the selective merger of admitting and collections, and cross-training of registrars and financial counselors were unique to Hospital B in this survey.

Changes in Credit and Collection

Respondents commented on their newly initiated up-front collection policies, a program they called collection at point of service (CAPS). The reason given for up-front collections was increased patient financial responsibility for services. One respondent explained,

We have more effort on up-front collection for inpatient and ambulatory surgery stays. We try to collect 30% of the patient-pay portion up front. From 98% to 100% of our inpatient and ambulatory survey patients are notified of their financial obligation before service is rendered.

Hospital B had also expanded the payment options that were available to the patient. Visa, Master Card, Discover Card, and bank notes were all acceptable means of payment. They had also computerized the credit and collection area to keep up with the increased volume of accounts.

Staffing Requirements

Unlike respondents from Hospital A and Hospital C, respondents from Hospital B did not mention the increase in the number of employees in patient accounting. Indeed, Hospital B recently had completed a downsizing of staff.

Most of the respondents thought the level of skill and knowledge required to work in hospital patient accounting was much greater now. Reasons they gave were the greater dependence on computers and the complex billing process. Hospital B had increased the entry-level qualifications to meet the need for more knowledgeable and skilled workers. A review of the job descriptions

substantiated this claim. The 1990 job description required previous knowledge of computers or billing, whereas the 1985 job description did not.

Increased Training Needs

One response centered on the knowledge level of the patient accounting staff and the lack of formal educational programs for training. This respondent stated,

The most significant change is the level of skill and knowledge required to work in patient accounting. There is no educational program available to prepare people to work in patient accounting. Patient accounting used to be simple; now it's extremely complicated.

Another respondent noted the increased reliance on computers, both in-house and through third parties. She cited direct data entry (DDE) and electronic collection software as new additions to patient accounting since PPS. Because these are software packages specific to the patient accounting function, more time consequently had to be devoted to on-the-job training.

The Relationship Between Patient Accounting and the Patient

Since adoption of PPS, most of the respondents thought that patients required more information about their accounts and looked to patient accounting to provide this information. The main reason for this change was increased patient responsibility for hospital services through larger patient co-pays and deductibles. Patients now demand more service and have become better

educated about the billing process. One respondent thus mentioned that Hospital B had done several customer surveys. As a result of these surveys, a customer service area had been developed. She explained, "Patients are more interested in their bills, and we need to be able to respond quickly."

Some of the respondents thought that the relationship between patient accounting and the patient had also become more adversarial. Reasons given for this perceived adversarial relationship were the move toward up-front collections, patients' greater awareness of the billing process, and more stringent collection policies. Hospital B had established more aggressive collection policies, such as collecting 30% of the self-pay portion at the time of admission and making patients aware of their responsibility at the time of admission rather than after services were rendered.

Other responses were pointed to more positive relations with the patient. One respondent observed, "Before PPS, we didn't have much of a relationship with the patient. Now we have much more dialogue with the customer. Patients are very demanding because they are much better educated in the billing process." Another respondent saw the relationship as changing more because of pressure on the customer:

Patients now have a vested interest in the cost of their medical care. Consequently, as a hospital I feel we need to be more aggressive in educating the public about the cost of their health care and to better communicate the true reimbursement picture.

Furthermore, the billing unit now loomed larger in customer relations:

Charge-based payors are more vocal. Patient accounting is forced to answer more questions. Patient accounting has become a bigger cog in the hospital organization. Patients depend on patient accounting to answer their questions and provide needed information.

Staff Training

All six respondents agreed that the major source for learning the necessary billing procedures was provided through in-house training. Hospital B had developed video training cassettes to aid in educating new people and to use for retraining experienced staff. The in-house trainer was also responsible for keeping up with third-party changes such as coding requirements, bundling of Medicare outpatient accounts to the inpatient account (if the outpatient account occurred within 72 hours of the inpatient stay), and many more regulatory requirements. Even though Hospital B hired more experienced people for entry-level positions, training still took longer. One respondent offered, "We used to be able to train a person in patient accounting in 30 to 90 days. Training now takes six to nine months." The complexity of the billing process caused by the individual requirements for each payor and the dependence of patient accounting on computer systems were cited as reasons for the longer training period.

Respondents also thought that third-party seminars were necessary to keep up with third-party changes. Both management and staff attended such seminars to keep informed of third-party changes.

Other information sources mentioned in the interviews were meetings of patient accounting associations, such as the Patient Accounting Management Association of Michigan (PAMAM), and quarterly meetings with a large firm that was a good customer. Patient accounting personnel met with the firm's claim adjudicators to discuss changes and iron out any claim-processing problems.

Use of Incentive Programs

Hospital B used several incentive programs, ranging from small prizes such as soda pop to gift certificates to \$200 awards. Respondents cited the Praise and Recognition (P&R) program. This program was the most recently established incentive program for patient accounting and included the switchboard operators. The program was adapted from a large corporation that used Hospital B for most hospital services. Figment, a cartoon character, was displayed on a large bulletin board announcing the Praise and Recognition program. Attached to the bulletin board were letters of recognition. One respondent explained the program:

We use these letters to thank someone for extra work. When an employee sees someone doing something nice, they write it up and tack it to the bulletin board. Each month we take these down and have a drawing for one winner. The prize is usually a gift certificate.

Other incentives used by Hospital B were meal tickets for the hospital cafeteria and paid time off from work, awarded by management. One respondent explained,

We use food coupons to reward staff for extra effort. Gift certificates are available to managers, who can award a staff member from \$1 to \$200. No higher-management approval is necessary. The manager has sole discretion over how much to award the worker. We can reward people instantly. We can also let people leave work early as a reward.

One respondent mentioned the Employee of the Month and Employee of the Year awards. Another respondent explained the monthly project day:

We have a project day monthly. Everyone dresses casually, and that day we don't do any of our usual daily work. We have a rebill day, an unapplied cash day, or some other project. We give small prizes such as pop or popcorn. We keep a tally board to track our progress on project day. These project days are very productive, and we get rid of the old garbage.

This respondent was referring to older accounts, which require extensive follow-up before rebilling can occur, and payments received but not yet posted to a patient account.

Hospital C

Length of Service

The length of service of respondents from Hospital C ranged from 7 months to 16 years. Two of the five respondents had been promoted to management positions from other positions at Medical Center C. However, both of these respondents were working in patient accounting when PPS was implemented.

General Changes

At Hospital C, changes included the loss of interim payments, the involvement of utilization and review (UR) in the patient accounting process, and the need for more information at time of admission. Two respondents thought that the elimination of interim payments created pressure on patient accounting to maintain adequate cash flow. They felt constant pressure to process bills more quickly. Steps taken to accomplish more timely billing were the development of new computer screens and other procedural changes. As one respondent explained,

We have developed new screens for insurance verification that are insurance specific. The registrar now copies all insurance cards for inpatient admissions. On the outpatient side, patients are asked for a copy of their insurance card. Now we have a patient accounting person assigned to work with patients prior to surgery. This person draws the chart together before admission. She works closely with 28 to 32 physician offices to get correct insurance information for both the physician and the hospital.

Hospital C had also added a patient advocate to its staff to explain to patients why they were being discharged sooner than in the past.

Respondents emphasized the increased importance of the insurance verification process since the adoption of PPS as the focal point of the patient accounting process. At Hospital C, patient accounting worked closely with physicians' offices to obtain good billing information. Physicians worked closely with UR to monitor the length of stay.

Respondents noted the importance of UR in the patient accounting process. One respondent stated,

The revenue cycle now includes the utilization and review piece. There is more interaction between utilization and review and patient accounting. There is a different focus in terms of the length of the patient stay. Under DRG reimbursement, the length of stay has been shortened.

The director of patient accounting offered his thoughts on the effect of PPS at Hospital C:

We have been forced to measure our processes such as the price per bill, and how many bills we get out. We have been forced to reduce our costs. We no longer have a blank check like we had under the cost-based system. We have to look at real costs and become more efficient. Also, PPS has put us on warning that we will be responsible for the clinical outcomes of our services.

The Use of a Work Group to Change the Admission Process

Respondents talked about the use of a work group that had been developed at Hospital C to revamp the admission process. One respondent explained, "We are in the process of implementing the Crosby method of continuous quality improvement (CQI)." The organization had made a strong commitment to CQI. Work groups were used to identify areas for improvement. "One group has been working with physician offices to improve processing of lab specimens gathered from physician offices. Through the efforts of this work group, the staff error rate went from 50% to 20% in a relatively short period of time." The emphasis was on the registration function. One of the outcomes of this work group was to move the preadmission process to UR.

Two respondents mentioned the increased use of computer functions to aid registrars during the admission process. Screens had been designed to help registrars gather all the needed information at the time of admission. One respondent commented,

The admission process has changed in lots of ways. We are information gatherers and disseminators. We have to provide more information to insurance companies in order to get payment. We have to get the information right the first time or bill more than once.

A CQI work group project found that the cost of incorrect insurance information at Hospital C was \$68,000 per year.

Changes in the Insurance Billing Process

Not all of the respondents were directly involved with the billing assignments; therefore, they did not comment on the billing process. Respondents who were directly involved with the billing assignments mentioned the change to team billing by payor class. One respondent summed up this change by stating,

Previously, we had inpatient billers and outpatient billers. Currently, we are divided into teams by payor classes. Each team has a team leader who is responsible for goal setting and training of the team. This is a change in our billing method, and it seems to be working.

These respondents also stressed that "We are continually upgrading the computer billing system to accommodate changes to the regulations. [There is] less dependence on information system [IS] people to train the billing staff. Rather than depending on IS people, the billing unit trains billing staff."

To keep staff informed, it was then necessary to hold monthly staff meetings to discuss policy issues. One respondent noted, "We also have separate meetings to discuss issues specific to each work team. Through meetings we try to keep our staff informed. Everyone has the information they need to do their job."

Changes in Credit and Collections

The respondents who commented on credit and collection policies and procedures thought that Hospital C collected more aggressively since PPS. However, up-front collection was not part of the process at Hospital C. One respondent indicated that it should be. He stated,

Hospital C has waffled on whether to collect money up front. An attempt was made to collect money up front from a board member. Obviously, the board does not like the idea of up-front collections. The hospital is not looked at as a soft touch, but there is nothing wrong with asking.

This respondent thought that part of the problem with up-front collections was the difficulty in quoting charges in advance:

I'll give you an example from a previous experience in Grand Rapids. Business A wanted the hospital to offer fixed prices. That is hard to do. Hospital prices are physician and patient specific, depending on the circumstances. One board member suggested the analogy of coming into a grocery store and getting a price in advance for the groceries they would need for a week and then shopping. The board member was not trying to be facetious. He made his point.

The starting point for collection of commercial receivables had been moved from 45 days to 30 days. A team of three collectors reviewed 3,000 statements a week. These collectors verified proof of ability to pay or not to pay.

Before, the hospital had accepted the information provided by the patient at face value.

Increase in Staff and in Staff Qualifications

The respondents noted that Hospital C had more staff. This had resulted from new computer systems and an increase in the number of accounts. The director of patient accounting commented on the increased staff, entry-level requirements, and organizational changes. He observed,

On a per bill basis, we have less cost per bill. We have had an increase of 22% in full-time equivalents, but the number of bills produced has increased 100%. Ninety percent of what we have done to comply is in staff and organizational development.

The director went on to report that Hospital C had increased the entry-level requirements for staff and also the level of responsibility and accountability. Reports had been developed to monitor productivity at team levels, as well as at individual team member levels. He explained,

We have reorganized at Hospital C. Medical Records, Admitting, Utilization and Review, Patient Accounting, the Business Office (cashier function), Information Systems and Accounting all report to the chief financial officer. Frankly, this hasn't worked as well as I hoped, but it does make for better teamwork.

One respondent commented on the need for more qualified staff and a move toward including staff as well as management in the hiring decision.

We cannot afford to carry deadwood. We need action-oriented, problem-solving people. We give new applicants a math test. The staff has input into the hiring process. New applicants are screened by management, but the hiring decision is made by management and the staff.

Sources of Staff Training

All of the respondents thought the need for training had increased because of third-party regulations. Hospital C used computer applications to keep up with third-party mandates. One respondent stated, "The computer has forced retraining. New screens have been designed to gather additional information required by insurances. As computer updates are implemented, retraining of staff occurs."

Another respondent pointed out that training was also part of the CQI project at Hospital C. He stated,

It's a sidelight of CQI training and updating skills. We provide more specific training, such as training required to keep up with changing regulations in-house. We send staff, as needed, to seminars. You can't have too much training. We need to find a balance between training and work.

At Hospital C, in-house training was provided by managers, team leaders, and two specialists. One of the specialists had been assigned to keep up with billing requirements. The other specialist kept up with changes in reimbursement. The two specialists regularly met with the team leaders. The team leaders were responsible for keeping the staff informed of changing regulations.

Other sources of training included third-party seminars, visits to other hospitals for networking, and meetings of patient accounting associations. Respondents stressed that both staff and management attended seminars.

Incentive Programs

Hospital C also took the need for incentives seriously. One respondent thus reported that:

We have celebrations. The director of credit invites his staff to his home. I've been there twice. The director of patient accounting has potluck at his home; I've been there, too. We have money in the budget, not a lot but about \$90,000, to be used for the whole hospital. This money can also be used for education.

All of the respondents mentioned the celebrations as a reward for team goal achievements, such as a certain number of final billed accounts. One respondent stated, "Goals are celebrated when they are achieved. So much goes into getting an account paid and so many people are involved, it would be hard to award one person. A good account goes from admitting through the collection process." The majority of patient accounting incentives centered on team goal achievements. Personal incentives also were used. Gift certificates, meal tickets, blue ribbons, and cash bonuses were presented to billers and cashiers individually.

Increases in Communication Between Patient Accounting and the Patient

All of the respondents acknowledge that communication with the patient had increased since PPS. One respondent noted,

Before 1985, we never bothered the patient. Today, we bill the patient if payment isn't received. We're including the patient more in the problem-resolution process. The patient now has to notify his/her HMO if payment isn't received from the HMO in a timely manner. The patient is more

assertive about bills. This puts patient accounts in a more defensive position.

Reasons that respondents gave for the new relationship between patient accounting and the patient included more complex billing requirements, more insurance requirements involving patient participation, larger co-pays and deductibles, and the danger of negative media coverage if billing mistakes were made. These respondents also noted changes since the initiation of PPS. As one explained,

Before PPS, insurance paid and everybody was happy. Now we have big deductibles and co-pays. We have a more adversarial relationship with the patient, at least for small groups of patients. There has been too much press on the cost of health care. Patients tend to question bills more. This sometimes makes our charges hard to justify.

But respondents also thought that Hospital C had learned along with the patients: "Patients and patient accounting work better together. Patients are more aware of additional required insurance information such as retirement dates. Patients ask more questions about insurance coverage issues, particularly since Hillary."

Although all of the respondents agreed that the relationship between patient accounting and the patient had changed, generally placing patient accounting in a defensive position, one respondent thought the new relationship was favorable. She thought that requiring the patient to be involved with the billing process was a positive effect of PPS for both the patient and patient accounting. Patients' increased awareness of insurance coverage and the billing

process had been a result of PPS and increased patient financial responsibility from other insurers.

Summary

Length of Service

Respondents were asked how long they had been in their current positions. The range for all respondents was from 7 months to 27 years. The average length of time in their current position was 10 years. Ten of the interviewees had served in their current positions for 6 to 15 years. Therefore, these managers all had input into the changes between 1985 and 1990.

Changes Since PPS

When asked what had changed most since PPS, respondents expressed concern about the need for more timely billing since the loss of interim payments. All of the hospitals in this study were highly dependent on the Medicare program as a source of revenue. The problem was widespread because Medicare interim payments were discontinued in July 1986 for all hospitals subject to PPS (CCH Editorial Staff, 1988, p. 241).

Loss of the steady stream of cash flow from the Medicare program created a need for timely billing to maintain an adequate cash flow. Several authors, such as Altman (1986) and Puhala and Barrett (1987), have addressed the issue of the loss of interim payments and the need for more timely billing. Each

hospital in the study had made organizational changes to enable its patient accounting departments to become more efficient in the billing process.

Respondents noted the dependence of the finance area on physicians, medical records (MR), and utilization and review (UR). The physician had to document the medical record precisely so MR could code correctly for maximum reimbursement under the DRG pricing method. UR kept the physician informed of average length of stay for each DRG and did concurrent review of the patient's chart during the hospital stay. Before PPS, physicians managed their patients autonomously, MR coding was used primarily for statistical information, and UR had no interest in reimbursement.

Respondents from two of the hospitals mentioned the need for more knowledgeable workers at the entry level. Both Hospital B and Hospital C had changed entry-level requirements for staff. Hospital B now required new employees to have some background in computer applications or previous insurance billing experience. Hospital C now administered a mathematics test to new employees. Hospital A had not changed its entry-level requirements.

Several respondents acknowledged the greater importance of information gathered at time of admission. This information was particularly important in the case of the Medicare secondary payor issue, insurance verification to allow more timely billing, and the need to allow up-front collections. Medicare requires registrars to fill out questionnaires for each Medicare beneficiary to determine whether another primary payor is responsible for payment of the hospital

account. Before PPS, Medicare was automatically billed if the patient was eligible for Medicare coverage. Since PPS, another insurer could be primary, such as automobile or homeowners insurance.

The need for more timely billing as a result of the loss of interim payments has put more pressure on registrars to gather correct insurance information at time of admission. To maintain adequate cash flow in the new environment since PPS, correct insurance information is vital.

Only Hospital B actually did any up-front collections. They had recently established policies to collect 30% deposits on the patient pay portion of all inpatient and ambulatory surgery accounts. Hospitals A and C acknowledged the need to collect at the time of admission but did not have established policies. Hospital A had collected deposits for self-pay accounts before PPS and had since discontinued this practice because of a change in the hospital's management team. However, the CFO stated that he was considering the establishment of up-front collections again.

Other respondents indicated that there was a cost shifting to charge-based payors as a result of lower payments through DRG reimbursement. Many respondents expressed the need to reduce the cost of the patient accounting process and to bill in a more timely manner. The use of an outside collection agency at Hospital A, the addition of a customer service unit at Hospital B, the involvement of UR in the patient accounting process at Hospital C, and the

increased reliance on computers at all three hospitals were some of the strategies chosen to reduce costs and promote more timely billing.

Changes in Patient Accounting

Changes in specific areas of patient accounting, namely admissions, billing, and credit and collections, were also of interest in this study. Each of the hospitals in the study had changed processes and procedures to meet the new challenges of PPS. However, each hospital chose different strategies.

Changes in Preadmission and Admission Processes

All of the respondents acknowledged the greater importance of the admission process today. Most thought the preadmission verification requirements were the main reason for the importance of the admission process (see Table 4). Many HMOs require the hospital to call before admission for inpatients or ambulatory surgery patients.

Table 4

Reasons for Increased Emphasis on the Admission Process

Primary Reasons	Secondary Reasons
Preadmission verification required	Preadmissions referrals required
Need for more timely billing	Additional regulatory requirements
	Other

The need for timely billing also was cited as an important reason for the growing significance of the admission process. Most respondents at these hospitals thought that information gathered during the admission process resulted in more timely billing.

Preadmission referral requirements were cited by five respondents as another change in the admission process since PPS. Many managed-care insurers require the patient to obtain a referral from a primary care physician before hospital services are rendered.

Regulatory requirements were mentioned as often as verification requirements. The Medicare requirement to fill out the secondary payor form and the need to identify outpatient admissions within 72 hours had had a significant effect on the admission process.

Hospital A had established a central scheduling process to better control the admitting process. Hospital B had developed a customer service area. This area was responsible for gathering all admitting information, answering all patient inquiries, and making up-front payment arrangements. Hospital C used a work group to identify areas for improvement in the admission process. As a result of using this work group, admitting errors had been reduced from 50% to 20%. In addition, at Hospital C, the preadmission process had been assigned to the UR area.

Changes in Billing Assignments

Each hospital in this study had made similar changes in the area of billing. Previously, work assignments had been distributed by patient type, such as inpatient or outpatient. Since PPS, all three hospitals had reorganized the patient accounting billing function by payor class. The consensus was that no one could remember all the billing requirements for all payors.

Insurance billing was the only facet of patient accounting in which all three hospitals had moved in the same direction. Medicare and all other payors, as well, had been making changes to billing requirements. To maintain the status of a participating provider for Medicare and Medicaid and to fulfill contractual obligations with other payors, hospitals have been mandated to comply with increasingly complex billing instructions. These requirements, coupled with increasing volumes of accounts, have made billing a difficult task. All of the hospitals in this study chose payor-specific billing teams as a means of coping in the new environment.

Changes in Credit and Collection Policies and Procedures

Although all of the hospitals had had credit and collection policies in place before PPS, respondents at Hospitals A and C indicated that these policies had not been strictly enforced. PPS placed more emphasis on the need to collect the self-pay portion of the patient account.

Another change that occurred at all of the hospitals was the use of more payment options. All of the medical centers now accepted Visa, Discover Card, and Master Card for payment. Before PPS, the patient pay portion of the bill generally had been paid by cash or personal check.

Staffing Changes

In general, responses to the question on changes in staffing requirements confirmed that more staff were required in patient accounting since PPS. Respondents cited the increase in the volume of accounts and the complexity of the patient accounting process as reasons for needing more staff. Most of the respondents also thought that the current patient accounting environment required more knowledgeable and skilled workers at the entry level. Both Hospitals B and C had increased the entry-level qualifications for patient accounting staff.

All of the respondents thought that more training was required since PPS. Third-party requirements and government regulations were continually changing. The bulk of the training at all three hospitals was done in-house, with some additional training provided at third-party seminars.

At Hospital A, experienced staff provided training for new employees. For example, the Medicare team trained new billers assigned to Medicare billing. No formal training program had been established. Both billing management and staff attended third-party seminars to keep abreast of changing billing

requirements. Experienced registrars and credit and collection staff were also responsible for training new hires. However, registrars and credit and collection personnel rarely attended such seminars.

Hospital B had a full-time trainer on staff. This person trained new staff members, kept abreast of changing regulations, and passed new information on to team leaders who were responsible for updating their specific teams. Management and staff attended third-party seminars. Hospital B also had quarterly meetings with a large firm to keep both the hospital and the company advised of processing changes.

Hospital C also used in-house training as the main avenue to keep staff informed. Two specialists maintained third-party manuals and tracked reimbursement changes. These specialists regularly met with team leaders and managers. In turn, the team leaders and managers were responsible for training staff. Third-party seminars attended by both management and staff provided additional training resources. In addition, Hospital C sent staff members to visit other hospitals to network and solve specific patient accounting problems.

All three hospitals took advantage of third-party seminars as a training vehicle for both management and staff and also used in-house training. Hospital B had a specific person assigned to in-house training. Hospital C used two specialists and team leaders for in-house training. Only Hospital A did not have any designated in-house trainers.

Staff Incentive Programs

Of the three hospitals in this study, Hospital A used incentive programs the least. Employee of the Month and Employee of the Year awards were the exception. Some respondents at Hospital A did not think that any formal incentive program was possible, probably because the CFO at that hospital did not think such programs were appropriate at not-for-profit institutions. Hospitals B and C provided a variety of incentive programs. They, too, had Employee of the Month and Employee of the Year awards hospitalwide. Management gave personal and team awards to staff members. Hospital B had designed an incentive program based on goal achievement and productivity. However, due to recent staff cutbacks and legal problems, this program had been put on hold. Hospital C celebrated goal achievements with parties hosted by the director of patient accounting and the director of credit and collection. The director of patient accounting also gave individual awards; however, the director of credit and collection did not believe that individual awards were appropriate. Therefore, individual awards were presented only to billers and cashiers.

The Relationship of Patient Accounting to the Patient

The general consensus among respondents from the three hospitals was that, indeed, there is more communication between the patient accounting unit and patients today than in the past. Most often, the respondents thought that

patients put patient accounting in a defensive position. Media coverage regarding the high cost of health care and higher co-pays and deductibles prompted patients to scrutinize their bills more closely. Under these circumstances, patient accounting was charged with the difficult responsibility of educating patients.

CHAPTER V

RESULTS OF THE DOCUMENT REVIEW

introduction

The hospitals used for this research were chosen based on their homogeneity. At each hospital in the study, the researcher reviewed several documents to identify changes that had taken place since the introduction of the prospective payment system (PPS). These included organizational charts, job descriptions, admission policies, credit and collection policies, statistical admission data, and financial data by payor class.

A trend toward more outpatient services and less dependence on the more expensive inpatient setting for health care is now generally accepted. Whether this trend toward outpatient service is a result of PPS or a result of rapid technological advances is less clear. The effect on patient accounting, however, is clear. Admission and billing requirements are more complex, and the volume of patient accounts that are processed has increased dramatically. CCH Pulse put the number of different bill forms processed by health care providers at 400 ("WEDI Recommends," 1993). Another major event affecting patient accounting was the elimination of periodic interim payments from Medicare. Timely and accurate billing assumed a greater priority. Because all of the hospitals in this

study were dependent on the Medicare program to maintain adequate cash flow, timely and accurate billing are critical to their financial survival.

Yet another purpose of the document review was to examine the effect of changes made at each hospital. Were some strategies more effective than others? Was any of the hospitals more efficient than the other hospitals?

An attempt to develop a measure of efficiency by using patient encounters per FTE was not conclusive because patient accounting no longer consists of the same work force that existed under the cost-based reimbursement system. Each hospital had made significant changes. Hospital A had added a central scheduling unit. Hospital B had added a customer representative as a result of customer surveys. Hospital C had a credentialed UR person on staff.

Patient accounting departments now depend on many more people to accomplish their tasks. The physician must document the record in a clear and timely fashion and sign the attestation before medical records can complete the process. Utilization and review begins during the admission process. Accurate coding is essential to maximize reimbursement. Billing cannot occur until the physician, medical records, and utilization and review have performed their functions.

Organizational Structure

Many changes in the organizational structure of all three hospitals had occurred since PPS. The driving forces for change were the complexity of the

patient accounting process, caused by third-party requirements and government regulations, and the loss of PIP. All three hospitals had moved to insurance billing by payor class. No longer was it possible to maintain all the information necessary to bill for several different payors because each payor had unique requirements. Even though the bill form was the same for several payors, the required information differed. Before PPS, all of the hospitals included in the study had divided the work between inpatient and outpatient bills. Since the advent of PPS, all had changed to a payor-specific organizational structure.

The admitting and credit and collection processes of the three hospitals had not been altered to accommodate payor-specific guidelines even though the information gathered at the time of admission is also unique for each payor class. In some cases, computer screens had been designed with required payor-specific fields. The information in each field had to be completed before the admission could be completed. Lacking computer assistance, registrars relied on "cheat sheets" to gather the payor-specific information. A good example is the Medicare requirement to complete a Medicare Secondary Payor form for each Medicare admission. In the case where a cheat sheet was being used, this would be listed as a requirement. If a computer screen was available, the secondary payor information would be a required field. Credit and collection personnel were generally responsible for collecting self-pay portions of the account; therefore, payor-specific information was not required.

Although admitting and credit and collection had not been reorganized around payor class, other organizational changes had occurred in these patient account areas. For example, Hospital B had added a credentialed UR staff to the admission process, and Hospital C made credit arrangements during the admission process.

Job Descriptions and Reporting Responsibilities

Job descriptions and reporting responsibilities had been changed to accommodate the new payor-specific organizational structure. For example, previously a supervisory title would be Outpatient Billing Supervisor to reflect her or his work responsibility. In the current billing climate, the title Insurance Billing Supervisor was used. Most often, a supervisor was responsible for supervising more than one payor billing class.

Admission Policies

Admission policies had changed due to third-party requirements. Many third-party insurers required precertification. In some cases, UR called for precertification; in other cases, the registrar performed this process. Each hospital had made changes to gather more payor-specific information during the preadmission or admission process.

Credit and Collection Policies

Credit and collection policies had changed or at least were more stringently enforced. Hospitals no longer can afford to extend unlimited credit to their patients. The loss of the steady income stream from Medicare PIP has forced hospitals to reevaluate their credit and collection policies.

Patient Accounting Expense Data

The hospitals examined for this study all devoted more human and technological resources to patient accounting under PPS reimbursement than they had under the cost-based system. Patient account expense data were gathered from each of the cases in the study. Because each hospital described patient accounting differently, revisions to the data were necessary for comparison purposes. Even with the revisions, one must be cautious about the validity of the data because of overlapping duties such as the precertification process, the merging of UR functions with admissions, the variety of cost centers used for accounting purposes, and the constant changes required to keep abreast of third-party requirements and still maintain adequate cash flow. For purposes of this study, FTEs rather than dollars were used for comparisons among hospitals.

Statistical Admission Data

Statistical admission data showed a definite trend toward increased volumes of outpatient admissions at all three hospitals. This equated to an increased workload for the patient accounting process. Admission data were equated with FTEs in an effort to address the question of efficiency.

Financial Data by Payor Class

Financial data by payor class were gathered to ensure that there was similar dependence on PPS at each hospital. If a hospital was not dependent on Medicare and Medicaid as major sources of revenue, PPS would not be an issue. Each hospital in this study received a minimum of 50% of its revenue from government programs; at Hospital A, the figure was as high as 60%.

Hospital A Document Review

Patient Accounting Defined by Hospital A

Patient accounting, as defined for the purpose of this study, was limited to admitting, insurance billing, and the credit and collection processes; it did not include cashiers. Perhaps the cashier function should have been included because two of the three hospitals in this study considered the cashier function a part of patient accounting. From this researcher's experience, the cashier function was associated with general accounting rather than patient accounting.

Patient accounting at Hospital A in 1985 consisted of the insurance billing function and the cashier function. By 1990, patient accounting was limited to the insurance billing function. The admitting process and the credit and collection process were separate cost centers. The CFO thought that this organizational structure would be most efficient at Hospital A.

Comparison of Number of FTEs for 1985 and 1990

The number of FTEs assigned to patient accounting increased from 1985 to 1990 (see Table 5). A review of the organizational charts for the two periods showed an increase in the number of employees assigned both to admitting and to the credit and collection function and the insurance billing function. The number of FTEs in admitting and credit and collection grew from 31 to 39.7, an increase of 8.7 FTEs, or 28.1%. Insurance billing had an increase of 5.8 FTEs, or 30.1%, for the same time period. Overall, the increase in the number of employees in patient accounting at Hospital A was 14.5 FTEs or 29%. There was also a corresponding increase in the volume of patient encounters from 1985 to 1990.

Patient Encounters

Table 6 shows comparative data for patient encounters at Hospital A. There were 410 more inpatient admissions in 1990 than in 1985, an increase of

Table 5

Hospital A FTEs

Cost Center	Number of FTEs		% Change
	1985	1990	
Admitting and credit and collection	31.0	39.7	28.1
Insurance billing	19.3	25.1	30.1
Total	50.3	64.8	28.8

Table 6

Hospital A Patient Encounters

Type of Patient Encounter	Number of Encounters		% Change
	1985	1990	
inpatient admissions	15,055	15,465	2.7
Emergency room visits	25,414	37,428	47.3
Outpatient clinic	10,974	8,604	(18.8)
Ambulatory surgeries	3,937	5,045	28.1
Total	55,380	66,542	20.2

2.7%. Although the number of inpatient admissions increased, the average length of stay decreased slightly, from 6.3 days to 6.2 days.

Emergency department visits increased by 12,014 from 1985 to 1990, an increase of 47.3%, whereas outpatient clinic visits decreased. In 1985, Hospital A had 10,974 outpatient clinic visits. By 1990, these patient encounters decreased to 8,604, a decrease of 18.8%. Hours in the outpatient clinic were reduced; therefore, some of the patient encounters in 1990 were counted as emergency department visits instead of outpatient clinic visits. When the outpatient department was not open, patients were seen in emergency.

Ambulatory surgeries increased by 28.1%. In 1985, 3,937 ambulatory surgeries were performed at Hospital A. In 1990, 5,045 ambulatory surgeries were performed, or 1,108 more surgeries than in 1985. Overall, Hospital A had 20.2% more patient encounters in 1990 as compared to 1985. While the number of patient encounters increased, the payor mix also changed.

Comparison of Payor Mix

One of the criteria used to select the cases for this study was hospitals with a 50% or greater dependence on Medicare and Medicaid as a source of revenue in 1990. In 1985, Hospital A received 52.8 of its revenue from the Medicare and Medicaid programs (see Table 7). By 1990, this revenue stream accounted for 60.6% of all revenues. The percentage increase came as a result of less revenue from Blue Cross and other insurers. Blue Cross revenue declined by 4.6% from 1985 to 1990. Other revenue, which included revenue

from HMOs, PPOs, charge-based commercial insurers, and self-pay revenue decreased by 3.3% for the same time period.

Table 7
Hospital A Revenue by Financial Class

Payor	Percentage by Payor Class		% Change
	1985	1990	
Medicare	42.5	48.3	5.8
Medicaid	10.3	12.3	2.0
Blue Cross	27.3	22.8	(4.6)
Other	19.9	16.6	(3.3)

The composition of the revenue stream is an important factor at hospitals because the PPS limits the reimbursement to a specific amount per inpatient case.

Was Hospital A More Efficient in 1990 Than in 1985?

Each patient encounter requires an admission, one or usually more insurance bills, and often a self-pay portion to be followed up by credit and collection. In 1985, 50.3 FTEs managed 60,940 patient encounters. This equates to 1,212 patient encounters per FTE. In 1990, 64.8 FTEs processed 74,319 patient encounters or 1,147 patient encounters per FTE. These figures, at face value, would indicate that Hospital A was slightly less efficient in 1990

than it was in 1985. However, these figures do not take into account the fact that the process has become more complicated.

Another statistic that is commonly used to measure the efficiency of patient accounting is gross revenue days in accounts receivable. Hospital A averaged 128.2 days in 1985. By 1990, gross revenue days had decreased to 64.8 days. Taken at face value, this statistic would seem to indicate that patient accounting at Hospital A was more efficient. However, in June 1984, Hospital A had converted to a new computer system. The higher revenue days were caused partly by the computer conversion.

Patient Accounting Policies

Admission and insurance billing policies are driven by third-party requirements. The only exception might be a hospital policy to refuse admission for elective admissions until financial arrangements have been determined. Hospitals that participate in the Medicare and Medicaid programs cannot refuse emergent or urgent treatment to patients. Treatment considered to be emergent or urgent by Medicare and Medicaid consists of any condition for which a delay in treatment might result in the recipient's death or permanent health impairment.

Hospital A did not have a policy to refuse any elective admissions based on ability to pay. Therefore, all financial arrangements were made after service was rendered. Credit and collection policies were hospital specific. A comparison of policies from 1985 and 1990 was not possible because the data

were not available for previous policies. In general, when a hospital rewrites a policy, the previous policy is discarded. During the interview process, respondents indicated that credit policies were enforced more stringently in the current environment. In the past, Hospital A had had many patients who paid as little as \$5 a month, regardless of the account balance.

Summary of the Document Review

Hospital A devoted more FTEs to the patient accounting process in 1990 than it did in 1985. The increase of 14.5 FTEs was necessary to process the 20.5% increase in patient encounters for the same period. The payor mix also changed substantially from 1985 to 1990. In 1985, shortly after the implementation of PPS, Medicare and Medicaid revenue accounted for 52.8% of total inpatient reimbursement. By 1990, this figure had grown to 60.6%, making Hospital A more dependent on these government programs.

In 1985, each FTE managed 1,212 patient encounters. By 1990, this figure had dropped to 1,147 patient encounters per FTE. Gross revenue days in accounts receivable were at 128.2 days in 1985 and had decreased to 64.8 days by 1990. The high-revenue days in 1985 were due in part to a computer conversion. However, the lower number of days may also be because Hospital A used more FTEs per patient encounter in 1990 than it did in 1985.

Hospital B Document Review

Patient Accounting Defined by Hospital B

Patient accounting at Hospital B included collections, admissions, insurance billing, and payment processing. Between 1985 and 1990, many of the functions were combined to streamline the operations of the department. It was not possible in this study to separate the cost of the cashier or payment processing function because these employees performed certain duties, such as voucher reconciliation, which are normally considered part of patient accounting. Because patient accounting was limited to admissions, credit and collection, and insurance billing for the purpose of this study, aggregate comparative cost data were not available. However, much of the information gathered for comparison between the two periods under study and a number of apparent trends were useful for this study.

Comparison of Number of FTEs for 1985 and 1990

The number of FTEs used to perform the patient accounting function increased by 28% between 1985 and 1990 (see Table 8). A review of the organizational charts for 1985 and 1990 showed dramatic changes in work assignments since the inception of PPS. In 1985, personnel were assigned to admitting, insurance billing, or credit and collections. The admitting area reported to a different vice-president. In 1990, admitting became part of patient

accounting. Inpatient admitting, inpatient billing, and customer service all reported to one manager. The customer service area responded to patient inquiries, a task previously assigned to insurance billers. Insurance billing personnel now billed by payor class, a change from the previous inpatient and outpatient assignments. Credit and collections, a separate unit in 1985, was now part of the billing process.

Table 8
Hospital B FTEs

Cost Center	Number of FTEs		% Change
	1985	1990	
Admitting and credit and collection	30.0	34.5	15.0
Insurance billing	10.0	17.0	70.0
Total	40.0	51.5	28.8

Patient Encounters

As with the other hospitals included in this study, Hospital B experienced an increase in outpatient encounters. Inpatient admissions were declining, but emergency room encounters and outpatient services were increasing. The decrease of 6.2% in inpatient admissions was more than offset by the increase of 5.7% in emergency room and 91.2% in outpatient encounters (see Table 9). The overall increase in patient encounters totaled 56.8%. In other words, patient

accounting at Hospital B managed 56.8% more patient encounters, with an increase of 11.5 FTEs.

Table 9
Hospital B Patient Encounters

Type of Patient Encounter	Number of Encounters		% Change
	1985	1990	
Inpatient admissions	11,418	10,706	(6.2)
Emergency room visits	22,164	23,417	5.7
Outpatient visits	53,908	103,086	91.2
Total	87,490	137,209	56.8

Revenue by Financial Class

Dependence on government programs as a source of revenue increased by 5.5% from 1985 to 1990 (see Table 10). Charge-based payors declined by 6% for the same period. Hospital B had the largest component of commercial-based payors of the three hospitals in this study. However, commercial-based payors decreased by 3.7% from 1985 to 1990. Even so, this was a significant advantage because commercial payors reimburse on a charge basis.

Table 10
Hospital B Revenue by Financial Class

Payor	Percentage by Payor Class		% Change
	1985	1990	
Medicare	38.9	44.5	5.6
Medicaid	9.4	9.3	(.1)
Blue Cross	14.3	14.8	.5
Commercial	32.6	28.9	(3.7)
Self-pay	4.8	2.5	(2.3)

Was Hospital B More Efficient in 1990 Than in 1985?

In 1985, each FTE was responsible for 2,187 patient encounters. In 1990, each FTE was responsible for 2,664 patient encounters, an increase of 477 patient encounters per FTE. If the complexity of the patient accounting function is considered, Hospital B would seem to have been more efficient in 1990 than in 1985. However, Hospital B had raised the entry-level qualifications for staff and also had added more professionals in the patient accounting function, such as, for example, a number of credentialed UR people. Therefore, the FTEs of 1990 were more qualified than those of 1985.

Another statistic that often is used to measure the efficiency of patient accounting is gross revenue days in accounts receivable. In 1985, Hospital B had 106.1 gross revenue days in accounts receivable. By 1990, this figure had

decreased to 75.8 days. Hospital B had gone through a computer conversion in 1985. Therefore, it is questionable whether revenue days can be used as a yardstick to compare 1985 to 1990. Computer conversions are rarely a smooth process for hospitals. It takes time to smooth out the revenue cycle after a conversion.

Patient Accounting Policies

Hospital B was the only hospital in this study that actually collected deposits upon admission. Admission policies had been changed to conform to third-party regulations at Hospital B, as well as at Hospitals A and C. A combination of computer screens and cheat sheets were used to gather required admission information. Hospital B would refuse elective admissions until financial arrangements were completed. This policy differed from those at Hospitals A and C. During the interview, one management person mentioned that it would be nice if other hospitals also would require deposits up front so that Hospital B would not be the only one.

Summary of the Document Review

Hospital B devoted more FTEs to the patient accounting function in 1990 than it did in 1985. In addition, the FTEs were more qualified at the entry level, and more professionally trained staff had been added to the patient accounting function. In 1985, each FTE handled 477 fewer patient encounters than in 1990.

The increase in the number of FTEs from 1985 to 1990 was 11.5, less than the increase at Hospital A. However, the increase in entry-level requirements and the addition of more highly qualified and expensive staff members could have contributed to the difference in the number of FTEs. The change in gross revenue days from 1985 to 1990 is inconclusive because of the computer conversion in 1985.

Hospital C Document Review

Patient Accounting Defined by Hospital C

Hospital C had three distinct divisions in the patient accounting organization in both 1985 and 1990. Each division had a director who reported directly to the CFO. The three divisions were collections, which was referred to as patient accounting; admitting and registration; and the business office, which consisted of insurance billing and the cashier function. As such, Hospital C was the only hospital in this study that had made virtually no organizational change from 1985 to 1990. Hospital A moved the cashier function to accounting, and Hospital C merged admitting, insurance billing, and collections.

Comparison of Number of FTEs for 1985 and 1990

The number of FTE employees performing the patient accounting function at Hospital C increased from 54 in 1985 to 73 in 1990 (see Table 11). The increases were in the admitting area, the collection area, and the billing and

cashiering area, where the greatest increases occurred; the overall increase was 19 FTEs.

Table 11
Hospital C FTEs

Cost Center	Number of FTEs		% Change
	1985	1990	
Admitting	16.5	20.5	43.4
Collections	11.5	16.5	24.2
Billing	26.0	36.0	38.5
Total	54.0	73.0	35.2

Patient Encounters

As shown in Table 12, there was an increase in all types of patient encounters, with the most dramatic increase in emergency room and outpatient visits. In 1985, 25,825 patients were seen in these departments. By 1990, these visits had increased to 55,991, an increase of 116.8%. Inpatient admissions and surgeries also were on the rise, but at a much slower rate.

Comparison of Payor Mix

Between 1985 and 1990, Hospital C became more dependent on Medicare and Medicaid as revenue sources (see Table 13). In 1985, only 49% of its revenue was attributable to Medicare and Medicaid. By 1990, this revenue

Table 12
Hospital C Patient Encounters

Type of Patient Encounter	Number of Encounters		% Change
	1985	1990	
Inpatient admissions	12,996	13,401	3.1
Emergency room and outpatient visits	25,825	55,991	116.8
Surgeries	7,989	8,354	4.6
Total	46,810	77,746	66.1

Table 13
Hospital C Revenue by Financial Class

Payor	Percentage by Payor Class		% Change
	1985	1990	
Medicare	41.5	44.3	2.8
Medicaid	7.5	7.3	(.2)
Blue Cross	22.6	19.2	(3.4)
Commercial	20.8	22.7	1.9
Self-pay	7.6	4.9	(2.7)

source had risen to 51.6% of total revenue. Of the three hospitals in this study, Hospital C was the least dependent on government programs as a source of

revenue in 1990. Blue Cross revenue, also reimbursed under PPS, declined by 3.4%, and self-pay revenue decreased by 2.7%. Blue Cross and self-pay revenue decreases accounted for the increases of 2.6% in Medicare and Medicaid and 1.9% in commercial insurers. Although bad-debt information was not included in this study, in many instances commercial revenue was paid at charges or, in the case of HMOs, at a percentage of charges, and self-pay revenue often was written off to charity. Patients without insurance usually did not have sufficient financial resources to pay for health care. Therefore, most often they qualified for some type of charity write-off. The possible reduction in revenue from self-pay write-offs would be minimized by an actual increase in reimbursement from the charge-based payments from other insurers.

Was Hospital C More Efficient in 1990
Than in 1985?

In 1985, 54 FTEs managed 46,810 patient encounters at Hospital C. By 1990, the number of FTEs had increased to 73, and the number of patient encounters had increased to 77,746. In 1985, each FTE was responsible for 867 patient encounters. In 1990, each FTE was responsible for 1,065 patient encounters, an increase of 198 encounters. It would appear that each FTE was more productive in 1990 than was true in 1985. However, the patient accounting staff were more qualified in 1990 than in 1985. Perhaps the more qualified staff

were at least part of the reason for higher productivity. However, in light of the pattern of these changes, patient accounting at Hospital C did appear to be more efficient in 1990 than it had been in 1985.

Using an accepted industry standard of gross revenue days in accounts receivable, though, indicates one area in which the trend was in the opposite direction. In 1985, Hospital C had 83 gross revenue days tied up in accounts receivable. By 1990, this figure had risen to 88 gross revenue days. Unlike Hospitals A and B, Hospital C did not complete a computer conversion between 1985 and 1990. The increase in revenue days could have been caused by several factors. Perhaps the medical records unit at Hospital C took longer to process the medical records, thereby increasing the length of time from discharge to billing, or perhaps physicians did not complete the records and sign the attestations in a timely manner. In the PPS environment, patient accounting is highly dependent on medical records and the physician. A slowdown in processing can result in more revenue days in accounts receivable.

Hospital C tracked the cost per patient bill. In 1985, the cost to produce a bill was \$3.05. By 1990, this cost had been reduced to \$2.49. The cost per patient bill was calculated by dividing total patient accounting expenses by the total number of primary bills produced. The calculation was based on the number of patient encounters rather than accounts billed because bills to second insurers and professional-component bills were not included in the calculation.

Two of the three major indicators, accounts per FTE and cost per bill, showed that Hospital C was more efficient in 1990 than it had been in 1985.

Patient Accounting Policies

Hospital C was more closely related to Hospital A than to Hospital B in regard to admission policies. Each of these hospitals realized the importance of attempting to collect deposits at time of admission, but neither had initiated policies to implement up-front collections. All collection efforts took place after the service had been rendered. No evidence of standard payment arrangements was mentioned during the interviews, and documents were not provided to indicate limits for payment arrangements. The main difference between 1985 and 1990 was that, in 1990, the patient was required to prove his or her ability or inability to pay a specified amount per month. In 1985, Hospital C had accepted the patient's word that he or she had the ability to pay. The CFO seemed more concerned about the lack of up-front collections than did the other management employees who were interviewed. He indicated, however, that the board of directors was not in favor of tight collection policies.

Summary of the Document Review

Between 1985 and 1990, Hospital C added 19 FTEs to process a 66.1% increase in patient encounters. On a cost-per-case basis, they produced bills more cost effectively in 1990 than they had done before PPS. In 1985, each

primary bill produced had cost Hospital C an average of \$3.05. In 1990, each bill cost only \$2.49, a decrease of \$.57 per bill. Hospital C was the only one in this study that tracked cost per bill, so a comparison with Hospitals A and C was not possible.

Productivity had increased over the 5-year period. In 1985, each FTE processed 867 accounts. By 1990, each FTE processed 1,067 accounts. The gain in productivity can be attributed to a more qualified staff and specialization by payor class.

The increase of 5 gross revenue days in accounts receivable from 1985 to 1990 is the only statistic that would indicate that Hospital C was not more efficient in 1990 than in 1985. This increase in gross revenue days could, in part, be attributed to medical records processing time or regulatory constraints, such as the 14-day payment floor mandated by the Medicare program.

Document Review: A Comparison of the Three Hospitals

Many changes had taken place between 1985 and 1990 in the three patient accounting departments examined in this study. The major forces driving these changes were government regulations, other insurer mandates, and an increase in the volume of patient encounters. In 1985, patient accounting had been organized by patient type. Each hospital in this study had had staff assigned to inpatient billing or outpatient billing. This organizational structure became outdated under the new PPS reimbursement. As the government and

other insurers continually changed the information requirements, patient accounting departments gravitated to a payor-specific organizational structure. No one could be expected to remember all of the rules for each payor. By 1990, all three hospitals in this study had reorganized to bill by payor class in an attempt to be more efficient in the new reimbursement climate.

The volume of patient encounters was increasing at an astronomical rate. Contributing to this volume were the procedures that previously had been performed in an inpatient environment, which were now performed in the outpatient setting. All of the patient accounting departments in this study had added more FTEs as they tried to maintain an acceptable level of accounts receivable that would provide adequate cash flow for their institutions.

The changes in FTEs, number of patient encounters, encounters per FTE, and gross revenue days in accounts receivable for 1985 and 1990 are summarized in Table 14. Hospital B had the lowest increase in FTEs (11.5), followed by Hospital A (14.5) and Hospital C (19). Hospital B also had the largest increase in volume of patient encounters--from 87,490 in 1985 to 137,209 in 1990. The second largest increase was at Hospital B, where the patient encounters increased from 46,810 in 1985 to 77,746 in 1990.

A ratio was developed to relate patient encounters to FTEs. Only Hospital A showed a decrease in patient encounters per FTE in 1990 compared to 1985. Significantly, Hospital A is also the only hospital in this study that had not changed the entry-level qualifications for its staff.

Table 14
Document Comparison for 1985 and 1990

	Hospital A		Hospital B		Hospital C	
	1985	1990	1985	1990	1985	1990
FTEs	50.3	64.8	40.0	51.5	54.0	73.0
Patient encounters	55,380	66,542	87,490	137,209	46,810	77,746
Encounters per FTE	1,212	1,147	2,187	2,664	867	1,065
Gross revenue days	128.2	64.5	106.1	75.8	83.0	88.0

Comparison of gross revenue days in accounts receivable was not conclusive because Hospital A and Hospital B both had been in the process of changing their patient accounting computer systems in 1985. However, it should be noted that, by 1990, Hospital A had the lowest number of gross revenue days in accounts receivable.

A review of patient accounting procedures indicates that most of the changes in procedures had been driven by third-party demands for admitting and insurance billing. Collection policies were generally hospital specific. Hospital B alone required payment arrangements in advance. Both Hospital A and Hospital C were contemplating up-front payment arrangements but had not yet implemented policies for payment arrangements during the admission process.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This researcher attempted to identify changes that had taken place in hospital patient accounting departments in Michigan since the implementation of the prospective payment system (PPS) and, further, to determine whether these changes had resulted in greater efficiencies. The researcher also examined the relationship between the patient accounting department and the patient. The importance of this study to the field of public administration is to identify the financial effect of the PPS on hospital administrative costs in patient accounting departments.

Government Involvement

Government entitlement programs pay for the largest portion of health care in the United States. In this study, the basic health care benefits offered under the Medicare and Medicaid programs were briefly reviewed. Since the inception of these programs in the 1960s, health care costs have spiraled. Schick (1990) stated that, in the decade of the 1980s, the Medicare budget tripled. To overcome the deficit caused by this increase, legislative action was

taken. The Medicare program has been tampered with more frequently than most entitlement programs. More than 200 changes in Medicare were legislated during the Reagan years. Legislative action was used to limit federal expenditures, such as payments to hospitals and physicians, and to reduce benefits or raise deductibles for Medicare recipients. These changes made both providers and recipients of health care feel cheated. This is the cost of improvisation. In 1982, legislators enacted the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) to control the spiraling cost of government-funded health care. The initial thrust of the legislation was to curb the cost of inpatient hospital care by changing the reimbursement methodology from a cost-based to a prospective payment system (PPS).

Overview of the Literature

Literature was reviewed that dealt with both changes in federal health care legislation and the effect of these changes on hospital providers. The government continues to refine PPS regulations. Hospital providers continue to make changes to survive under the new regulations. Woolhandler and Himmelstein (1991) contended that the rising cost of health care can be attributed primarily to administrative costs. They compared the American health care system and the Canadian system to substantiate their position. Dobson and Bergheiser (1993) reported on a Lewin-VHI study that synthesized four other

studies and concluded that 17% of total health care expenditures were for administrative costs.

On the health care provider side of the equation, Dalton and Crane-Morgan (1985) assessed the effect of the legislation in an informal survey of hospital managers. They found many policy differences among hospitals but a definite consensus on the importance of timely billing and the increased complexity of the billing process.

Hackett (1985) cited several factors that affect the ability of hospitals to bill in a timely manner, such as the UB82 and the physician attestation requirement. Altman (1986) suggested the need for patient accounting managers to take a more proactive stance to meet the challenges created by the PPS environment. She thought that patient account managers should monitor patient charts to ascertain how long they take to complete, help obtain physicians' signatures when needed, and bill without the signature if the physician delays.

Patient accounting has assumed a more important role in the hospital industry. Nemes (1991) thought that patient account managers require more specialized education to cope in the PPS environment. Anderson (1991) interviewed several patient account managers. He reported on different approaches taken by three patient accounting departments to reduce their gross revenue days in accounts receivable, such as using consultants to streamline the business office function, adding computerized collection systems, requiring cash deposits on self-pay accounts, and adding credit cards and bank loans as

payment options. Puhala and Barrett (1987) cited PPS as the main reason to pay more attention to patient accounting for hospital financial survival. Other factors were larger deductibles and co-pays, and preauthorization requirements. They also noted the increased importance of medical records for proper reimbursement and timely billing and the need to restructure the hospital organization.

Methodology for This Research

A multiple case study was used for this research. Three Michigan hospital patient accounting departments were examined. Each hospital included in the study had a similar number of inpatient beds, provided a fairly wide range of outpatient services, depended on government programs for a minimum of 50% of its reimbursement, had a fiscal year ending on June 30, and had minimal competition from other hospitals. Interviews were conducted and documents were examined. Patient accounting managers and the CFO were interviewed at each hospital to identify changes that had been made by their patient accounting departments to cope in the new reimbursement environment after PPS. The assumption here was that the management team would be responsible for driving the change. The purpose of the interviews was, therefore, to identify changes in procedures and the patient accounting organization, and, further, to examine the relationship between patient accounting and the patient.

Documents were also reviewed from each of the three hospitals for 1985 and 1990. The hospitals initially were subjected to PPS reimbursement in July 1984. The intention of the document review was to determine whether the patient accounting departments were more efficient as a result of changes made between 1985 and 1990. Two measures were used to determine whether these patient accounting departments were more efficient in 1990 than in 1985. First, gross revenue days in accounts receivable was selected as a measure because it is a generally accepted standard in the hospital industry. Second, a ratio of the number of FTEs to patient encounters was developed for each hospital in this study. In this final chapter, these two measures are used to summarize the changes resulting during this period, and to report on successful changes developed by each hospital patient accounting department in the new PPS environment.

Findings and Conclusions

In 1985, patient accounting was a fairly homogeneous facet of hospital operations. By 1990, patient accounting encompassed a much broader range of services, with considerably more dependence on other hospital departments and physician input. Medical records must code the record in a timely and accurate fashion to maximize reimbursement and allow timely billing. Furthermore, the physician must attest to the accuracy of the record before the

account can be billed. Before PPS, coding was not important because the hospital was paid on a cost basis, and the physician attestation did not exist.

The patient accounting process is more dependent on others, as well as more important to the financial stability of the hospital. Under the cost-based system, income was not dependent on the timeliness or the accuracy of the billing department. Under PPS, timely and accurate billing assumes a crucial role in hospital financial stability.

All of the hospitals in this study had changed their organizational structures to survive under PPS. Before PPS, patient accounting was not a very important function. The job was to bill third-party payors. Timely and accurate billing was not important because the majority of third-party payors paid hospitals on an interim payment basis, regardless of when the bill had been received. When the Medicare program eliminated the interim payment in 1986 and added a payment floor in 1989, timely and accurate billing became a critical factor for the financial survival of hospitals.

Billing by Payor Class

Each of the three hospitals in this study had made the change to billing by payor class. This change was the result of the increased complexity of third-party billing requirements. Each payor has unique billing requirements. The lack of any structured training program necessitated in-house training. Moving to payor-specific billing required less training than the previous inpatient-outpatient

division. Each biller must only be trained for certain payor-specific requirements. The high cost of on-the-job training was recognized by respondents from all of the hospitals in this study. Billing by payor class seemed to be a normal reaction to the complexity of the billing process rather than a hospital-specific decision. Nemes (1993), too, reported the move to billing by payor class as a successful strategy that was used at Maricopa Medical Center in Arizona in the redesign of its patient accounting department.

The cost of training could be further reduced by requiring third-party payors to accept a standard set of information as proposed by the Healthcare Simplification and Uniformity Act of 1993 (Dobson & Bergheiser, 1993). Additional changes would also minimize the administrative cost of patient accounting, such as a simplified admission process and a mandated payment turn-around time. The hospitals in this study had successfully minimized the cost of training by organizing the billing function around payor class. However, the need for training would be lessened if all third-party payors were mandated to accept the same bill form with the same set of information.

Collections and Payment Options

All of the hospitals included in this study were concerned with self-pay collections because the revenue stream from third-party payors was shrinking. Collections were a primary concern to the CFOs who were interviewed. Only Hospital B actually did any up-front collections. The CFOs and several of the

managers from the other two hospitals were almost apologetic because they were not collecting before service was rendered.

Hospital A added a monthly \$3 service fee on all payment agreement contracts and required larger monthly payments than it did before. The service fee offset the cost of monthly statements. Patients initially objected to the fee but eventually accepted paying the fee in lieu of paying their bill with a credit card. This would seem to indicate that, over a period of time, patients will realize that a hospital bill is no different from any other financial obligation.

Patients are becoming more aware of their financial obligation for health care services. Many of the respondents mentioned the changing relationship between patient accounting and the hospital patient. The current hospital patient is more knowledgeable and better educated with regard to hospital services because of the trend toward larger co-pays and deductibles and the media exposure. As one respondent stated, "Patients now have a vested interest in the cost of their health care." This newly educated patient should be viewed by patient accounting as an opportunity to speed up self-pay collections.

Changes in the Number and Components of Staff

Each patient accounting department had more staff in 1990 than it did in 1985. Increased complexity of the admission and billing process and an increase in the number of patient encounters were the reasons most often cited. The staff mix had also changed. Hospital A had added a central scheduling unit to

expedite the admission process. They also had hired an outside firm to perform the precollection function, which previously had been done by in-house staff.

Hospital B had added a preadmission unit similar to the central scheduling unit added at Hospital A. Both the central scheduling unit and the preadmission unit required more staff than the previous admission function. Hospital C had moved the entire preadmission process to Utilization and Review (UR). The management personnel who were interviewed at Hospital C thought that moving the preadmission process would allow for better information and financial accountability before service was rendered, thus increasing the collectability of the account. There seemed to be a consensus among those involved in this change that the result would benefit the hospital. However, this shifting of responsibilities from one area to another makes any cost comparison inconclusive. The patient accounting unit described originally, for the purpose of this study, as admitting, insurance billing, and collections no longer exists. The new patient accounting arena encompasses a much broader mix of staff.

Training Requirements

Nemes (1991) made the point that patient account managers need more specialized training to advance in their fields. He stated that patient account managers obtained their positions accidentally and are lower paid than other hospital financial personnel. Those interviewed for this study were patient accounting management personnel. Therefore, training needs were directed at

their staff rather than at the management level. No interviewee mentioned a need for more training at the management level. Both Hospital B and Hospital C required higher entry-level qualifications for their staffs. Hospital B had added many new job classifications, whereas Hospital C had changed the entry-level qualifications to include computer skills or previous billing experience and tested new applicants in basic mathematics skills. Hospital A had not changed the entry-level qualifications but covertly looked for more qualified applicants.

Patient account managers were still learning their profession through on-the-job training because no formal program existed. The managers who were interviewed in this study seemed to be looking for a "cook book" approach for staff training. However, the patient accounting field is so complex and dynamic that educational programs could not keep pace with the current changes. Third-party seminars, which were payor specific and offered at minimal cost to the hospital, were most often used for staff training.

Incentive Programs

Only Hospital A lacked any formal incentive program in patient accounts. Even without a formal program, however, management attempted to reward staff with flex hours and lenient rules for scheduling time off.

Hospital B used goal-achievement celebrations and personal gifts for above-average performance. Above-average performance was defined as doing extra work, such as helping auditors find documents or volunteering for extra

work assignments. Patient account management had the authority to give gift certificates of up to \$200 or to grant time off with pay as they deemed appropriate. It appeared that Hospital B had the most generous incentive program of the three hospitals in this study.

The management at Hospital C had parties and potluck suppers at the homes of the management staff to celebrate goal achievements. They also gave financial awards for reaching team goals. The difference between Hospital B and Hospital C appeared to be that, at Hospital B, individuals were most often awarded incentives whereas at Hospital C teams were most often awarded incentives.

The evidence is not conclusive as to whether incentive programs make patient accounting staff more efficient. Many hospitals have managed to succeed without offering incentives. Use of incentive programs is a hospital-specific choice. Anderson (1991) reported on three hospitals that had successfully reduced their gross revenue days in accounts receivable. Only Halifax Medical Center used an incentive program. Franciscan Health Systems and Good Samaritan Hospital used automation and restructured their business offices.

Were These Hospitals More Efficient Since PPS?

Two measures were used to determine whether the patient accounting departments included in this study were more efficient in 1990 than they had

been in 1985: gross revenue days in accounts receivable and a ratio of FTE to patient encounters. The results of these measures for each hospital were summarized in Table 14 (Chapter V). Hospital A had effectively reduced the number of gross revenue days but processed fewer encounters per FTE in 1990 than it had in 1985. Hospital B had also lowered the number of gross revenue days but had also substantially increased the number of patient encounters per FTE. Hospital C showed an increase in gross revenue days but also had increased the ratio of patient encounters per FTE. It would appear that all three hospitals were more efficient, based on the measures used for this study, especially if the increased complexity of the patient accounting process is taken into consideration.

Both Hospital A and Hospital B had gone through a computer conversion in 1985. Therefore, their gross revenue days were higher in 1985 because of the conversion. The fact that two of the three hospitals in the study were in the process of a computer conversion indicated a new dependence on more sophisticated computer hardware and software in the PPS environment.

Both Hospital B and Hospital C handled more patient encounters per FTE in 1990 than in 1985. However, how much of this gain could be attributed to improved efficiency or to shifting procedures to other units that were previously performed in patient accounting is unknown.

How Patient Accounting Departments Have Changed Since the Enactment of PPS

The parallel changes made by each of the three hospitals in this study were the shift to billing by payor class, the acknowledgment of the need to collect at time of admission rather than after services were rendered, an increase in the number of staff required to perform the patient accounting function, and a greater dependence on computers. Although all of the hospitals in the study acknowledged the need to collect at the time of admission, only Hospital B actually had put this process in place. Hospital A and Hospital C seemed to be delaying this action. Even though the consensus among those interviewed was that hospitals should be collecting payments up front, only one of the hospitals did so. Perhaps these hospitals lacked the board approval and administrative support to institute policies that would mandate or allow up-front collections. Another possible reason is that these managers were not totally convinced that health care is like any other business and the same business practices should be adhered to. Health care decisions are not preplanned. This researcher sensed that the management people who were interviewed were not totally in favor of treating their patients the same as other businesses do. When one purchases a major appliance or an automobile, the individual has a choice of the price he or she is willing to pay and the payment arrangements to which he or she is willing to agree. Hospitals do not offer such options. The price is fixed, and negotiations are not usually made at the self-pay level. The management

people who were interviewed, although they intuitively realized the need for up-front collections, could not morally justify the need to collect up front.

Other changes made by each of the hospitals in the study were substantially different. These hospitals were similar in many respects, yet each chose a different strategy to cope in the new environment. Clearly, other factors were operating.

Hospital A had made the least change in the 5-year period under study. Yet, looking at gross revenue days as a success indicator, the patient accounting department was successful in producing adequate cash flow with minimal change. The corporate culture at Hospital A seemed to promote an attitude of no change or at least gradual change as long as the patient accounting function was doing what it is supposed to do--provide adequate cash flow. Hospital A retained a vendor to provide precollection services similar to the central service office used by Franciscan Health System (Anderson, 1991). Hospital A also used consultants to point out the weak points in its accounts receivable management, similar to the Franciscan approach. Otherwise, things remained for the most part business as usual at Hospital A.

Hospital B seemed to adopt a more customer-oriented approach. As a result of customer surveys, it had added a customer service unit. Of the three hospitals in this study, only this one actually collected at time of admission. Nevertheless, it seemed to hold the customer in greater esteem in the new PPS environment. The customer service unit was designed to answer patient queries

in a more timely manner and to improve the relationship between the patient and the hospital. Hospital B seemed to have successfully separated good customer service from the need to collect for services, which is good business policy. Its approach closely resembled the customer-oriented approach adopted by Good Samaritan Hospital (Anderson, 1991).

Hospital C seemed most similar to Halifax Medical Center (Anderson, 1991). It also subscribed to the team-building approach. The team approach requires a great commitment to staff development and training. Hospital C seemed to be more committed to allowing the staff to offer greater input to change than either Hospital A or B.

Each patient accounting department included in this study had made significant changes between 1985 and 1990 as a result of PPS and the increasingly diverse demands made by third-party payors. Evidence was inconclusive as to whether one set of strategies was more efficient than another. However, it is clear that the cost of performing the patient accounting function had increased since the implementation of PPS at each of these hospitals.

Recommendations for Further Study

This researcher did not address the role that computers play in the patient accounting function. Several managers indicated that more sophisticated computer software programs were used to prompt registrars to obtain needed information during the admission process. Other managers indicated that the

billing process relied on computer prompts to bill correctly. The staff increases between 1985 and 1990 would have been much greater without the use of computers. Further research should be undertaken to obtain more knowledge about the administrative costs associated with the adoption and use of these computer systems because they provide a substitute for some staffing requirements or at least appear to make staff more efficient.

This study was limited to patient accounting, which included only the admitting, billing, and credit and collection functions of the hospital. Since PPS, the medical records and utilization and review and physicians have become intertwined with patient accounting. Further study should be broadened to include these new players and perhaps the accounting function, at least in the case of the cashiers. This study did not include the cashiering function; however, at two hospitals in the study, the cashiers were included with patient accounting. Evidence from this study indicated that many hospitals had merged many of these functions.

Building on the knowledge obtained from this study, perhaps further information could be obtained using a survey method. A survey could be designed to include the educational levels and ages of the respondents. Throughout the interview process, this researcher intuitively thought that the ages and educational levels of the respondents played an important role in the strategies chosen by each hospital, but this information was not gathered as part of this study.

Nemes (1991) thought that patient account managers required specialized education. Both Hospital B and Hospital C had raised the entry-level qualifications for their staff. Specialized education at the management level might include courses designed specifically to analyze hospital accounts receivable or to analyze third-party contracts, which would not generally be part of the usual accounting curriculum. These types of specialized education could play an important role in the success of a patient accounting department.

The cost associated with the regulation of this new payment system was not a part of this study but should be considered in future research. Evidence from this study showed that the administrative cost of the patient accounting function had increased since PPS. If the cost to the government also has increased, perhaps changes to PPS could be implemented to improve the system. Adoption of a proposal such as the Healthcare Simplification and Uniformity Act of 1993 (Dobson & Bergheiser, 1993) could offer savings to both the health care provider and the government.

Each of the hospital patient accounting departments in this study chose different strategies for survival in the new PPS environment, yet each succeeded. Not all of the changes that were made would be successful at one institution. Corporate culture dictated the path taken, even though the results were similar.

None of these hospitals achieved the success with regard to revenue days in accounts receivable as the hospitals reported by Anderson (1991). The main difference between the hospitals in this study and the ones in Anderson's study

was the emphasis on collections. It would appear that, to become more efficient in the current environment, hospitals must take a more aggressive collection stance to reduce accounts receivable even further.

Appendix A
Interview Schedule for Hospital Personnel

Interview Schedule for Hospital Personnel

1. Hospitals with a fiscal year ending on June 30 have been reimbursed under the PPS since 1985. How have patient accounting procedures changed at your hospital since then?
2. Many changes have been made in preadmission, admission, and billing requirements since PPS—for example, admission requirements, timely billing requirements, bundling of outpatient charges with inpatient stays, etc. How has your patient accounting department adapted to accommodate these changes in the following areas: Please explain.
 - a. Preadmission or admission policies and procedures
 - b. Billing assignments
 - c. Credit and collection policies and procedures
3. How have staffing requirements in your patient accounting department changed since 1985? Please explain.
4. How have the training needs of your staff changed since PPS? Please explain the source of formal and informal training provided to your staff. For example, do you use consulting firms, in-house training staff, third-party seminars, and/or other sources to maintain patient accounting skills? Please explain.
5. Do you use any incentive programs for your staff, such as financial rewards for productivity, goal-achievement celebrations, or other awards? Please explain.
6. How has the relationship between patient accounting and the patient changed as a result of PPS reimbursement?
7. How long have you been in your current position at this hospital?

Appendix B
A Definition of Patient Accounting

A Definition of Patient Accounting

For the purpose of this study, patient accounting was defined as follows: The patient accounting function of an acute-care hospital includes preadmissions and precollections, admissions and insurance verification, insurance billing, and credit and collections. These are the functional areas that directly affect the hospital's ability to maintain adequate cash flow from patient revenue. Other areas of the hospital also affect and are closely related to the patient accounting function, such as medical records and discharge planning. However, for the purpose of this study, these additional functions will not be examined.

Appendix C

**Letter of Approval From the Human Subjects
Institutional Review Board**

Human Subjects Institutional Review Board



Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: December 8, 1992**To:** Carol Francke**From:** M. Michele Burnette, Chair *M. Michele Burnette***Re:** HSIRB Project Number: 92-10-28

This letter will serve as confirmation that the revisions to your research protocol, "Changes in hospital patient accounting under the prospective payment system (PPS)" have been received and your protocol has been approved under the expedited category of review by the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

xc: Reding, SPAA**Approval Termination:** December 8, 1993

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