
NATIONAL DRG VALIDATION STUDY

QUALITY OF PATIENT CARE IN HOSPITALS



OFFICE OF INSPECTOR GENERAL
OFFICE OF ANALYSIS AND INSPECTIONS

JULY 1989

OFFICE OF INSPECTOR GENERAL

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Entitled "National DRG Validation Study, Quality of Patient Care in Hospitals," this study was conducted to analyze and profile the characteristics of patients who received poor quality care in hospitals.

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EXECUTIVE SUMMARY

PURPOSE

This inspection analyzed the quality of patient care in hospitals under the prospective payment system (PPS) based upon the (a) extent to which poor quality care occurred in a random sample of hospitals, (b) extent to which poor quality care varied in different types of hospitals and (c) characteristics of patients who received poor quality care. The report is one of a series in the National Diagnosis Related Group Validation Study undertaken by the Office of Inspector General (OIG).

BACKGROUND

Effective October 1983, Congress mandated a change in Medicare payments to hospitals from a cost-based retrospective reimbursement system to a prospective payment system. Under PPS, hospitals currently receive a fixed payment based upon 1 of 475 diagnosis related groups (DRGs) for each Medicare patient discharge, regardless of the services provided or the length of stay. Hospitals retain a profit when patient care costs less than the DRG payment, but must absorb losses when costs exceed the DRG. The intent of PPS was to curb rapidly escalating increases in Medicare costs for acute inpatient care by giving hospitals an incentive to reduce lengths of stay and eliminate unnecessary services without compromising the quality of patient care. This issue was included in the National DRG Validation Study to determine the prevalence of poor quality care under PPS. Since there are no comparable data on the quality of care in hospitals prior to the implementation of PPS, we cannot infer a causal effect between PPS and poor quality care.

Under contract to the OIG, board-certified physicians with extensive experience in peer review identified cases of poor quality care based on an analysis of a random sample of 7,050 Medicare patients discharged from 239 hospitals between October 1984 and March 1985. Reviewers defined poor quality care as substandard medical care *clearly* failing to meet professionally recognized standards under any circumstances in any locale.

Both the utilization and quality control peer review organizations (PROs) and the SuperPRO (the contractor which assists the Health Care Financing Administration [HCFA] in monitoring PROs) review patient hospital stays for poor quality care. During the time of our review, PROs nationally found evidence of poor quality care in 0.8 percent of the cases reviewed, while the SuperPRO's rate was 3.0 percent. Since HCFA required the PROs and SuperPRO to review cases using six uniform quality screens these rates have increased substantially. Recent data indicate PROs identified quality problems in 3.6 percent of the cases reviewed, while the SuperPRO's rate was 9.1 percent.

MAJOR FINDINGS

- The OIG found that 6.6 percent of the sampled patients received poor quality care. Projected nationally, HCFA paid hospitals approximately \$1.2 billion under PPS in Fiscal Year 1985 for patients with quality of care problems.
- PROs lacked authority to deny Medicare reimbursement for substandard medical care during our review period. Congress subsequently granted this authority in the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985, but regulations to implement this provision have not been issued.
- Even though PROs nationally are identifying more cases of poor quality care since they began using generic quality screens, rates reported by both the OIG and the SuperPRO remain substantially higher than the PROs. There continues to be wide variation among PROs in the identification of poor quality care cases.
- Eighty percent of the reasons for poor quality care involved the omission of necessary medical services (e.g., failure to administer appropriate tests for proper diagnosis, omission of necessary drugs or therapy); other reasons included errors leading to unnecessary complications or placing patients at increased risk by providing unnecessary services or inadequately documenting medical records.
- Patients receiving poor quality care were 3 times more likely to die, 4 times more likely to develop nosocomial infections, twice as likely to have been unnecessarily admitted to hospitals and 76 times more likely to have been prematurely discharged from hospitals.
- Patients receiving poor quality care were, on the average, 3 years older than patients receiving appropriate care.
- Most patients receiving substandard care had multiple quality problems. Patients with short hospital stays averaged approximately the same number of problems as those with long hospital stays.
- Small, rural and nonteaching hospitals had higher rates of poor quality care.
- Many hospitals with the highest rates of poor quality patient care also had high rates of unnecessary admissions and premature discharges.
- Six DRGs are frequently associated with poor quality care:
 - DRG 14 (strokes, except transient ischemic attacks)
 - DRG 15 (transient ischemic attacks)
 - DRG 87 (pulmonary edema and respiratory failure)
 - DRG 89 (simple pneumonia and pleurisy, patients over age 69)
 - DRG 141 (fainting, patients over age 69)
 - DRG 320 (kidney and urinary tract infections patients over age 69)

RECOMMENDATIONS

The HCFA should increase its efforts to identify and address poor quality care in hospitals by:

- issuing regulations to implement the COBRA 1985 provision giving PROs authority to deny Medicare reimbursement for patients receiving substandard medical care,
- determining why PROs identify a substantially lower rate of poor quality care cases than either the SuperPRO or the OIG,
- developing acceptable disagreement rates between PROs and the SuperPRO for identified cases of poor quality care,
- incorporating reconciliation of high disagreement rates into PRO performance evaluations for consideration in renewal of PRO contracts,
- analyzing quality review practices of PROs with low disagreement rates to identify exemplary models and best practices which could be used to assist other PROs and
- requiring that PROs continue to improve their identification and follow-up of cases involving poor quality patient care in order to better target problem hospitals and physicians.

COMMENTS

The HCFA commented on our draft report. While HCFA disagrees with our methodology for determining the incidence of poor quality care, it agrees that PRO performance should be improved and has taken several important actions to that effect. Its written comments are presented in general following the recommendation section of this report and in detail in appendix O. A summary of HCFA's subsequent actions also is presented in the comments section of this report.

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INTRODUCTION

Effective October 1983, Congress mandated a change in Medicare payments to hospitals from a cost-based retrospective reimbursement system to a prospective payment system (PPS). Under PPS, hospitals currently receive a fixed payment based upon 1 of 475 diagnosis related groups (DRGs) for each Medicare patient discharge, regardless of the services provided or length of stay. Hospitals retain a profit when patient care costs less than the DRG payment but must absorb losses when costs exceed the DRG. The intent of PPS was to curb the rapidly escalating increases in Medicare costs for acute inpatient care by giving hospitals an incentive to reduce lengths of stay and eliminate unnecessary services without compromising the quality of patient care.

The Office of Inspector General (OIG) has undertaken a number of initiatives to evaluate the effects of PPS on hospital behavior and medical practices. To date, the OIG has completed validation studies of DRG 14 (strokes), DRG 82 (respiratory neoplasms) and DRG 88 (chronic obstructive pulmonary disease), as well as inspections on beneficiary notices under PPS and activity by the utilization and quality control peer review organizations (PROs) in identifying and handling inappropriate discharges and transfers. The OIG also has conducted pre-award audits of the PRO and SuperPRO contracts.

Current efforts underway include an audit on patient hospital stays of less than 24 hours (excluding deaths), an ongoing audit of Medicare profits in hospitals under PPS and a study of DRG 129 (cardiac arrest). An inspection of PRO performance has produced three final reports on quality review, sanctions activities and PRO effectiveness.

Another major initiative is the National DRG Validation Study, which analyzes patterns of hospital behavior under PPS. The study is based on an analysis of extensive data compiled by the Health Data Institute (HDI) of Lexington, Massachusetts, under contract to the OIG. This report on the quality of patient care in hospitals is one in a series generated from the National DRG Validation Study. Other reports in this series focus on issues such as premature discharges from hospitals, the accuracy of DRG coding, unnecessary hospital admissions and short hospital stays.

BACKGROUND

Since the inception of PPS, health care providers, Congress, and public interest groups have expressed concern that patients are at increased risk of receiving poor quality care. The Congress has held hearings and enacted legislation designed to improve quality of care. The Health Care Financing Administration (HCFA) has conducted research, held a symposium and compiled a summary of papers addressing a range of quality of care issues in its 1987 annual supplement to *Health Care Financing Review*. Since December 1987, HCFA has released death rates in hospitals serving Medicare patients. Several organizations, including the General Accounting Office, the Office of Technology Assessment, the Prospective Payment Assessment Commission, the Rand Corporation (under contract to HCFA) and the National Academy of Science's Institute of Medicine have initiated studies addressing various quality of care issues.

Concern over quality of patient care in hospitals is not new to PPS. Prior to PPS, the federally mandated professional standards review organizations (PSROs) required hospitals to conduct special studies focusing on specific quality of care issues. Shortly after the implementation of PPS, PROs replaced PSROs. One of their primary responsibilities is to assess the quality of patient care in hospitals. The extent to which PROs identify and follow-up on poor quality care cases varies widely. Between July 1984 and June 1986, a time frame which encompasses the period of this study, PROs reviewed 46 percent of the 15 million PPS discharges and determined that 0.8 percent of the patients received poor quality care. The PROs reported that 36 percent of the 54 PRO-designated areas had no patients with quality of care problems. PROs lacked authority to deny Medicare reimbursement for poor quality care.

Both Congress and HCFA are taking steps to strengthen PRO identification, follow-up and use of penalties for cases of poor quality care:

- The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) gave the PROs statutory authority to deny Medicare reimbursement for substandard care.
- The HCFA required PROs to use six uniform screens, commonly referred to as generic quality screens, for every case review beginning with their second contract period (1986-1988). The screens were further refined in November 1987.
- The HCFA is requiring PROs to assign one of three specified severity levels to identified cases of poor quality care during their third contract period (1988-1991). Corrective action must be taken within specified time frames to improve follow-up. All PROs must implement these measures by April 1989.

Currently, PROs review a 3 percent random sample of Medicare discharges from each hospital within their jurisdictions, plus additional cases to meet other monitoring responsibilities. Using the generic screens, PROs review all cases for appropriate quality of care. Systemetrics, a contractor better known as the SuperPRO, is responsible for assisting HCFA in monitoring PRO performance. The SuperPRO selects a random sample of cases reviewed by each PRO and, using the same screening criteria, conducts its own quality reviews.

OBJECTIVES

The purpose of this study was to examine the quality of patient care under PPS, including the (a) extent to which poor quality care occurred among Medicare patients, (b) extent to which poor quality care varied in different types of hospitals and (c) characteristics of patients who received poor quality care. Since there are no comparable data on the quality of care in hospitals prior to the implementation of PPS, we cannot infer a causal effect between PPS and poor quality care.

METHODOLOGY

Using a two-stage cluster design, the OIG sampled 7,050 Medicare patient records from 239 hospitals stratified by size. The sample included roughly equal numbers of hospitals which were small (under 100 beds), medium (100-299 beds) and large (300+ beds). Patient discharges occurred between October 1984 and March 1985.

The OIG contracted with physicians and nurses to assess the quality of patient care. Poor quality care was defined as substandard medical care *clearly* failing to meet professionally recognized standards under any circumstances in any locale.

Registered nurses screened medical records for evidence of poor quality care. When nurses identified quality problems, they referred the medical records to board-certified physicians with extensive experience in peer review for a final determination. Physicians ignored marginal problems or cases involving honest differences in medical judgment about appropriate case management. If documentation in the medical record was so poor that reviewers could not determine whether there were quality problems, the patient was considered to have received appropriate care. Physicians prepared narrative summaries outlining each patient's quality problems. A particular problem was counted only once, regardless of the number of times it occurred during a patient's hospital stay. A patient with eight quality problems, therefore, experienced eight different problems during the hospital stay. An OIG physician evaluated each case summary, confirming the conclusions of medical reviewers on cases of substandard care.

The OIG staff analyzed hospitals where patients received poor quality care by bed size, urban/rural location, profit/nonprofit status and teaching/nonteaching status. We also analyzed each hospital by the number of poor quality cases occurring in its patient sample: (a) none, (b) 1-2, (c) 3-5 and (d) 6 or more. A summary of the data appears in appendices A through D. In addition, we compared patients receiving poor and good care. We used averages and percentages weighted to adjust for differences in the size of hospital or patient groupings. Fiscal projections were based on (a) the rate and average cost of cases with poor quality care by hospital size and (b) total PPS discharges in Fiscal Year (FY) 1985. Appendix E provides further information on the study methodology.

FINDINGS

MORE THAN 6 PERCENT OF THE PATIENTS RECEIVED POOR QUALITY CARE UNDER PPS AT A NATIONAL COST OF \$1.2 BILLION FOR FISCAL YEAR (FY) 1985

The OIG found that 464 patients (6.6 percent) in 159 hospitals received substandard medical care. The OIG finding is substantially higher than the rate of poor quality care cases identified by the PROs (0.8 percent) or SuperPRO (3.0 percent) for the same time period.

Although the number of poor quality care cases identified by the PROs and SuperPRO has increased substantially since they began using generic quality screens, HCFA data comparing the findings of the PROs and SuperPRO (October 1987) indicate that PROs nationally identified only about half as many poor quality care cases (i.e., 3.6 percent) during the fourth review cycle as the OIG found in FY 1985. There continues to be wide variation in the identification of poor quality care cases among PROs and high discrepancy between the findings of the PROs and SuperPRO. The SuperPRO, using the same criteria as a PRO when reviewing a sample of that PRO's quality reviews, reported quality of care problems in 9.1 percent of the cases reviewed.

Projected nationally, HCFA paid hospitals approximately \$1.2 billion under PPS in FY 1985 for patients with quality of care problems. Although the PROs lacked authority to deny payment for substandard care at that time, Congress subsequently granted this authority. The HCFA has not issued regulations to implement this legislation.

RATES OF POOR QUALITY CARE CASES VARY AMONG HOSPITALS

As the following chart indicates, the OIG identified a wide variation in the rates of poor quality care cases in hospitals. Although medical reviewers found no instances of poor quality care in 80 hospitals (33.5 percent), 21 hospitals (8.8 percent) had at least 6 cases of poor quality care (20 percent or more of their sampled patient records). In one hospital, more than half the sampled patients received substandard care. A more detailed breakout of these hospitals appears in appendix F.

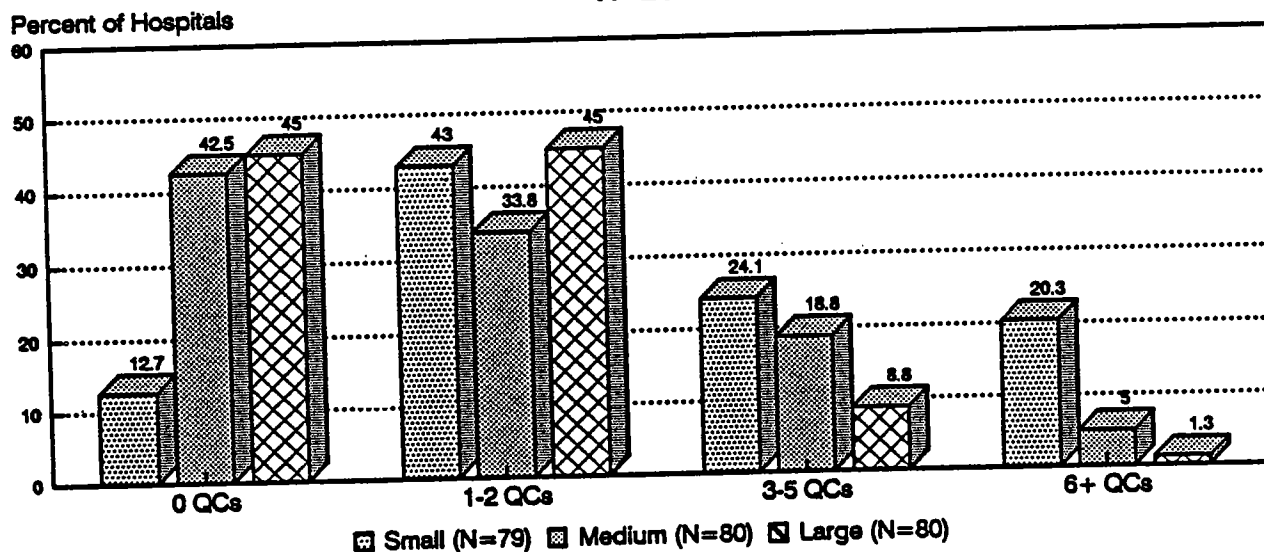
DISTRIBUTION OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES (N=239)		
# QC Cases	# Hospitals	Percent
0	80	33.5
1 - 2	97	40.6
3 - 5	41	17.2
6 - 16	21	8.8

Types of Hospitals

The OIG staff analyzed cases of poor quality care in terms of hospital bed size, urban/rural location, profit/nonprofit status and teaching/nonteaching status.

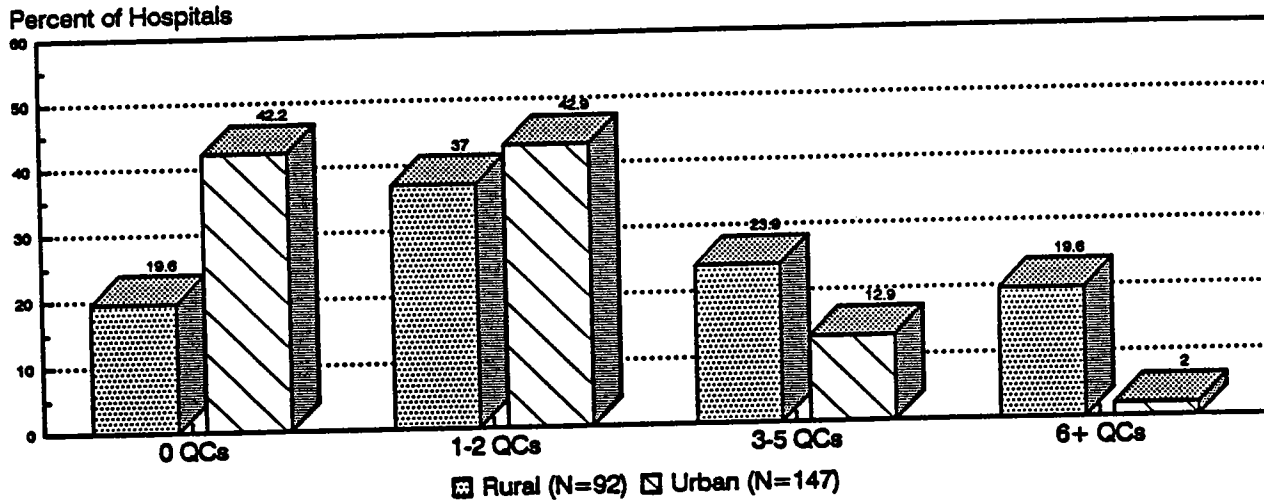
Bed Size. Small hospitals had the highest overall rates of poor quality patient care (11.4 percent, compared with 5.1 percent in medium hospitals and 3.5 percent in large hospitals). This trend is more pronounced when comparing hospitals by frequency of poor quality care cases. As the following table indicates, more than 40 percent of the medium and large hospitals had no quality of care problems, compared with 12.7 percent of small hospitals. In contrast, only 1.3 percent of the large hospitals and 5 percent of the medium hospitals had 6 or more poor quality care cases (at least 20 percent of their patient sample), compared with 20.3 percent of the small hospitals.

**COMPARISON by BED SIZE:
FREQUENCIES of POOR QUALITY CARE (QC) CASES**
N=239



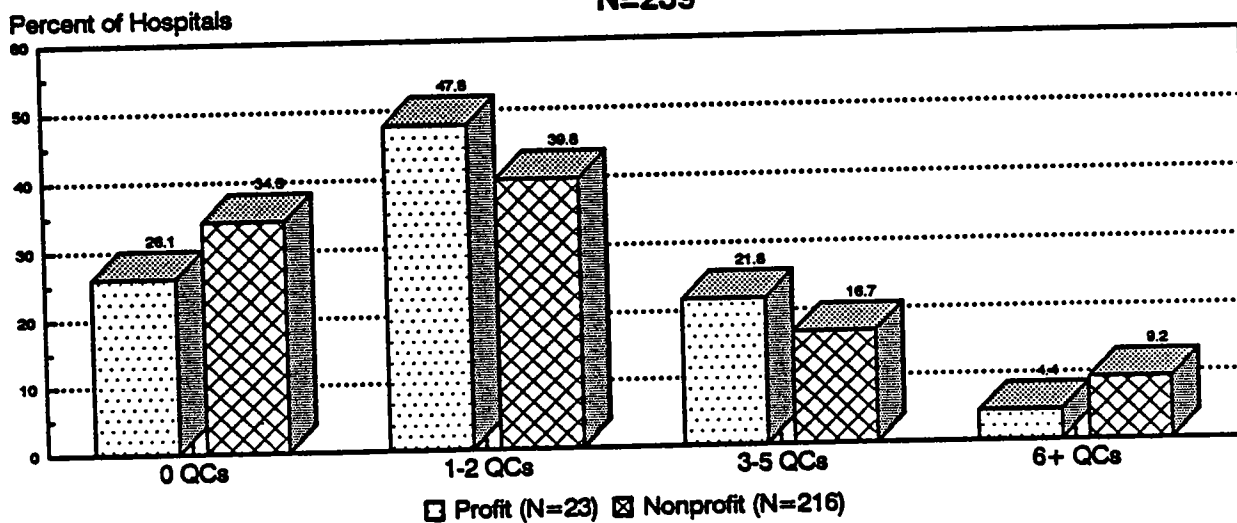
Urban/Rural Location. Rural hospitals had higher overall rates of poor quality patient care (10.7 percent, compared with 4.1 percent in urban hospitals). Again, this trend is more pronounced when comparing hospitals by frequency of poor quality care cases. As the following table indicates, 42.2 percent of the urban hospitals had no quality of care problems, compared with 19.6 percent of the rural hospitals. Only 2 percent of the urban hospitals had 6 or more poor quality care cases, compared with 19.6 percent of the rural hospitals.

**COMPARISON by RURAL/URBAN STATUS:
FREQUENCIES of POOR QUALITY (QC) CASES
N=239**



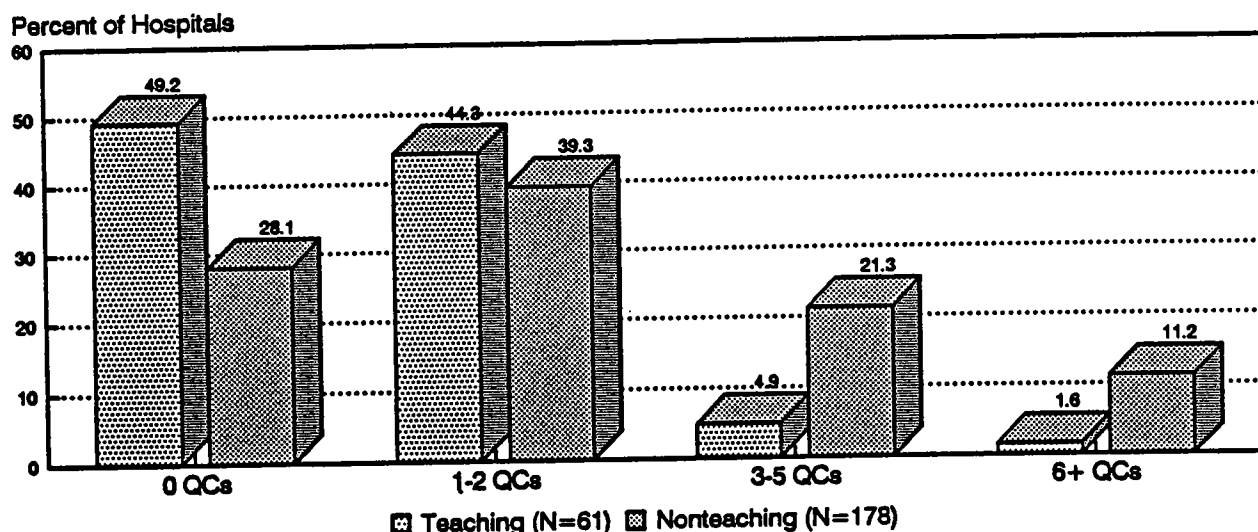
Profit/Nonprofit Hospitals. Overall rates of poor quality care cases were similar for profit (5.7 percent) and nonprofit (6.7 percent) hospitals. This was also true when comparing frequencies of poor quality care cases in both types of hospitals.

**COMPARISON by PROFIT/NONPROFIT STATUS:
FREQUENCIES of POOR QUALITY CARE (QC) CASES
N=239**



Teaching/Nonteaching Hospitals. Nonteaching hospitals had a higher overall rate of poor quality care cases (7.8 percent compared with 3.0 percent in teaching hospitals). Again, this trend is more pronounced when comparing hospitals by frequency of poor quality care cases. As the following table indicates, 49.2 percent of the teaching hospitals had no quality of care problems, compared with 28.1 percent of the nonteaching hospitals. Only 1.6 percent of the teaching hospitals had 6 or more poor quality care cases, compared with 11.2 percent of the nonteaching hospitals.

**COMPARISON by TEACHING/NONTEACHING STATUS:
FREQUENCIES of POOR QUALITY CARE (QC) CASES
N=239**



Other Problems in Hospitals With High Rates of Poor Quality Care Cases. The 21 hospitals with 6 or more poor quality care cases treated only 8.8 percent of the patients in the full sample (7,050 cases), but they accounted for 15.3 percent of the unnecessary admissions, 46.0 percent of the premature discharges and 38.2 percent of the poor quality care cases. Additional information on these hospitals can be found in appendix G.

MOST PATIENTS RECEIVING SUBSTANDARD CARE HAD MULTIPLE QUALITY OF CARE PROBLEMS REGARDLESS OF THEIR LENGTH OF STAY IN A HOSPITAL

Reviewers found 1,331 problems contributing to the substandard care received by the 464 patients in the sample. As the following table indicates, only one-fourth of the patients had a single quality of care problem. The range ran as high as 16 different problems for 1 patient. A more detailed breakout of the number of quality care problems per patient appears in appendix H.

**DISTRIBUTION OF PATIENTS BY NUMBERS OF
QUALITY CARE (QC) PROBLEMS
(1331 Problems in 464 Patients)**

# QC Problems	# Patients	Percent
1	115	24.8
2 - 3	225	48.5
4 - 5	88	19.0
6 - 9	30	6.5
10 - 16	6	1.3

Overall, patients averaged 2.9 problems. The average number of problems was higher for patients in small hospitals (3.1) than patients in large hospitals (2.4). Patients in rural hospitals also averaged more problems (3.2) than patients in urban hospitals (2.6). Differences between profit/nonprofit and teaching/nonteaching hospitals were negligible.

Patients receiving poor quality care who had short hospital stays averaged approximately the same number of problems as those who had long hospital stays. For example, patients who spent less than 4 days in the hospital averaged 2.6 problems, while patients with hospital stays of 14 to 77 days averaged 2.9 problems.

In hospitals classified as large, urban or teaching facilities, the average length of stay (ALOS) for patients receiving substandard medical care was 2.5 to 3 days longer than patients receiving appropriate care. In rural hospitals, the opposite was true where poor quality ALOS was 2.3 days shorter. The ALOS for patients receiving good and poor care was similar in other types of hospitals. For more specific detail, see appendix I.

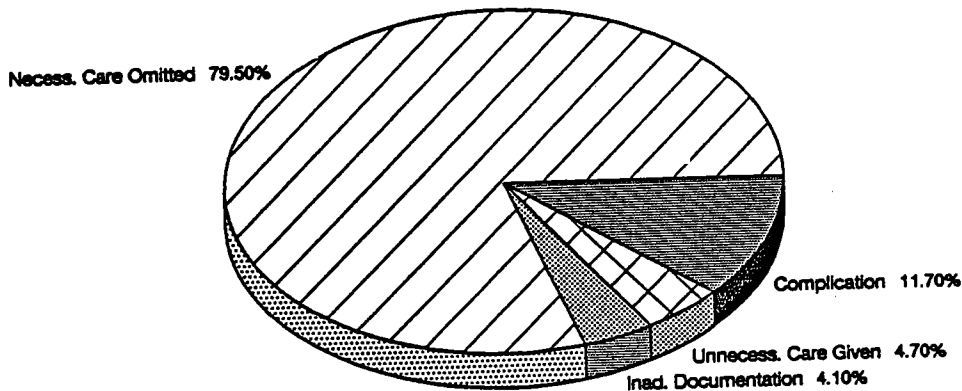
MOST OF THE REASONS CONTRIBUTING TO POOR QUALITY CARE INVOLVED THE OMISSION OF NECESSARY MEDICAL SERVICES

Reasons for poor quality care, illustrated with typical examples, fell into four classifications:

- ***Necessary care omitted.*** A patient with a history of epilepsy, well controlled by medication, was admitted to the hospital suffering a heart attack. While under care for his cardiac condition, an order for continuation of his medication to control the epilepsy was omitted in error. The day after admission, as a result of a seizure, the patient fell out of bed and broke his leg.
- ***Errors contributing to complications in care.*** A patient underwent successful surgery for an aortic aneurysm. Failure to properly monitor fluid levels led to kidney failure. A procedure necessary to diagnose the kidney failure dislodged a blood clot on the inside of the aorta where the surgery had been performed. The clot blocked an artery, and the patient's right leg had to be amputated.
- ***Unnecessary care placing patient at increased risk.*** A patient was admitted to the hospital with jaundice, excess abdominal fluid and weakness. The only treatment for the patient's condition consisted of morphine injections, which would not have relieved any of the symptoms. The patient was placed at potential risk of side effects from the drug.
- ***Inadequate documentation of the medical record placing patient at increased risk.*** A patient was admitted to the hospital after falling and breaking both hips. The physician diagnosed that the fall resulted from fainting due to poor blood circulation to the brain. There was no documentation in the medical record that the physician ordered tests to rule out other possible explanations for the fall. Failure to document the patient's problem properly could have resulted in an inaccurate medical diagnosis and treatment.

As the following chart indicates, most of the 1,331 quality problems involved the omission of necessary medical services. A more detailed breakout of reasons for poor quality care appears in appendix J.

REASONS CONTRIBUTING TO POOR QUALITY CARE N=1331



Among hospitals, the omission of necessary services was always the predominant reason for poor quality care. As the following table indicates, approximately 8 out of 10 quality problems in small, rural and nonteaching hospitals fell into this category. This was true regardless of whether hospitals were profit or nonprofit.

REASONS CONTRIBUTING TO POOR QUALITY CARE BY TYPE OF HOSPITAL (PERCENT) (N=1331)

Variable	N	Necessary Care Omitted	Complication	Unnecessary Care Provided	Inadequate Doc.	%
Small	803	83.4	9.5	2.7	4.4	100
Medium	330	77.0	10.6	9.4	3.0	100
Large	198	67.7	22.2	5.1	5.0	100
Rural	871	83.4	9.5	3.0	4.1	100
Urban	460	72.2	15.7	8.0	4.1	100
Teaching	148	67.6	18.9	6.8	6.7	100
Nonteach.	1,183	81.0	10.7	4.5	3.8	100
Profit	110	80.0	9.0	7.3	3.7	100
Nonprofit	1,221	79.4	11.9	4.5	4.2	100

PATIENTS RECEIVING POOR QUALITY CARE WERE AT HIGHER RISK OF DEATH, CONTRACTING NOSOCOMIAL INFECTIONS AND BEING UNNECESSARILY ADMITTED OR PREMATURELY DISCHARGED FROM HOSPITALS

Patients receiving poor quality care were three times more likely to die. Overall, 16.4 percent of the patients receiving poor quality care died during their hospital stays, compared with 5.6 percent of the patients receiving appropriate care. For a breakout of patient discharge dispositions, including death, see appendix K.

As the following table indicates, the death rate among patients receiving poor quality care varied by type of hospital with higher rates in small, rural, profit and nonteaching hospitals.

CHARACTERISTIC	TOTAL DEATHS (N=422)	# QC DEATHS (N=76)	PERCENT
Small	127	32	25.2
Medium	148	27	18.2
Large	167	17	10.2
Rural	157	44	28.0
Urban	285	32	11.2
Profit	24	6	25.0
Nonprofit	418	70	16.7
Teaching	125	12	9.6
Nonteaching	317	64	20.2

Patients receiving poor quality care were four times as likely to develop nosocomial infections. Overall, 21.3 percent of the patients receiving poor quality care contracted nosocomial infections (i.e., infections acquired during a hospital stay), compared with 4.8 percent of the patients receiving appropriate care. As the following table indicates, there was a strong relationship between poor quality care and nosocomial infections, regardless of hospital characteristic.

**COMPARISON BY TYPE OF HOSPITAL
PATIENTS RECEIVING GOOD AND POOR QUALITY CARE
CONTRACTING NOSOCOMIAL INFECTIONS**

CHARACTERISTICS	POOR CARE		GOOD CARE	
	(N=464)	% NOSOC. INFEC.	(N=6,586)	% NOSOC. INFEC.
Small	259	13.8	2,017	3.3
Medium	122	21.4	2,266	4.7
Large	83	32.7	2,303	6.5
Rural	285	14.4	2,391	3.6
Urban	179	27.0	4,195	5.6
Profit	39	9.8	650	4.8
Nonprofit	425	22.0	5,936	4.8
Teaching	55	37.5	1,770	7.2
Nonteaching	409	17.3	4,816	4.0

Patients receiving poor quality care were twice as likely to be admitted to hospitals unnecessarily. Of those patients receiving poor quality care, 19 percent were unnecessary admissions, compared with 9.9 percent of the patients receiving appropriate care. Twelve percent of the 740 unnecessary admissions in the study sample received poor quality care.

Patients receiving poor quality care were more than 76 times as likely to be prematurely discharged from hospitals. Of those patients receiving poor quality care, 13.4 percent also were discharged prematurely from hospitals, compared with only 0.18 percent of the patients receiving appropriate care. Eighty-four percent of the 74 premature discharges in the study sample had quality of care problems.

OLDER PATIENTS WERE AT INCREASED RISK OF RECEIVING POOR QUALITY CARE DURING THEIR HOSPITAL STAYS

Patients receiving poor quality care were, on the average, 3 years older (76.8 years) than patients receiving appropriate care (73.8 years). There was a strong relationship between age and poor quality care, regardless of hospital variable (see appendix L).

An age comparison of patients who died in hospitals revealed a similar trend. The average age of deceased patients who received poor care was 80.1 years; the average age of deceased patients who received good care was 77.6 years (a difference of 2.5 years). This trend was also true across most hospital variables (see appendix L).

TARGETING DRGS IDENTIFIED CASES OF POOR QUALITY CARE

At the time of our review, there were 468 possible DRGs; 352 (75.2 percent) occurred at least once in the study sample. Cases of poor quality care occurred in approximately one-third of these DRGs. The OIG staff analyzed poor quality care cases which occurred in the 10 most frequent DRGs in the full patient sample, as well as DRGs which had (a) the highest numbers of poor quality care cases (at least 10 cases) and (b) high rates (poor quality care occurred at least 10 percent of the time). Analysis was based on DRGs assigned by the fiscal intermediary.

Poor Quality Care Among the Most Common DRGs in the Patient Sample. Among the 10 DRGs which occurred most frequently in the sample, poor quality care cases were overrepresented. Collectively, these 10 DRGs represent 41.6 percent of patients receiving poor quality care, compared with 31.3 percent of patients receiving good quality care. Appendix M lists a breakout of poor and good quality care cases among the most frequent DRGs.

DRGs With the Highest Numbers of Poor Quality Care Cases. The following table lists the 12 DRGs which had the highest absolute numbers of poor quality care cases. These DRGs closely mirror the most common DRGs (all 12 were among the 20 DRGs which occurred most frequently in the sample). For example, DRG 89 (simple pneumonia and pleurisy, patients over age 69) had the highest number of poor quality care cases and was the second most common DRG to occur in the study sample.

All DRGs fall into 1 of 24 major diagnostic categories (MDCs). MDCs are classifications of medical problems by organ system. There was at least 1 case of poor quality care in 21 of the MDCs, but half of the poor quality care cases fell into 3 categories: (a) circulatory system, (b) respiratory system and (c) digestive system. A breakout of poor quality care cases by MDC classification appears in appendix N.

DRGS WITH HIGHEST NUMBERS OF POOR QUALITY CARE (QC) CASES

DRG	DESCRIPTION	MDC	# QC CASES	# TOTAL SAMPLE	% QC CASES
89	SIMPLE PNEUMONIA AND PLEURISY, PATIENTS OVER AGE 69	4	35	351	10.0
127	HEART FAILURE AND SHOCK	5	32	388	8.2
14	STROKES, EXCEPT TRANSIENT ISCHEMIC ATTACKS	1	27	217	12.4
182	DIGESTIVE DISORDERS, PATIENTS OVER AGE 69	6	23	245	9.4
15	TRANSIENT ISCHEMIC ATTACKS	1	17	146	11.6
140	CHEST PAIN	5	16	261	6.1
296	NUTRITIONAL AND MISCELLANEOUS METABOLIC DISORDERS, PATIENTS OVER AGE 69	10	14	173	8.1
320	KIDNEY AND URINARY TRACT INFECTIONS, PATIENTS OVER AGE 69	11	12	107	11.2
96	BRONCHITIS AND ASTHMA, PATIENTS OVER AGE 69	4	11	179	6.1
141	FAINTING, PATIENTS OVER AGE 69	5	10	80	12.5
87	PULMONARY EDEMA AND RESPIRATORY FAILURE	4	10	91	11.0
174	GASTROINTESTINAL HEMORRHAGE, PATIENTS OVER AGE 69	6	10	113	8.8

DRGs with the Highest Rates of Poor Quality Care Cases. The following table describes 15 DRGs where at least 10 percent of the cases reflected poor quality care. (The table excludes DRGs which occurred less than 30 times in the full sample.) Although many of these DRGs had lower numbers of poor quality care cases than the DRGs listed in the preceding table, patients with these DRGs had the highest *likelihood* of receiving poor quality care. For example, DRG 416 (bacterial blood infections) had the highest rate of poor quality care cases (17.7 percent).

**DRGS WITH THE HIGHEST RATES OF POOR QUALITY CARE (QC) CASES
(N=464)**

DRG	DESCRIPTION	MDC	# Of QC Cases	# Total Sample	% QC Cases
416	BACTERIAL BLOOD INFECTIONS, PATIENTS OVER AGE 17	18	9	51	17.6
123	DEATHS BY HEART ATTACK	5	9	54	16.7
24	SEIZURE & HEADACHE, PATIENTS OVER AGE 69	1	7	44	15.9
172	DIGESTIVE MALIGNANCY, PATIENTS OVER AGE 69	6	5	37	13.5
316	KIDNEY FAILURE WITHOUT DIALYSIS	11	4	30	13.3
141	FAINING, PATIENTS OVER AGE 69	5	10	80	12.5
14	STROKES, EXCEPT TRANSIENT ISCHEMIC ATTACKS	1	27	217	12.4
144	HEART DISORDERS WITH COMPLICATIONS	5	4	33	12.1
132	ARTERIOSCLEROSIS, PATIENTS OVER AGE 69	5	5	42	11.9
15	TRANSIENT ISCHEMIC ATTACKS	1	17	146	11.6
320	KIDNEY & URINARY TRACT INFECTIONS, PATIENTS OVER AGE 69	11	12	107	11.2
180	GASTROINTESTINAL OBSTRUCTION, PATIENTS OVER AGE 69	6	6	54	11.1
87	PULMONARY EDEMA & RESPIRATORY FAILURE	4	10	91	11.0
134	HYPERTENSION	5	4	39	10.3
89	SIMPLE PNEUMONIA & PLEURISY, PATIENTS OVER AGE 69	4	35	351	10.0

Six DRGs appear in both tables, indicating they occurred frequently as poor quality care cases in terms of absolute numbers and also had high rates of poor quality care. These DRGs, representing 23.9 percent of the poor quality care cases, include:

- DRG 14 (strokes, except transient ischemic attacks)
- DRG 15 (transient ischemic attacks)
- DRG 87 (pulmonary edema and respiratory failure)
- DRG 89 (simple pneumonia and pleurisy, patients over age 69)
- DRG 141 (fainting, patients over age 69)
- DRG 320 (kidney and urinary tract infections, patients over age 69)

RECOMMENDATIONS

IMPROVE PRO IDENTIFICATION OF CASES INVOLVING PATIENTS RECEIVING POOR QUALITY CARE IN HOSPITALS

FINDING: The OIG found that 6.6 percent of the patients sampled in the National DRG Validation Study received poor quality care. Although the number of poor quality care cases identified by the PROs has increased substantially since they began using generic quality screens, recent data indicates that nationally they identified only about half as many cases (3.6 percent) as were found in the OIG study. The SuperPRO also found a much higher rate of poor quality care cases (9.1 percent). There continues to be wide variation in the identification of poor quality care cases among PROs and high discrepancy between the findings of the PROs and SuperPRO.

During the period of our review, PROs lacked authority to deny payment for poor quality care. They were granted this authority with the enactment of a COBRA 1985 provision. Regulations to implement this measure have not been issued.

Hospital and patient characteristics associated with poor quality care include:

- Small, rural and nonteaching hospitals had higher rates of poor quality care cases.
- Hospitals with the highest rates of poor quality patient care (20 percent or more of their sampled patient records) accounted for only 9 percent of the patients in the sample, but had 15 percent of all unnecessary admissions, 46 percent of premature discharges and 38 percent of the poor quality care cases.
- Patients receiving poor quality care were 3 times more likely to die, 4 times more likely to develop nosocomial infections, twice as likely to have been admitted unnecessarily to hospitals and 76 times more likely to have been discharged prematurely from hospitals.
- Most patients receiving substandard care had multiple quality problems. Patients with short hospital stays averaged approximately the same number of problems as patients with long hospital stays. Eighty percent of the reasons contributing to poor quality care involved the omission of necessary medical services.
- Patients receiving poor quality care were, on the average, 3 years older than patients receiving appropriate care.
- Six DRGs were associated frequently with poor quality care.

RECOMMENDATION: The HCFA should increase its efforts to identify and address poor quality care in hospitals by:

- issuing the regulations to implement the COBRA 1985 provision giving PROs authority to deny Medicare reimbursement for patients receiving substandard medical care,
- determining why the PROs identify a substantially lower rate of poor quality care cases than either the SuperPRO or the OIG,
- developing acceptable disagreement rates between the PROs and SuperPRO for identified cases of poor quality care,
- incorporating reconciliation of high disagreement rates into PRO performance evaluations for consideration in renewal of PRO contracts,
- analyzing quality review practices of PROs with low disagreement rates to identify exemplary models and best practices which could be used to assist other PROs and
- requiring that PROs continue to improve their identification and follow-up of cases associated with poor quality patient care to better target problem hospitals and physicians. Approaches might include focusing on (a) types of hospitals with high rates of patients receiving poor quality care, (b) DRGs which are frequently associated with poor quality care and (c) patients at highest risk of receiving poor quality care.

IMPACT: The OIG estimates that HCFA paid hospitals approximately \$1.2 billion in FY 1985 for patients with quality of care problems. This amount represents the maximum savings that could be achieved through implementation of regulations allowing PROs to deny the entire DRG payment for substandard patient care. Implementation of the regulations would place the burden of enforcing good quality care standards upon hospitals and physicians. We expect that the incidence of poor quality patient care would decrease as quality standards increase.

COMMENTS

The HCFA provided comments on our draft report. While HCFA agreed with, and has taken action on, most of our recommendations, it took issue primarily with the methodology we used to evaluate quality care, i.e., medical record review absent personalized discussion with attending physicians. We were aware of these concerns when we began this inspection and instructed the medical reviewers not to count as poor quality care any case where there was any doubt whatsoever. Thus, we tried to weight the review to factor in what would have occurred had we emulated a localized PRO review. (Appendix O contains HCFA's detailed written comments.)

The HCFA has taken the following actions which respond to our recommendations:

- The HCFA issued a Notice of Proposed Rulemaking (NPRM) to give PROs the authority to deny Medicare reimbursement for patients who received substandard medical care. This regulation is scheduled to become final in August 1989. The NPRM incorporates an estimated PRO denial rate of 1 percent, resulting in savings of \$550 million over a 5-year period.
- The HCFA has implemented a positive procedural change to determine why the PROs identify a substantially lower rate of poor quality care cases than either the SuperPRO or the OIG. Specifically, HCFA has expanded its regional staff expertise and has implemented a re-review process to analyze and act upon the differences between the PRO and SuperPRO findings.
- The HCFA has incorporated criteria into the PRO review protocol to determine acceptable disagreement rates between the PROs and SuperPRO for identified cases of poor quality care.
- The HCFA now considers PRO/SuperPRO disagreement rates as documentation when deciding whether to renew PRO contracts.

The OIG continues to believe that the rates of poor quality care are unacceptably high and hopes that HCFA's new PRO review protocol will result in the undisputed identification and remedy of poor quality cases. As part of our continuing concern about the quality of patient care, we recently issued a final report entitled "National DRG Validation Study: Short Hospitalizations" and currently are studying surgeries as a predictor of poor quality care.

COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES: BED SIZE EFFECT (N=152) (Analysis of 464 Poor Quality Care Cases Only)																		
Hospitals with QC Cases	<100 Beds (N=69)						100-299 Beds (N=46)						300+ Beds (N=44)					
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average		0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average		0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	Over- All Average
N=	N/A	34	19	16			N/A	27	15	4			N/A	36	7	1		
Av. Pt. Age	N/A	79.09	79.33	76.98	78.69		N/A	76.94	75.49	73.22	76.15		N/A	74.83	73.81	73.75	74.65	76.83
Av. Length. Stay	N/A	6.00	5.49	5.61	5.77		N/A	9.29	6.08	7.77	8.11		N/A	13.31	7.83	8.87	12.35	8.29
% Rural	N/A	73.53	84.21	93.75	81.16		N/A	25.93	26.67	75.00	30.43		N/A	5.56	28.57	0.00	9.09	46.54
% Profit	N/A	14.71	5.26	6.25	10.14		N/A	14.81	26.67	0.00	17.39		N/A	5.56	0.00	0.00	4.55	10.69
% Teaching	N/A	5.88	0.00	0.00	2.90		N/A	22.22	13.33	0.00	17.39		N/A	52.78	14.28	100.00	47.73	19.50
% Cases Nosoc. Infe.	N/A	16.18	15.26	6.44	13.77		N/A	25.93	14.89	15.28	21.40		N/A	36.11	18.09	12.50	32.71	21.27
% Cases Unrec. Admits	N/A	17.65	12.46	24.74	17.76		N/A	11.11	18.33	18.40	14.10		N/A	18.06	31.43	0.00	19.77	17.26
% Cases Inapp. Doc.	N/A	35.29	46.58	48.20	41.29		N/A	29.63	36.33	38.54	32.59		N/A	51.39	64.76	50.00	53.48	42.15

COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES: BED SIZE EFFECT (N=239)																
(Analysis of 6,586 Good Quality Care Cases Only)																
Hospitals with QC Cases	<100 Beds (N=79)					100-299 Beds (N=80)					300+ Beds (N=80)					Over-All Average
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	
N=	10	34	19	16		34	27	15	4		36	36	7	1		
Av. Pt. Age	75.37	75.11	76.23	76.51	75.69	73.96	73.53	73.15	74.45	73.69	72.02	72.04	72.51	64.55	71.98	
Av. Length Stay	6.52	6.21	5.49	5.61	5.95	7.72	7.02	7.94	5.66	7.42	8.32	8.25	8.14	12.69	8.32	
% Rural	70.00	73.53	84.21	93.75	79.75	29.41	25.93	26.67	75.00	30.00	2.78	5.56	28.57	0.00	6.25	
% Profit	0.00	14.71	5.26	6.25	8.86	17.65	14.81	26.67	0.00	17.50	0.00	5.56	0.00	0.00	2.50	
% Teaching	0.00	5.88	0.00	0.00	2.53	20.59	22.22	13.33	0.00	18.75	63.89	52.78	14.28	100.00	55.00	
% Cases Nosoc. Infec.	1.68	3.86	3.59	2.60	3.27	4.22	5.83	4.31	3.12	4.72	7.81	5.43	5.46	4.55	6.49	
% Cases Unnec. Admits	9.19	10.74	10.59	16.96	11.77	8.24	8.52	14.77	14.31	9.86	8.45	8.54	10.22	4.55	8.60	
% Cases Inapp. Doc.	37.86	40.13	36.95	43.87	39.84	41.70	34.44	43.69	47.07	39.89	37.04	37.99	50.03	27.27	38.48	

APPENDIX B

COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES: RURAL/URBAN LOCATION STATUS (N=239) (Analysis of all 7,050 Cases)												
Hospitals with QC Cases	Rural (N=92)					Urban (N=147)					Over- All Average	
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average		
N=	18	34	22	18		62	63	19	3			
Av. Pt. Age	75.80	75.68	75.88	76.23	75.86	72.53	72.58	73.60	72.23	72.68	73.90	
Av. Lngth. Stay	6.53	6.46	5.95	5.65	6.19	8.22	7.73	7.62	8.02	7.93	7.26	
% Profit	0.00	8.82	9.09	0.00	5.43	9.68	12.70	15.79	33.33	12.24	9.62	
% Teaching	0.00	0.00	0.00	0.00	0.00	48.39	42.86	15.79	33.33	41.50	25.52	
% <100 Beds	38.89	75.53	72.73	83.33	68.48	4.84	14.29	15.79	33.33	10.88	33.05	
% 100-299 Beds	55.56	20.59	18.18	16.67	26.09	38.71	31.75	57.89	33.33	38.10	33.47	
% 300+ Beds	5.56	5.88	9.09	0.00	5.43	56.45	53.97	26.32	33.33	51.10	33.47	
% Cases Nosoc. Infec.	2.41	4.99	5.46	4.44	4.49	6.42	6.49	5.61	2.22	6.26	5.58	
% Cases Unnec. Admits	8.52	9.86	10.51	17.96	11.34	8.43	9.57	15.41	17.78	9.98	10.50	
% Cases Inapp. Doc.	37.68	39.80	36.66	44.07	39.47	39.54	36.73	48.25	46.66	39.61	39.56	

**COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES:
RURAL/URBAN LOCATION STATUS (N=159)
(Analysis of 464 Poor Quality Care Cases Only)**

Hospitals with QC Cases	Rural (N=74)					Urban (N=85)					Over-All Average
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	
N=	N/A	34	22	18		N/A	63	19	3		
Av. Pt. Age	N/A	79.40	78.92	75.99	79.43	N/A	75.57	74.76	76.63	75.43	76.82
Av. Lngth. Stay	N/A	5.25	5.49	6.01	5.51	N/A	12.00	6.83	8.14	10.71	8.29
% Profit	N/A	8.82	9.09	0.00	6.76	N/A	12.70	15.79	33.33	14.12	10.69
% Teaching	N/A	0.00	0.00	0.00	0.00	N/A	42.86	15.79	33.33	36.47	19.50
% <100 Beds	N/A	75.53	72.73	83.33	75.68	N/A	14.29	15.79	33.33	15.29	43.40
% 100-299 Beds	N/A	20.59	18.18	16.67	18.92	N/A	31.75	57.89	33.33	37.65	28.93
% 300+ Beds	N/A	5.88	9.09	0.00	5.41	N/A	53.97	26.32	33.33	47.06	27.67
% Cases Nosoc. Infec.	N/A	14.71	8.56	8.76	14.41	N/A	32.54	12.19	4.17	26.99	21.13
% Cases Unnec. Admits	N/A	13.24	11.89	24.27	15.52	N/A	17.46	24.74	26.39	19.40	17.60
% Cases Inapp. Doc.	N/A	36.76	39.09	48.50	40.31	N/A	41.27	53.86	51.39	44.44	45.52

**COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES:
RURAL/URBAN LOCATION STATUS (N=239)
(Analysis of 6,586 Good Quality Care Cases Only)**

Hospitals with QC Cases	Rural (N=92)					Urban (N=147)					Over- All Average
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	
N=	18	34	22	18		62	63	19	3		
Av. Pt. Age	75.80	75.56	75.44	76.37	75.74	72.53	72.44	73.34	70.61	72.55	73.78
Av. Lngth. Stay	6.53	6.53	6.04	5.62	6.23	8.22	7.55	7.77	8.01	7.87	7.24
% Profit	0.00	8.82	9.09	0.00	5.43	9.68	12.70	15.79	33.33	12.24	9.62
% Teaching	0.00	0.00	0.00	0.00	0.00	48.39	42.86	15.79	33.33	41.50	25.52
% <100 Beds	38.89	75.53	72.73	83.33	68.48	4.89	14.29	15.79	33.33	10.88	33.05
% 100-299 Beds	55.56	20.59	18.18	16.67	26.09	38.71	31.75	57.89	33.33	38.10	33.47
% 300+ Beds	5.56	5.88	9.09	0.00	5.43	56.45	53.97	26.32	33.33	51.10	33.47
% Cases Nosoc. Infec.	2.41	4.45	3.64	3.01	3.57	6.42	5.28	4.79	1.52	5.62	4.83
% Cases Unnec. Admits	8.52	9.63	10.46	15.83	10.83	8.43	9.13	13.91	16.04	9.59	10.07
% Cases Inapp. Doc.	37.68	39.97	36.37	43.40	39.33	39.54	36.55	47.75	45.45	39.44	39.40

APPENDIX C

COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES:												
PROFIT/NON-PROFIT STATUS (N=239)												
(Analysis of all 7,050 Cases)												
Hospitals with QC Cases	Non-Profit (N=216)					Profit (N=23)					Over-All Average	
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average		
N=	74	86	36	20		6	11	5	1			
Av. Pt. Age	73.27	73.87	74.99	75.79	74.03	73.23	72.12	73.62	72.70	72.76	73.90	
Av. Lngth. Stay	7.89	7.34	6.57	5.99	7.27	7.22	6.91	7.83	6.03	7.15	7.26	
% Rural	24.32	36.05	55.56	90.00	40.28	0.00	27.27	40.00	0.00	21.74	38.49	
% Teaching	40.54	30.23	8.33	5.00	27.78	0.00	9.09	0.00	0.00	4.35	25.52	
% <100 Beds	13.51	33.72	50.00	75.00	33.33	0.00	45.45	20.00	100.00	30.43	33.05	
% 100-299 Beds	37.84	26.74	30.56	20.00	30.56	100.00	36.36	80.00	0.00	60.87	33.47	
% 300+ Beds	48.65	39.53	19.44	5.00	36.11	0.00	18.18	0.00	0.00	8.70	33.47	
% Cases Nosoc. Infec.	5.51	6.30	4.82	4.33	5.37	5.56	3.33	10.69	0.00	5.60	5.58	
% Cases Unnec. Admits	8.46	8.78	11.80	17.33	9.97	8.33	16.67	18.78	30.00	15.53	10.50	
% Cases Inapp. Doc.	38.87	36.91	41.54	44.00	39.01	42.22	44.85	45.59	53.33	44.69	39.56	

**COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES:
 PROFIT/NON-PROFIT STATUS (N=159)
 (Analysis of 464 Poor Quality Care Cases Only)**

Hospitals with QC Cases	Non-Profit (N=142)					Profit (N=17)					Over-All Average
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	
N=	N/A	86	36	20		N/A	11	5	1		
Av. Pt. Age	N/A	76.77	77.04	76.01	76.74	N/A	78.00	76.60	77.50	77.56	76.82
Av. Lngth. Stay	N/A	9.98	5.89	6.30	8.42	N/A	6.95	7.65	6.67	7.14	8.29
% Rural	N/A	36.05	55.56	90.00	48.59	N/A	27.27	40.00	0.00	29.41	46.54
% Teaching	N/A	30.23	8.33	5.00	21.13	N/A	9.09	0.00	0.00	5.88	19.50
% <100 Beds	N/A	33.72	50.00	75.00	43.66	N/A	45.45	20.00	100.00	41.18	43.40
% 100-299 Beds	N/A	26.74	30.56	20.00	26.76	N/A	36.36	80.00	0.00	47.06	28.93
% 300+ Beds	N/A	39.53	19.44	5.00	29.58	N/A	18.18	0.00	0.00	11.76	27.67
% Cases Nosoc. Infec.	N/A	28.49	14.12	8.51	22.03	N/A	9.10	26.33	0.00	9.80	21.13
% Cases Unnec. Admits	N/A	15.12	20.32	22.47	17.47	N/A	22.73	0.00	66.67	18.63	17.60
% Cases Inapp. Doc.	N/A	37.79	47.68	48.03	41.74	N/A	54.55	33.33	66.67	49.02	42.52

**COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES:
PROFIT/NON-PROFIT STATUS (N=239)
(Analysis of 6,586 Good Quality Care Cases Only)**

Hospitals with QC Cases	Non-Profit (N=216)					Profit (N=23)					Over-All Average
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	
N=	74	86	36	20		6	11	5	1		
Av. Pt. Age	73.27	73.74	74.67	75.75	73.92	73.23	71.89	73.04	71.50	72.47	73.78
Av. Lngth. Stay	7.89	7.23	6.69	5.96	7.25	7.22	6.92	7.89	5.88	7.17	7.24
% Rural	26.32	36.05	55.56	90.00	40.28	0.00	27.27	40.00	0.00	21.74	38.49
% Teaching	40.54	30.23	8.33	5.00	27.78	0.00	9.09	0.00	0.00	4.35	25.52
% <100 Beds	13.51	33.72	50.00	75.00	33.33	0.00	45.45	20.00	100.00	30.43	33.05
% 100-299 Beds	37.84	26.74	30.56	20.00	30.56	100.00	36.36	80.00	0.00	60.87	33.47
% 300+ Beds	48.65	39.53	19.44	5.00	36.11	0.00	18.18	0.00	0.00	8.70	33.47
% Cases Nosoc. Infec.	5.51	5.23	3.59	2.93	4.84	5.56	3.16	8.38	0.00	4.78	4.83
% Cases Unnec. Admits	8.46	8.40	10.72	15.62	9.47	8.33	16.41	21.67	20.83	15.64	10.07
% Cases Inapp. Doc.	38.87	36.92	40.77	43.37	38.83	42.22	44.30	47.93	50.00	44.79	39.40

APPENDIX D

COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES: TEACHING/MON-TEACHING STATUS (N=239) (Analysis of ALL 7,050 Cases)												
Hospitals with QC Cases	Non-Teaching (N=178)					Teaching (N=61)					Over- All Average	
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average		
N=	50	70	38	20		30	27	3	1			
Av. Pt. Age	74.07	74.56	74.87	76.08	74.66	71.92	71.34	74.18	67.00	71.70	73.90	
Av. Lngth. Stay	7.34	6.96	6.59	5.71	6.85	8.66	8.12	8.47	11.67	8.46	7.26	
% Rural	36.00	48.57	57.89	90.00	51.69	0.00	0.00	0.00	0.00	0.00	38.49	
% Profit	12.00	14.29	13.16	5.00	12.36	0.00	3.70	0.00	0.00	1.64	9.62	
% <100 Beds	20.00	45.71	50.00	80.00	43.26	0.00	7.41	0.00	0.00	3.28	33.05	
% 100-299 Beds	54.00	30.00	34.21	20.00	36.52	23.33	22.22	66.67	0.00	24.59	33.47	
% 300+ Beds	26.00	24.29	15.79	0.00	20.22	76.66	70.37	33.33	100.00	72.13	33.47	
% Cases Nosoc. Infec.	3.94	5.11	5.71	4.00	4.78	8.15	8.18	3.33	6.67	7.90	5.58	
% Cases Unnec. Admits	8.97	10.50	13.21	18.67	11.57	7.58	7.54	5.55	3.33	7.40	10.50	
% Cases Inapp. Doc.	41.66	39.42	42.46	45.00	41.33	34.89	33.62	66.67	33.00	34.39	39.56	

**COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES:
TEACHING/NON-TEACHING STATUS (N=159)
(Analysis of 464 Poor Quality Care Cases Only)**

Hospitals with QC Cases	Non-Teaching (N=128)					Teaching (N=31)					Over-All Average
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	
N=	N/A	70	38	20		N/A	27	3	1		
Av. Pt. Age	N/A	77.57	77.61	76.19	77.35	N/A	75.33	69.11	73.75	74.68	76.83
Av. Lngth. Stay	N/A	7.69	5.96	6.07	6.93	N/A	14.67	7.93	8.88	13.82	8.28
% Rural	N/A	48.57	57.89	90.00	57.81	N/A	0.00	0.00	0.00	0.00	46.54
% Profit	N/A	14.29	13.16	5.00	12.50	N/A	3.70	0.00	0.00	3.23	10.69
% <100 Beds	N/A	45.71	50.00	80.00	52.34	N/A	7.41	0.00	0.00	6.45	43.40
% 100-299 Beds	N/A	30.00	34.21	20.00	29.69	N/A	22.22	66.67	0.00	25.81	28.93
% 300+ Beds	N/A	24.29	15.79	0.00	17.96	N/A	70.37	33.33	100.00	67.74	27.67
% Cases Nosoc. Infec.	N/A	20.00	16.84	8.30	17.31	N/A	42.59	0.00	12.50	37.50	21.27
% Cases Unnec. Admits	N/A	19.29	18.38	23.40	19.63	N/A	7.41	11.11	0.00	7.53	15.98
% Cases Inapp. Doc.	N/A	40.00	46.05	46.17	42.73	N/A	38.89	44.44	50.00	39.78	42.15

**COMPARISON OF HOSPITALS BY NUMBER OF POOR QUALITY CARE (QC) CASES:
TEACHING/NON-TEACHING STATUS (N=239)
(Analysis of 6,586 Good Quality Care Cases Only)**

Hospitals with QC Cases	Non-Teaching (N=178)					Teaching (N=61)					Over-All Average
	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	0 QC Cases	1 - 2 QC Cases	3 - 5 QC Cases	6 - 17 QC Cases	Average	
N=	50	70	38	20		30	27	3	1		
Av. Pt. Age	74.07	74.45	74.45	76.10	74.53	71.92	71.15	74.67	64.55	71.59	73.78
Av. Lngth. Stay	7.34	6.92	6.70	5.62	6.85	8.66	7.89	8.54	12.68	8.38	7.24
% Rural	36.00	48.57	57.89	90.00	51.69	0.00	0.00	0.00	0.00	0.00	38.49
% Profit	12.00	14.29	13.16	5.00	12.36	0.00	3.70	0.00	0.00	1.64	9.62
% <100 Beds	20.00	45.71	50.00	80.00	43.26	0.00	7.41	0.00	0.00	3.28	33.05
% 100-299 Beds	54.00	30.00	34.21	20.00	36.52	23.33	22.22	66.67	0.00	24.59	33.47
% 300+ Beds	26.00	24.29	15.79	0.00	20.22	76.66	70.37	33.33	100.00	72.13	33.47
% Cases Nosoc. Infec.	3.94	4.37	4.20	2.71	4.02	8.15	6.60	3.80	4.55	7.19	4.83
% Cases Unnec. Admits	8.97	9.99	12.61	16.43	10.99	7.58	7.52	5.04	4.55	7.38	10.07
% Cases Inapp. Doc.	41.66	39.43	42.02	44.51	41.18	34.89	33.41	36.89	27.27	34.21	39.40

APPENDIX E

SAMPLING AND METHODOLOGY

The National DRG Validation Study used a stratified two-stage sampling design based on hospitals. The sample divided the population of hospitals meeting the study's eligibility criteria (outlined below) into three groups based on bed size: less than 100 beds, 100 to 299 beds, 300 or more beds.

The first stage used simple random sampling without replacement to select 80 hospitals within each group for a total sample size of 240 hospitals. First, it included only acute care, short-stay facilities. This test also excluded specialty institutions such as children's hospitals. Second, as of October 1, 1983, a waiver provision exempted New York, New Jersey, Massachusetts and Maryland from PPS. Therefore, the sample excluded facilities in these States. Third, each facility had to have contributed data to the construction of the initial relative weights assigned to DRG categories at the start of PPS. These initial relative weights derived from a 20 percent sample of Medicare discharges from facilities participating in the program in 1981. To be included in the sampling frame, a facility had to both (a) contribute discharges to the construction of the initial relative weights and (b) participate as a provider at the beginning of PPS, October 1, 1983.

The effective universe of hospitals available for study numbered 4,913. Of the initial sample of 240 hospitals, 1 facility terminated its Medicare eligibility between the sampling time frame and the actual collection of medical records. The first-stage sample therefore included 239 (4.9 percent) randomly selected, short term, acute care facilities eligible under the Medicare program since at least 1981 and not located in a waiver State.

The second stage of the design employed systematic random sampling to select 30 Medicare discharges from each of the 239 hospitals. The HCFA's Bureau of Data Management and Strategy supplied a list of all final bills they received from the fiscal intermediaries through April 30, 1985. Each bill represented one Part A Medicare discharge for the time period October 1, 1984 to March 31, 1985. If a facility had fewer than 30 discharges during the applicable period, all available Medicare discharges were selected.

Record Collection

In mid-1986, the OIG sent registered letters to the selected hospitals requesting copies of the complete medical record for each of the sample discharges. Administrative subpoenas compelled the participation of a few institutions. Of the 222,396 records available from the 239 hospitals, the sample design requested 7,076 (3.2 percent). The study ultimately received and reviewed 7,050 (99.6 percent) medical records. The hospitals could not locate the remaining 26 records.

Medical Review

Registered nurses initially screened the medical records for incidents relating to poor quality care. If problems were found, the medical record was referred to board-certified physicians with extensive experience in peer review. Upon confirming a case where a patient received poor quality care, the physician dictated a narrative summary describing the nature of the problems and citing supporting evidence from the patient chart. This methodology paralleled the process used in local peer review and by the PROs. Reviewers were instructed to ignore marginal problems or cases involving honest differences in medical judgment about appropriate case management.

Medical experts reviewed records presenting specialty care issues. Physician panels convened to decide difficult cases. Most of the reviewing physicians had recent experience with patient care. An OIG physician reviewed each case, confirming the conclusions of the medical reviewers.

Analysis

We compared characteristics of 464 patients who received poor quality care with 6,586 patients receiving appropriate care. Variables selected for analysis were descriptive (e.g., age), furnished insight into financial considerations (e.g., average length of stay) or indicative of the quality of patient care. Comparisons used averages and percentages weighted to adjust for different sizes of groupings (e.g., patients receiving poor and good care).

Analysis of poor quality care in different types of hospitals followed HCFA's practices for classifying hospitals by demographic characteristics—urban/ rural location, teaching status, and bed size. The additional classification category, profit/nonprofit status, was derived from the American Hospital Association's *Guide to the Health Care Field*.

A hospital was considered to be:

- urban if it was located within a standard metropolitan area as defined by the Bureau of the Census,
- teaching if it had an accredited residency program,
- for-profit as designated by the American Hospital Association,
- small if the HCFA-certified bed size was less than 100 beds,
- medium if the HCFA-certified bed size was between 100 and 299 beds,
- large if the HCFA-certified bed size was more than 299 beds.

These classes of hospitals became a central basis for analysis of selected variables, again using weighted averages and percentages. To the basic classifications of urban/rural location, teaching/nonteaching status, profit/ nonprofit status and small/ medium/large bed size, we added a further division—the frequency of poor quality care cases in hospitals. This permitted comparisons, for example, between small hospitals with no poor quality care cases and small hospitals with six or more poor quality care cases.

Fiscal Projections

- First, projections were made using the actual dollars paid for the 7,050 Medicare patients in the sample (derived from HCFA PATBILL files). We multiplied the number of patient discharges in each bed size category by the average cost per discharge in bed size categories for a total in rounded figures. Calculations show the total dollars paid to sampled hospitals in the three bed size categories. Small hospitals, for example, were paid \$4.98 million for 2,276 discharges at an average cost of \$2,186 per patient.

All admissions (N=7,050):	Small	Medium	Large
# patient discharges	2,276	2,388	2,386
Average cost/discharge	\$2,186	\$3,222	\$3,999
Total dollars (in millions)	\$4.98	\$7.69	\$9.54

- Next, using the same mathematical approach, projections were made for the costs associated with poor quality care cases by the three bed size categories. For example, small hospitals were paid \$490,000 for 259 patients receiving poor quality care at an average cost of \$1,908 per patient.

Poor quality care cases (N=464):	Small	Medium	Large
# patient discharges	259	122	83
Average cost/discharge	\$1,908	\$2,850	\$3,540
Total dollars (in millions)	\$.49	\$.35	\$.29

- Dividing the dollars paid to hospitals for patients receiving poor quality care by the dollars paid for all admissions in the sample by bed size category yields the percentage of dollars associated with poor quality care.

	Small	Medium	Large
Percentage of dollars for poor quality care cases	9.8	4.6	3.0

- We adjusted for the higher volume of discharges that occur in large hospitals, using FY 1985 data. Summing the projections for each bed size category yields a total projected amount of approximately \$1.2 billion paid by the Medicare program for poor quality care.

PPS admissions (FY 1985)	Small	Medium	Large
# discharges (in millions)	1.52	3.11	3.65
Multiplied by average cost/discharge	x <u>\$2.186</u>	x <u>\$3.222</u>	x <u>\$3.999</u>
Yields dollars paid (in millions)	\$3,323	\$10,020	\$14,596
Times percentage of sample dollars for poor quality care cases	x <u>9.8</u>	x <u>4.6</u>	x <u>3.0</u>
Yields dollars for poor quality care (in millions)	\$325.6	\$460.9	\$437.9
Total dollars (in millions) spent on poor quality care:			\$1,224.4

APPENDIX F

DISTRIBUTION OF HOSPITALS BY NUMBER OF
POOR QUALITY CARE (OC) CASES (N=239)

<u># OC Cases</u>	<u># Hospitals</u>	<u>Percent</u>	
0	80	33.47	
1	59	24.69	
2	38	15.90	
3	21	8.79	
4	11	4.60	
5	9	3.77	
6	6	2.51	
7	3	1.26	
8	4	1.67	
9	4	1.67	
11	1	.42	
12	1	.42	
13	1	.42	
<u>16</u>	<u>1</u>	<u>.42</u>	
Totals	464	239	100.00

APPENDIX G

<u>CHARACTERISTICS OF HOSPITALS WITH 6+ POOR QUALITY CARE (QC) CASES (N=21)</u>										
STATE	FEDERAL REGION	# ADMITS	# QCs	% QCs	# UNNECESSARY ADMITS	# PREMATURE DISCHARGES	BED SIZE	RURAL/ URBAN	TEACHING/ NONTEACHING	PROFIT/ NONPROFIT
AL	4	30	16	53.3	2	4	S	R	NT	NP
GA	4	30	13	43.3	5	3	S	R	NT	NP
MS	4	30	12	40.0	3	6	S	R	NT	NP
TX	6	30	11	36.7	7	4	S	R	NT	NP
AR	6	30	9	30.0	3	1	M	R	NT	NP
GA	4	30	9	30.0	3	2	S	R	NT	NP
MO	7	30	9	30.0	4	0	S	R	NT	NP
TX	6	30	9	30.0	12	3	S	R	NT	NP
LA	6	30	8	26.7	1	0	L	U	T	NP
MN	5	30	8	26.7	1	2	S	R	NT	NP
TX	6	30	8	26.7	6	1	M	U	NT	NP
WI	5	30	8	26.7	6	0	S	R	NT	NP
AL	4	30	7	23.3	6	0	S	R	NT	NP
ID	10	30	7	23.3	11	1	S	R	NT	NP
IL	5	30	7	23.3	15	1	S	R	NT	NP
GA	4	30	6	20.0	7	0	M	R	NT	NP
GA	4	30	6	20.0	0	1	S	R	NT	NP
GA	4	30	6	20.0	0	0	S	R	NT	NP
LA	6	30	6	20.0	10	2	S	R	NT	NP
TX	6	30	6	20.0	9	1	S	U	NT	P
WI	5	30	6	20.0	2	2	M	R	NT	NP
TOTAL ¹ (%)		630	177 (38.2)		113 (15.3)	34 (46.0)				

¹ PERCENTAGES ARE BASED ON THE FACT THAT THERE WERE 464 POOR QUALITY CARE CASES, 740 UNNECESSARY ADMISSIONS AND 74 PREMATURE DISCHARGES IN THE SAMPLE OF 7,050 PATIENTS.

APPENDIX H

DISTRIBUTION OF PATIENTS BY NUMBERS OF
QUALITY CARE (OC) PROBLEMS
(1331 Problems/464 Patients)

<u># OC Problems</u>	<u># Patients</u>	<u>Percent</u>
1	115	24.78
2	127	27.37
3	98	21.12
4	51	10.99
5	37	7.97
6	14	3.02
7	8	1.72
8	4	.86
9	4	.86
10	2	.43
11	2	.43
13	1	.22
16	<u>1</u>	<u>.22</u>
Totals	464	100.00

APPENDIX I

COMPARISON BY TYPE OF HOSPITAL
AVERAGE LENGTHS OF STAY (ALOS)
Patients Receiving Good and Poor Quality Care

CHARACTERISTICS	POOR CARE (N=464)		GOOD CARE (N=6,586)	
	N	ALOS	N	ALOS
Small	259	5.47	2,017	5.90
Medium	122	7.52	2,266	7.43
Large	83	10.84	2,303	8.31
Rural	285	5.52	2,391	7.82
Urban	179	9.28	4,195	6.30
Profit	39	7.00	650	7.16
Nonprofit	425	6.97	5,936	7.28
Teaching	55	11.55	1,770	8.37
Nonteaching	409	6.35	4,816	6.87

APPENDIX J

<u>REASONS FOR QUALITY OF CARE PROBLEMS (N=1331)</u>			
<u>REASON</u>		<u># PROBLEMS</u>	<u># PERCENT</u>
<u>Necessary Care Omitted</u>			
• Services/follow-up not ordered	794		
• Services ordered, but:			
• inadequate/incomplete	110		
• not provided	64	→ 1,058	79.49
• contraindicated	51		
• not provided in time to be useful	39		
<u>Complication of Care</u>			
• Incorrect services	86		
• Unnecessary complications	69	→ 155	11.65
<u>Unnecessary Care Provided</u>			
• Ordered services unnecessary	62		
• Unordered services provided	1	→ 63	4.73
<u>Inadequate Documentation</u>		→ 55	4.13
TOTALS		1,331	100.00

APPENDIX K

DISCHARGE DISPOSITION Patients Receiving Good and Poor Quality Care (N=7,050)

TYPE OF DISCHARGE	# PATIENTS	# POOR CARE CASES	%	# GOOD CARE CASES	%
Home	5,076	264	56.90	4,812	73.06
Died	442	76	16.38	366	5.56
Intermed. Care Fac.	670	70	15.09	600	9.11
Short-term Hosp.	158	18	3.88	140	2.13
Home Health Orders	390	15	3.23	375	5.69
Skilled Nurs. Fac.	131	9	1.94	122	1.85
Other Institution	119	5	1.08	114	1.73
Other	64	7	1.08	57	1.00
Totals	7,050	464	100.00	6,586	100.00

APPENDIX L

COMPARISON BY TYPE OF HOSPITAL
AVERAGE AGE OF PATIENTS RECEIVING
POOR AND GOOD QUALITY CARE

CHARACTERISTICS	POOR CARE (N=464)		GOOD CARE (N=6,586)		DIFFERENCE (YEARS)
	N	AV. AGE	N	AV. AGE	
Small	259	78.7	2,017	75.7	3.0
Medium	122	76.2	2,266	73.7	2.5
Large	83	74.7	2,303	72.0	2.7
Rural	285	78.4	2,391	75.7	2.7
Urban	179	75.4	4,195	72.6	2.8
Profit	39	77.6	650	72.5	5.1
Nonprofit	425	76.7	5,936	73.9	2.8
Teaching	55	74.7	1,770	71.6	3.1
Nonteaching	409	77.4	4,816	74.5	2.9

COMPARISON BY TYPE OF HOSPITAL
AVERAGE AGE OF DECEASED PATIENTS
RECEIVING POOR AND GOOD QUALITY CARE

CHARACTERISTICS	POOR CARE (N=76)		GOOD CARE (N=366)		DIFFERENCE (YEARS)
	N	AV. AGE	N	AV. AGE	
Small	32	81.8	95	79.4	2.4
Medium	27	76.9	121	77.5	-0.6
Large	17	82.1	150	76.5	5.6
Rural	44	80.5	113	78.8	1.7
Urban	32	79.6	253	77.0	2.6
Profit	6	83.7	18	77.7	6.0
Nonprofit	70	79.8	348	77.6	2.2
Teaching	12	80.2	113	76.9	3.3
Nonteaching	64	80.1	253	77.9	2.2

APPENDIX M

OVERREPRESENTATION OF POOR QUALITY CARE (QC) CASES IN MOST FREQUENT DRGS					
DRG	DESCRIPTION	MDC	# QC CASES (N=464)	# GOOD CARE CASES (N=6,586)	TOTAL # SAMPLE (N=7,050)
127	HEART FAILURE AND SHOCK	5	32	356	388
89	SIMPLE PNEUMONIA AND PLEURISY, PATIENTS OVER AGE 69	4	35	316	351
140	ANGINA PECTORIS	5	16	245	261
182	DIGESTIVE DISORDERS, PATIENTS OVER AGE 69	6	23	222	245
14	STROKES, EXCEPT TRANSIENT ISCHEMIC ATTACKS	1	27	190	217
96	BRONCHITIS AND ASTHMA, PATIENTS OVER AGE 69	4	11	168	179
296	NUTRITIONAL AND MISCELLANEOUS METABOLIC DISORDERS, PATIENTS OVER AGE 69	10	14	159	173
138	CARDIAC ARRHYTHMIA AND CONDUCTION DISORDERS, PATIENTS OVER AGE 69	5	9	157	166
15	TRANSIENT ISCHEMIC ATTACKS	1	17	129	146
88	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	4	9	121	130
	TOTAL (Percent)		193 (41.6)	2,063 (31.3)	2,256 (32.0)

APPENDIX N

POOR QUALITY CARE (OC) CASES BY MAJOR DIAGNOSTIC CATEGORY (MDC) (N=664)				
MDC	DESCRIPTION	# OC Cases	# All Admits	% OC Cases
5	Diseases and Disorders of the Circulatory System	107	1,643	6.5
4	Diseases and Disorders of the Respiratory System	77	1,052	7.3
6	Diseases and Disorders of the Digestive System	61	883	6.9
1	Diseases and Disorders of the Nervous System	52	565	9.2
8	Diseases and Disorders of the Musculoskeletal System and Connective Tissue	29	627	4.6
11	Diseases and Disorders of the Kidney and Urinary Tract	26	332	7.8
10	Endocrine, Nutritional and Metabolic Diseases and Disorders	24	348	6.9
19	Mental Diseases and Disorders	16	112	14.3
3	Diseases and Disorders of the Ear Nose and Throat	13	155	8.4
18	Infectious and Parasitic Diseases	10	108	9.3
23	Factors Influencing Health Status and Other Contact with Health Services	9	69	13.0
16	Blood, Blood Forming Organs and Immunological Diseases and Disorders	8	88	9.1
9	Diseases and Disorders of the Skin Subcutaneous Tissue and Breast	6	181	3.3
7	Hepatobiliary System and Pancreas	5	194	2.6
20	Substance Abuse and Substance Induced Organic Mental Disorders	4	41	9.8
21	Injury, Poisoning and Toxic Effects of Drugs	4	81	4.9
12	Diseases and Disorders of the Male Reproductive System	3	194	1.6
17	Myeloproliferative Diseases and Disorders and Poorly Differentiated Neoplasms	3	120	2.5
24	DRG 468	3	65	4.6
2	Diseases and Disorders of the Eye	2	104	1.9
13	Diseases and Disorders of the Female Reproductive System	2	82	2.4
22	Burns	0	5	0.0
14	Pregnancy, Childbirth and the Puerperium	0	1	0.0

APPENDIX O



DEPARTMENT OF HEALTH & HUMAN SERVICES

*1. Mangano / OIG
Tebbutt / OAI file
HAD Health Care
Steeley
Reg. Ex*

6 OFFICE OF THE INSPECTOR GENERAL

Memorandum
IG
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OGC IG
EX SEC
DATE SENT 9/7

1988 SEP -7 PM 1:02

Date
From William L. Roper, M.D. *WLR*
Administrator

Subject OIG Draft Report: "National DRG Validation Study, Quality of Patient Care in Hospitals," OAI-09-88-00870

To The Inspector General
Office of the Secretary

We have reviewed the OIG draft report that examines the quality of care in hospitals under PPS. We are concerned that the OIG study may result in misleading conclusions and incorrect impressions about quality of care in general, and the Peer Review Organization (PRO) program in particular. Our most significant concern is the report's conclusion that, in effect, PRO judgments are insufficient because they are not identifying as many quality problems as SuperPRO and the OIG's own reviewers. This would result in continued poor care for Medicare patients and the expenditure of millions of dollars for substandard care.

The report's conclusions indicate an apparent misunderstanding of the function of PROs vs. SuperPRO. The backbone of the PRO program is local physician peer review. The legislation mandated this approach and HCFA's management of the program has emphasized it. Local peers can best judge the care rendered by local physicians within the broad context of professionally recognized standards. The SuperPRO, like the OIG reviewers, is not hampered by the reality of dealing with a patient or with local conditions and practice patterns. Their view is, in some ways, an abstract, pure review of a medical record. While this type of review is valuable as a guide or as a part of an evaluation effort, we do not accept it as the definitive word on quality of care. In fact, it is for this reason that we use the SuperPRO findings carefully, in concert with other consultants and our regional offices, to determine if the performance of individual PROs needs improvement.

We agree with OIG that SuperPRO findings and other measures should be used to improve PRO performance and we are already making changes in our evaluation protocols. However, the SuperPRO findings should never represent the "last word" in any case under review.

This draft report also does not take into account HCFA's effectiveness initiative. A major thrust of this effort is to provide PROs with more objective review criteria and an improved review methodology. Of course, the participation of leading clinicians and health service researchers has been critical to this effort. Not only will the effectiveness initiative improve PRO review, but we believe it will contribute significantly to improvement of medical education and practice.

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In sum, while we agree with numerous points raised in the study, we are concerned that certain inappropriate assumptions may make it a controversial and counter-productive effort.

Our specific comments on the recommendations are attached for your consideration. Thank you for the opportunity to comment on this draft report.

Attachment

Comments of the Health Care Financing Administration on the
OIG Draft Report: "National DRG Validation Study,
Quality of Patient Care in Hospitals,"
OAI-09-88-00870

OIG Recommendation

Immediately issue the regulations to implement the COBRA 1985 provision giving PROs authority to deny Medicare reimbursement for patients receiving substandard medical care.

HCFA Response

This provision is one of the most controversial and complex responsibilities assigned to PROs. HCFA has been working with representatives of consumers, providers, physicians, and PROs to draft a Notice of Proposed Rulemaking. These proposed rules have undergone extensive review throughout the Department, including the OIG. Presently, the proposal is pending clearance by the Office of Management and Budget.

OIG Recommendation

Determine why PROs identify a substantially lower rate of poor quality care cases than either the SuperPRO or the OIG.

HCFA Response

As previously mentioned, we believe comparing PRO findings with either OIG or SuperPRO results is inappropriate. The PRO review process includes at least two major steps which are not performed by the other mechanisms. These are: (1) PRO physician reviewers must discuss the cases with the attending physicians before making the final decision that a quality of care problem exists; and (2) PRO physician reviewers must also take into consideration local medical practices and other factors such as the availability of appropriate ambulatory facilities. This does not mean that we expect a lower level of care to be rendered in certain areas, but that local peers can best determine the appropriateness of care rendered by local physicians within the broad context of professionally recognized standards.

Our PRO monitoring and final evaluation protocols are designed to identify problems in PRO performance and initiate appropriate corrective action. PROs that fail to substantially fulfill the requirements of their contracts are either terminated or not renewed on a noncompetitive basis. During the first PRO Scope of Work, we recognized that there were problems with the review determinations being made by PROs. As a result, 25 of the first PRO contractors were not renewed noncompetitively and 2 PRO contractors were terminated.

Additionally, in the second Scope of Work, we implemented the use of generic quality screens to identify potential quality of care problems that were not being satisfactorily addressed through PRO review. We are and will continue to evaluate PRO review determinations, including identifying poor quality of care problems, and initiate appropriate action where required.

OIG Recommendation

Develop acceptable disagreement rates between PROs and the SuperPRO for identified cases of poor quality care.

HCFA Response

In the current PRO performance evaluation protocol, we have developed acceptable disagreement rates between PROs and the regional offices for identified cases of poor quality of care. Disagreements between PROs and SuperPRO for identified cases of poor quality care are analyzed by the appropriate regional office and corrective action plans are established to address identified problems in the PROs' performance. We are currently considering incorporating the SuperPRO review results into our ongoing and final evaluation protocols.

OIG Recommendation

Incorporate reconciliation of high disagreement rates into PRO performance evaluations for consideration in renewal of PRO contracts.

HCFA Response

The disagreement rates have always been part of the overall PRO performance evaluation system. In the past, the results of regional office staff monitoring have been included in the final evaluation package. As stated above, we are considering incorporating the SuperPRO findings in the PRO performance evaluation protocol for the third PRO Scope of Work.

OIG Recommendation

Analyze quality review practices of PROs with low disagreement rates to identify exemplary models and best practices which could be used to assist other PROs.

HCFA Response

We will explore the possibility of identifying exemplary models of detecting quality of care problems that could be applied to other PROs systems. It is important to remember that the legislation authorizing the PRO program requires local peer review. This legislative mandate limits our ability to standardize some aspects of peer review, especially as it relates to the use of specialists that may not be available in certain States.

OIG Recommendation

Require that PROs continue to improve their identification and follow-up of cases involving poor quality patient care in order to better target problem hospitals and physicians. Approaches might include focusing on types of hospitals, DRGs frequently associated with poor quality care or patients at highest risk of receiving poor quality care.

HCFA Response

The third Scope of Work for PRO contracts includes increased emphasis on the generation of profiles which will result in the accomplishment of this recommendation. PROs will be required to generate physician, hospital, and DRG profiles which will assist them in identifying poor quality care practices. Where program monitoring identifies deficiencies in PRO generation and use of profiles, PROs will be required to develop corrective action plans.