

The National Home Care Re-Engineering Study

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Introduction

Medicare's Interim Payment System (IPS), managed care, and future Prospective Payment System (PPS) have one common implication for most home health providers: fewer visits per patient. Recognizing this reality, Fazzi Associates, PricewaterhouseCoopers, and the National Association for Home Care (NAHC) collaborated on a national study that examined the practices of home health agencies whose utilization trends represented the future of home care.

The study focused on agencies who either significantly reduced their number of visits per Medicare patient (by 25% or more in the last four years) or those who maintained low utilization (an average of 43 or fewer visits per Medicare patient) in the same period. The purpose of the study was to learn about the practices and structures of these agencies that contributed to their utilization results.

This report provides the detailed findings and recommendations from the study.

Methodology

The sponsors established two criteria for participation in the study. Agencies must have:

1. Been Medicare certified as of January 1, 1993; and,
2. Averaged 43 or fewer visits per Medicare patient in their last four cost reporting periods or reduced their average number of visits per Medicare patient by 25% or more in the same period.

Within the above criteria, Medicare patients did not include Medicare managed care patients. The visit criteria applied only to the "traditional" fee for service Medicare patients.

The study was conducted in three phases between April and September of 1998. In the first phase, efforts were made to recruit agencies who met the criteria. Several methods to identify these agencies were employed, including:

- Ads run by NAHC;
- Requests to all state associations resulting in notices in several of their newsletters;
- Notices on listservs;

- Direct requests to selected Fazzi Associates and PricewaterhouseCoopers clients; and,
- Announcements at conferences and presentations by representatives of Fazzi Associates and PricewaterhouseCoopers.

In all of the recruitment efforts, agencies were told that if they participated in the study they would receive a formal report of the findings and recommendations, and they would be invited to a free workshop at NAHC's 1998 Annual Meeting in Atlanta, GA. As a result of these efforts, nearly 200 agencies who thought they met the criteria expressed interest in participating in the study.

In phase two of the study, all of the agencies who responded to the recruitment efforts were sent by fax a brief overview of the study and a Preliminary Survey to complete (see Appendix A). In the overview agencies were assured that the information they provided was confidential and would be grouped with the answers of other participants in all reports on the study.

The purpose of the Preliminary Survey was to determine whether the agencies actually met the criteria for participating in the study. It requested the total number of Medicare visits and unduplicated Medicare census reported in agencies' cost reports filed for Federal Fiscal Years 1994 through their most recently filed cost report.

In addition, agencies were asked to provide a copy of specific Worksheets from their Federal Fiscal Year 1994 and 1998 (or most recent year filed) cost reports. The requested Worksheets contained information that enabled the study's sponsors to determine the average number visits and cost by discipline and patient.

The Preliminary Survey also requested information about the type of agency, e.g., free-standing, hospital department, etc.; service area; agency size, type of cost report filed, and reporting year dates.

Ninety-three (93) agencies responded to the Preliminary Survey and expressed interest and commitment in participating in the study. Of these, 82 were found to meet the criteria established for the study.

In the third phase of the study, an in-depth telephone interview was conducted with a senior manager who was familiar with their agency's clinical practices and structure from each of the 82 agencies that were found to meet the criteria for participation in the study. The interviews typically required 30 to 40 minutes each. Data from four of these agencies was incomplete and could not be included in the final report.

The questions for the telephone survey were reviewed with selected leaders in the field identified by the study's sponsors. Modifications were made based on their input.

The data from cost reports and survey questions which could be coded for quantitative analysis was identified as were critical open-ended questions which required qualitative analysis. The data was entered into a computer database and codes were identified for open-ended questions with categorizable responses. Responses to both open and close-ended questions which did not fit into any of the expected categories were coded as "*other.*"

Due to the detailed nature of some of the questions, some respondents could not answer all of the questions or provide all of the requested data. Any unanswered questions from the total number of responses were excluded. Therefore, the total number of analyzed responses varies for each question. Cross tabulations were conducted as were analyses of the open and close-ended questions.

Due to the size of the sample and the non-scientific sampling process, and the variation in responses to individual questions, the results of this survey should be treated as qualitative, not quantitative data.

Detailed Findings

Characteristics of Agencies Surveyed

Fazzi Associates conducted interviews with a total of 82 agencies. Data from four of these agencies was incomplete and could not be included in the final report. The 78 agencies included in the study were located in the following twenty-three states:

| | |
|-------------------|--------------------|
| Arkansas (1) | North Carolina (1) |
| Arizona (3) | New Hampshire (1) |
| California (5) | New Jersey (3) |
| Florida (2) | Nevada (1) |
| Georgia (1) | New York (8) |
| Iowa (2) | Ohio (12) |
| Idaho (1) | Oregon (1) |
| Illinois (6) | Pennsylvania (3) |
| Massachusetts (5) | Texas (2) |
| Maryland (4) | Utah (1) |
| Michigan (10) | Washington (4) |
| Missouri (1) | |

During the preliminary survey, agencies were asked to provide basic information regarding their location, size, type, and cost reporting characteristics (see Table 1). The sample included a good mix of agencies of different types and sizes in both urban and rural areas. Of the agencies surveyed:

- about one-third (37.2%) were **hospital departments**;
- about half (56.4%) were **free-standing agencies**; and
- 6.4% were **other types of agencies**

Included in the free-standing agency category were agencies that were non-profit or for-profit subsidiaries of a larger system but still separate corporations. The agencies were split between those located in primarily urban areas (32.1%), primarily rural areas (26.9%), and mixed urban/rural areas (39.7%).

As is clear from Figure A, the agencies ranged in size from small to very large, with the largest percentage (66.7%) in the 25,000 to 200,000 total visits per year range. Most file cost reports as freestanding agencies (51.3%) or hospital-based agencies (44.9%), and the majority have cost reporting years of January 1 to December 31 (51.3%) or July 1 to June 30 (21.8%).

FIGURE A

SIZE OF AGENCIES SURVEYED (N=78)

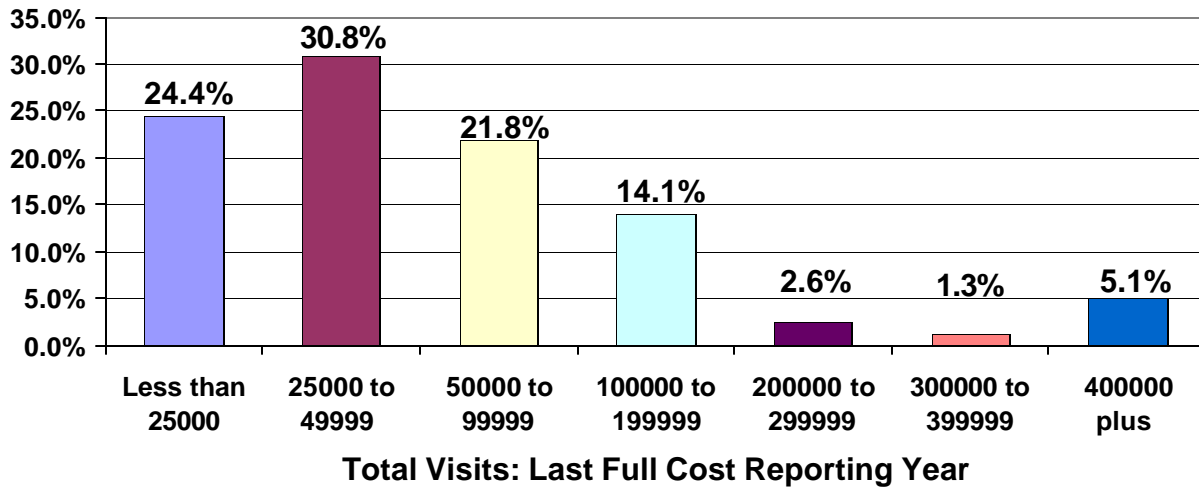


TABLE 1

AGENCY CHARACTERISTICS

| Agency Type | Percent |
|---|---------|
| Not reported | 1.2% |
| Free standing non-profit agency or for profit | 56.4% |
| Hospital department | 37.2% |
| Other | 5.2% |
| Total | 100.0% |
| Area Served | Percent |
| Primarily Urban | 32.1% |
| Primarily Rural | 26.9% |
| Both | 39.7% |
| Not reported* | 1.3% |
| Total | 100.0% |
| Agency Size | Percent |
| Less than 25000 visits | 24.4% |
| 25000 to 49999 visits | 30.8% |
| 50000 to 99999 visits | 21.8% |
| 100000 to 199999 visits | 14.1% |
| 200000 to 299999 visits | 2.6% |
| 300000 to 399999 visits | 1.3% |
| 400000 plus visits | 5.1% |
| Total | 100.0% |

| Cost Report Filed | Percent |
|------------------------------------|---------|
| Freestanding Agency HCFA 1728-94 | 51.3% |
| Hospital Based Agency HCFA 2552-96 | 44.9% |
| Nursing Home Based Agency 2540-96 | 2.6% |
| Not reported* | 1.3% |
| Total | 100.0% |
| Cost Reporting Year | Percent |
| January 1 through December 31 | 51.3% |
| July 1 through June 30 | 21.8% |
| October 1 through September 30 | 15.4% |
| Other | 10.3% |
| Not reported* | 1.3% |
| Total | 100.0% |

Trends in Medicare Visits: 1994 -1998

While all of the agencies in the study were being reimbursed for their Medicare patients under the Interim Payment System (IPS) at the time of the study, all of the cost and utilization data reported for the study was prior to IPS.

Agencies were asked to provide data from their cost reports of their total Medicare visits and unduplicated Medicare census for cost reporting years 1994 through 1998. We used this information to calculate the average visits per patient for each agency. In fiscal year 1998, the 78 agencies surveyed reported an **average of 35 Medicare visits per patient** (see Figure B and Table 2). Over the past five years, the average visits per patient fluctuated from a low of 32 visits in 1994 to a high of 43 visits in 1997. *In contrast, the national average for number of visits per Medicare patient ranged from 69.4 in 1994 to a high of 80.1 in 1997.*

A major goal of this study was to determine what factors contribute to agencies achieving both significant declines in Medicare visits per patient, and low overall average visits per patient. We divided the agencies into three groups based on their reported utilization rates: (1) agencies that decreased utilization by 25% or more in the past four years; (2) agencies whose total utilization was under 43 visits per patient in their most recent cost reporting year; and (3) agencies whose utilization rate was under 43 visits per patient for the past three years.

Some agencies met the criteria for more than one of these groups and their data was therefore included in each group for which they qualified, e.g., an agency that reduced utilization by 25% or more during the past four years *and* averaged less than 43 visits per patient in the most recent cost reporting year was included in both of these groups for data analysis. Overall:

- **Agencies achieving a 25% or greater reduction in utilization** have historically had higher utilization rates overall (e.g., for FY97 their average was 55 visits per patient vs. 43 visits per patient for all agencies, and this trend was true throughout the five year period studied); they were more likely to be hospital departments (44.7% vs. 37.2% overall); and, they were more likely to be located in mixed urban/rural areas (47.4% vs. 39.7%) or primarily rural areas (34.2% vs. 26.9%). There were 38 agencies in this group.
- **Agencies whose total utilization was under 43 visits per patient in their most recent cost reporting year** tended to be smaller than other agencies (30.0% had fewer than 25,000 visits in FY98, vs. 5.6% for agencies with more than 43 visits), and they were more likely to be hospital departments (45.0% vs. 37.2% overall). There were 60 agencies in this group.
- **Agencies whose utilization rate has averaged under 43 visits per patient for the past three years** also tended to be smaller (27.9% had fewer than 25,000 visits in FY98, vs. 11.8% for agencies averaging more than 43 visits over the past three years). There were 61 agencies in this group.

In general, hospital departments tended to have lower average visits per patient (26 for FY98). Free-standing agencies reported an average of 44 visits per patient in FY98 (the non-profit agencies within this group reported an average of 38 visits per patient and the for profit agencies averaged 71 visits per patient). The two departments of skilled nursing facilities surveyed averaged 27 visits per patient for FY98, although this should be interpreted cautiously due to the small sample.

FIGURE B

OVERALL TRENDS IN MEDICARE VISITS: 1994-1998

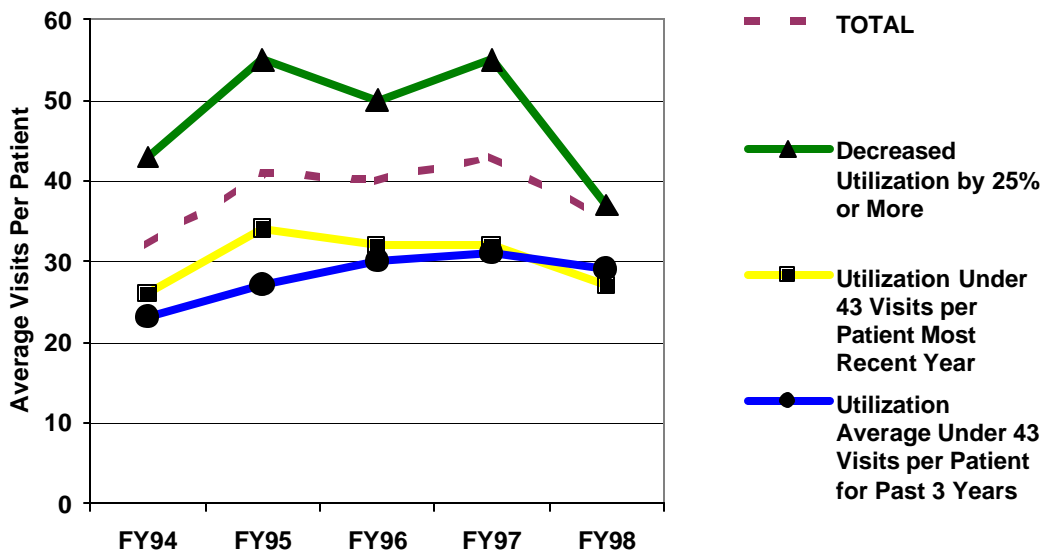


TABLE 2

TRENDS IN MEDICARE VISITS: 1994-1998

| | FY94 Visits Per Patient | FY95 Visits Per Patient | FY96 Visits Per Patient | FY97 Visits Per Patient | FY98 Visits Per Patient |
|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | N=66 | N=76 | N=77 | N=78 | N=78 |
| Total Visits per Patient | 32 | 41 | 40 | 43 | 35 |
| Decreased Utilization by 25% or More (N=38) | 43 | 55 | 50 | 55 | 37 |
| Utilization Under 43 Visits per Patient last year (N=60) | 26 | 34 | 32 | 32 | 27 |
| Average Under 43 Visits per Patient-Past 3 Years (N=61) | 23 | 27 | 30 | 31 | 29 |
| Free standing agencies (N=44) | 36 | 43 | 43 | 44 | 44 |
| Hospital department (N=29) | 27 | 33 | 35 | 29 | 26 |
| Other (5) | 18 | 27 | 32.5 | 39 | 33 |

Variations in Costs and Visits by Discipline

Table 3 presents the average visits per patient, average costs per visit, and average costs per patient for FY94 and FY98, with an estimate of the change between these two years, by discipline. Overall, the results indicated that:

- **average visits per patient** declined for all disciplines except for speech pathologists, which experienced increases in visits per patient. The greatest declines were for occupational therapists, physical therapists, social workers and home health aides, while the decline for nurses was minimal. In total, visits per patient for all disciplines decreased 14.8% during the time period examined;
- **average costs per visit** declined for some disciplines (occupational therapists and social services), but increased, in some cases dramatically, for nurses, physical therapists, speech pathologists, and home health aides. In total, costs per visit increased 2.0% during the time period examined; and,
- **average costs per patient** declined for all disciplines except speech pathologists, for whom costs per patient increased slightly. Overall, cost per patient decreased by 30.6% during the time period examined.

In general, agencies that decreased their overall Medicare visits per patient by 25% or more tended to:

1. increase visits by nurses, while reducing visits by other types of staff;
2. reduce the average costs per visit for all types of staff except physical therapists, for whom the increase was relatively minimal; and,
3. decrease the average costs per patient for all types of staff except speech pathologists.

These patterns were different for agencies that had low overall Medicare visits per patient in their most recent reported year, and those who maintained low visits per patient ratios over the past three years. The trends for these types of agencies were less clear. Their general tendency was to increase costs-per-visit for many types of staff, reduce visits per patient for some types of staff and increase visits per patient for others, and reduce overall costs per patient.

A clear utilization pattern for all groups was the relationship between the average number of nursing and home health aide visits per patient. Overall there was an average of 14.8 nursing visits per patient versus 12.0 home health aide visits. This relationship of more nursing visits than home health aide visits was true for all groups in the most recent cost-reporting year.

TABLE 3
AVERAGE VISITS PER PATIENT, COSTS PER VISIT, AND COSTS PER PATIENT BY TYPE OF STAFF

| FY1998 | Average Visits per patient - Nurse | Average Visits per patient - P.T. | Average Visits per patient - O.T. | Average Visits per patient - S.P. | Average Visits per patient - S.S. | Average Visits per patient - H.H.A. | Average Visits per patient - All |
|---|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|----------------------------------|
| TOTAL VISITS PER PATIENT | 14.8 | 2.8 | 0.3 | 0.3 | 0.3 | 12.0 | 30.5 |
| Decreased Utilization by 25% or More | 18.0 | 2.1 | 0.2 | 0.2 | 0.3 | 15.3 | 36.1 |
| Utilization Under 43 Visits per Patient | 14.3 | 2.8 | 0.4 | 0.3 | 0.3 | 9.1 | 27.2 |
| Average Under 43 Visits-Past 3 Years | 11.5 | 2.7 | 0.4 | 0.3 | 0.4 | 7.4 | 22.6 |
| | Average Costs per visit - Nurse | Average Costs per visit - P.T. | Average Costs per visit - O.T. | Average Costs per visit - S.P. | Average Costs per visit - S.S. | Average Costs per visit - H.H.A. | Average Costs per visit - All |
| TOTAL COSTS PER VISIT | \$ 84 | \$ 101 | \$ 73 | \$ 91 | \$ 104 | \$ 40 | \$ 69 |
| Decreased Utilization by 25% or More | \$ 80 | \$ 90 | \$ 76 | \$ 95 | \$ 117 | \$ 36 | \$ 65 |
| Utilization Under 43 Visits per Patient | \$ 83 | \$ 87 | \$ 97 | \$ 100 | \$ 143 | \$ 39 | \$ 66 |
| Average Under 43 Visits-Past 3 Years | \$ 89 | \$ 108 | \$ 74 | \$ 94 | \$ 105 | \$ 42 | \$ 73 |
| | Average Costs per patient - Nurse | Average Costs per patient - P.T. | Average Costs per patient - O.T. | Average Costs per patient - S.P. | Average Costs per patient - S.S. | Average Costs per patient - H.H.A. | Average Costs per patient - All |
| TOTAL COSTS PER PATIENT | \$ 972 | \$262 | \$ 40 | \$ 25 | \$ 43 | \$434 | \$ 1,707 |
| Decreased Utilization by 25% or More | \$ 1,026 | \$246 | \$ 36 | \$ 29 | \$ 43 | \$562 | \$ 1,791 |
| Utilization Under 43 Visits per Patient | \$ 924 | \$260 | \$ 39 | \$ 28 | \$ 46 | \$308 | \$ 1,533 |
| Average Under 43 Visits-Past 3 Years | \$ 906 | \$276 | \$ 45 | \$ 29 | \$ 44 | \$325 | \$ 1,598 |
| % Change: FY94-FY98 | Average Visits per patient - Nurse | Average Visits per patient - P.T. | Average Visits per patient - O.T. | Average Visits per patient - S.P. | Average Visits per patient - S.S. | Average Visits per patient - H.H.A. | Average Visits per patient - All |
| TOTAL VISITS PER PATIENT | -3.2% | -31.9% | -61.3% | 16.5% | -27.8% | -19.3% | -14.8% |
| Decreased Utilization by 25% or More | 6.6% | -41.6% | -69.7% | -17.5% | -28.7% | -17.7% | -10.8% |
| Utilization Under 43 Visits per Patient | 12.2% | -30.0% | -55.7% | 21.8% | -19.7% | 14.6% | 4.0% |
| Average Under 43 Visits-Past 3 Years | -17.4% | -36.8% | -62.0% | 25.2% | -25.5% | -31.2% | -26.1% |
| | Average Costs per visit - Nurse | Average Costs per visit - P.T. | Average Costs per visit - O.T. | Average Costs per visit - S.P. | Average Costs per visit - S.S. | Average Costs per visit - H.H.A. | Average Costs per visit - All |
| TOTAL COSTS PER VISIT | 5.4% | 17.6% | -30.4% | 0.3% | -16.5% | 0.7% | 2.0% |
| Decreased Utilization by 25% or More | -4.1% | 3.6% | -22.0% | -5.2% | -19.9% | -8.2% | -1.4% |
| Utilization Under 43 Visits per Patient | -2.6% | 5.2% | -30.7% | 11.3% | -12.0% | -9.2% | -6.2% |
| Average Under 43 Visits-Past 3 Years | 9.0% | 29.2% | -29.7% | 11.9% | -9.5% | 4.7% | 4.3% |
| | Average Costs per patient - Nurse | Average Costs per patient - P.T. | Average Costs per patient - O.T. | Average Costs per patient - S.P. | Average Costs per patient - S.S. | Average Costs per patient - H.H.A. | Average Costs per patient - All |
| TOTAL COSTS PER PATIENT | -26.2% | -33.9% | -47.0% | 6.2% | -26.3% | -27.7% | -30.6% |
| Decreased Utilization by 25% or More | -25.2% | -23.2% | -54.1% | 31.5% | -23.2% | -24.6% | -30.2% |
| Utilization Under 43 Visits per Patient | -23.9% | -35.1% | -43.5% | 35.3% | -19.1% | -25.8% | -29.6% |
| Average Under 43 Visits-Past 3 Years | -31.4% | -34.8% | -45.0% | 21.0% | -24.1% | -33.4% | -33.4% |

Reasons for Declines in Medicare Visits per Patient

Agencies cited a number of different factors or actions they took to maintain or reduce their average visits per patient (see Table 4). The three most common actions included:

- examining the patient's needs and conducting better assessments (25.9%);
- educating the patient and family, including a discussion of discharge early on (14.8%), and
- better and more frequent communication, conferencing, and more data collection and documentation (7.4%).

The study participants also provided many different suggestions for other agencies trying to reduce visits per patient. **Educating staff** was the most frequent response (29.5%), followed by **using care plans, case conferencing, and analysis** (11.5%). Some also suggested redoing documentation tools, so that the agency would have good documentation and quality data to work with (6.4%). Some said to maximize resources by increasing RN caseload and productivity (6.4%), and some said to begin by educating patients and staff (5.1%).

When asked how they could demonstrate that the steps they had taken to manage utilization had not adversely affected the quality of care provided to patients, agencies mentioned:

- measuring patient satisfaction (42.3%);
- measuring physician satisfaction and increased referrals (14.1%);
- clinical outcomes (10.3%);
- incident reports, including fewer hospital admissions (9.0%);
- QI, QA, and cost monitoring (6.4%); and
- discharge planning, utilization, record review, and follow-up (5.1%).

TABLE 4
MANAGING OR REDUCING VISITS PER PATIENT

| | |
|--|-------------|
| Three Most Important Things Did to Maintain or Reduce Visits per Patient | N=78 |
| Examine patient's needs; better assessments | 25.9% |
| Educate the patient and their family, including discussion of discharge early on | 14.8% |
| Better-more frequent communication/ conferencing/more data and documentation | 7.4% |
| Must increase number of visits, so N/A | 7.4% |
| Educate staff on new realities | 3.7% |
| Family and patient education beginning at first visit: early discussion of discharge | 3.7% |
| Enhanced communications and conferencing | 3.7% |
| Care maps, pathways, etc | 3.7% |
| Hire well, trust your staff, have good orientation | 3.7% |
| Other | 25.9% |
| How Can Demonstrate that Managing Utilization Has Not Adversely Affected Quality of Care Provided to Patients | N=78 |
| Patient satisfaction | 42.3% |
| Physician satisfaction – increased referrals | 14.1% |
| Clinical outcomes | 10.3% |
| Look at incident reports-fewer readmissions to hospital | 9.0% |
| QI, QA and cost monitoring | 6.4% |
| Discharge planning, utilization, record review, follow-up | 5.1% |
| Can't demonstrate | 3.8% |
| No response | 9.0% |
| Advice to Other Agencies About How to Reduce Visits Per Patient | N=78 |
| Educate staff | 29.5% |
| Use care plans case conferencing and analysis | 11.5% |
| Redo documentation tool-have good documentation and quality | 6.4% |
| Maximize resources, increase RN caseload, productivity | 6.4% |
| Educate patients and families | 5.1% |
| Primary nursing in teams hire visiting staff diversify staff | 5.1% |
| Good assessment | 3.8% |
| Be cautious: do not reduce too far-too quickly | 3.8% |
| Mindset of discharging in timely fashion-extensive discharge | 2.6% |
| Good communication between all aspects of patients care | 2.6% |
| Examine home health aide utilizations and visits in general | 2.6% |
| Good UR screen for appropriateness | 1.3% |
| Compare with other agencies-networking | 1.3% |
| Patient satisfaction-outcomes | 1.3% |
| Reduce pay-per-visit staff | 1.3% |
| Other | 2.6% |
| No response | 12.8% |

Payor Mix

Agencies were asked to provide an estimate of the percentage of patients whose services were paid by: (1) Medicare fee-for-service; (2) Medicaid fee-for-service; (3) managed care; and (4) other payors, during their last full cost reporting year (see Table 5). Agencies varied to some extent in their payor mix, but this did not appear to be a major factor contributing to their ability to decrease or maintain low Medicare visit per patient rates. Overall, agencies were most likely to be reimbursed by **Medicare fee for service** (on average, 75% of patients' services were covered by this payor). Some were reimbursed through Medicaid fee for service (9%) or managed care (11%), and in a few cases, other payors (9%).

These results were consistent across agencies regardless of their type, location (urban vs. rural), or Medicare visits per patient rates, with one exception. In general, the larger the agency in terms of total Medicare visits, the less likely the agency is to rely on payors other than Medicare, such as Medicaid fee for service or managed care.

Compensation Strategies

The study asked about two types of compensation for staff who developed care plans, and performed case management and utilization review functions: salaried and pay-per-visit. Of the agencies surveyed, pay-per-visit staff were seldom used for these functions. On average, 11.5% reported using nurses or therapists who were paid on a pay-per-visit basis to develop care plans, 11.7% reported using pay-per-visit staff for case management, and only 1.3% reported using pay-per-visit staff for utilization review. There were several significant trends:

- in general, the larger the agency in terms of total Medicare visits per cost reporting year, the less likely the agency was to use pay-per-visit staff, while smaller agencies were more likely to use pay-per-visit strategies;
- hospital departments relied more on salaried workers, while other types of agencies relied more on pay-per-visit strategies;
- pay-per-visit was more commonly used as a compensation strategy in urban areas, and less common in rural areas; and,
- agencies that decreased their Medicare utilization rates by 25% or more tended to rely more often on pay-per-visit staff.

TABLE 5**COST REIMBURSEMENT AND STAFF
COMPENSATION STRATEGIES**

| | Average Percentage of Patients Whose Services Were Paid by the Following Payors: Last Full Cost Reporting Year ¹ | | | |
|--|--|--------------------------------|-----------------|-------|
| | Medicare Fee For Service | Medicaid Fee For Service | Managed Care | Other |
| Total All Agencies (N=78) | 75% | 9% | 11% | 9% |
| Decreased Utilization by 25% or More (N=38) | 77% | 8% | 10% | 11% |
| Utilization Under 43 Visits per Patient (N=60) | 75% | 8% | 12% | 9% |
| Average Under 43 Visits per Patient-Past 3 Years (N=61) | 74% | 9% | 12% | 9% |

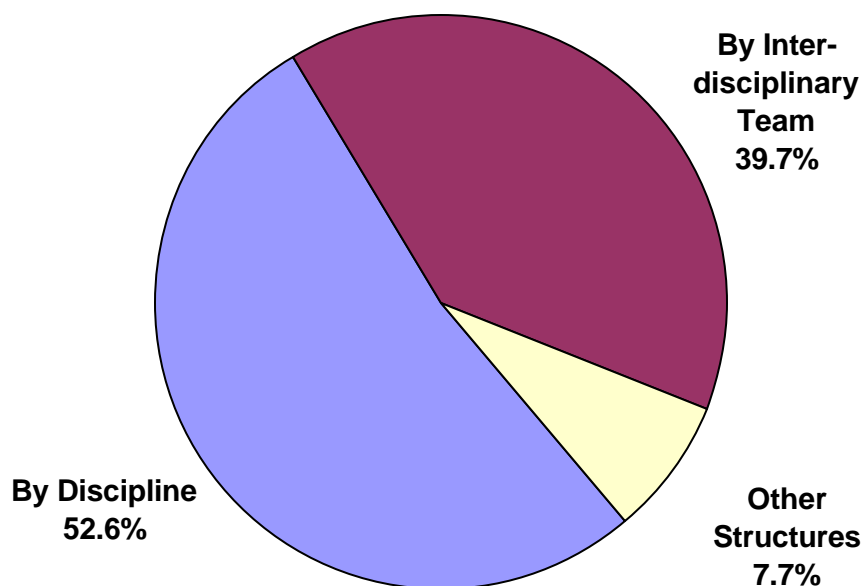
¹ *These percentages are averaged across agencies, and in many cases agencies provided reimbursement estimates that did not total 100%. As a result, the reported averages cannot be added together, but provide a general estimate of scope only.*

Structure of Clinical Services

Agencies were next asked a variety of questions regarding how they structured and managed their clinical services (see Figure C). Of the 78 agencies surveyed, slightly more than one-half (52.6%) structured their clinical services by **discipline**, about two-fifths (39.7%) structured their clinical services by **interdisciplinary teams**, and the remainder (7.7%) used **other structures**.

FIGURE C

TYPICAL STRUCTURE OF CLINICAL SERVICES



About two-fifths (45.3%) of the agencies had **teams by geographic area**, two-fifths (40.1%) had **specialty teams for specific patient populations**, a small proportion (6.6%) had **specialty teams for managed care**, and some (8.0%) had other types of specialty teams.

In most cases, the RN or therapists who had the primary responsibility for providing direct care to patients also had the primary responsibility for **developing care plans** (91.0%). In a few cases, this responsibility was assigned to the RN or therapist who assigns and supervises direct care staff (2.6%).

About three-fourths (75.6%) of agencies reported using **standardized care plans, care maps or pathways, or disease management protocols**. Agencies that did so tended to use them either for specific diagnoses (41.3%), although some used them for most patients (17.3%) or all patients (20.0%). About one-half (50.0%) developed their standardized care plans, care maps/pathways, or disease management protocols at their agencies, and about one-fourth (21.1%) either purchased or were given a system. In most cases (79.5%), the standardized care plans, care maps/pathways, or disease management protocols did not extend to other care settings (such as hospital care), but in some cases (20.5%), this did happen.

In the past four years, **more than four-fifths (82.1%) of agencies had implemented significant changes in how they developed care plans or in who developed them**. These changes mainly included computerization (35.1%) and more conferencing and enhanced communication (39.0%).

While agencies that reduced their Medicare utilization rates by 25% or more or who maintained low overall utilization rates are fairly similar to other agencies in their reimbursement and compensation strategies, **these agencies differed significantly from other agencies in terms of how they structured their clinical services**. Specifically:

- agencies that reduced visits per patient by 25% or more were much more likely than other agencies to structure their clinical services by interdisciplinary teams (52.6% vs. 27.5%). This was also true to some extent for agencies with low overall visits per patient ratios, but the difference is not as dramatic (41.7% vs. 33.3%);
- agencies that reduced visits per patient by 25% or more were much more likely than other agencies to have implemented changes in how their care plans were developed (89.5% vs. 75.0%). The types of changes they implemented were not significantly different from those of other agencies that made changes, however; and,
- agencies with low overall visits per patient ratios were less likely than other agencies to use standardized care plans (71.7% vs. 88.9% for agencies with overall utilization of under 43 visits per patient).

Trends in Case Management

Agencies reported a variety of ways in which they handled case management. We asked agencies who was responsible for this function, whether any changes had been made in the last four years, and how successful those changes were in helping to reduce or maintain visits-per-patient while maintaining clinical quality.

In more than four-fifths (80.8%) of the agencies, the **primary responsibility for case management** was with the RNs or specialists who were responsible for direct care to patients. Some agencies (6.4%) assigned case management to RNs or therapists who assigned and supervised direct care staff, and in a small number of cases (3.8%), case management was the responsibility of RNs or therapists who only did case management.

Overall, the **median caseload of patients per case manager** for the 78 agencies surveyed was 23 patients, and this did not differ significantly among agencies in the different criteria groups (see Table 6). Hospital departments tended to have lower ratios (18 vs. 23 patients per case manager), as did agencies located in primarily urban areas (20 vs. 23 patients per case manager).

TABLE 6

AVERAGE CASELOAD PER MANAGER

| | Decreased Utilization by 25% or More | Utilization Under 43 Visits per Patient | Utilization Average Under 43 Visits-Past 3 Years | Total |
|--|--------------------------------------|---|--|-------|
| Average Caseload Per Case Manager | N=38 | N=60 | N=61 | N=78 |
| No response | 5.3% | 3.3% | 3.3% | 2.6% |
| Less than 15 patients | 10.5% | 13.3% | 14.8% | 12.8% |
| 16 to 20 patients | 23.7% | 25.0% | 27.9% | 25.6% |
| 21 to 25 patients | 26.3% | 25.0% | 19.7% | 24.4% |
| 26 to 30 patients | 21.1% | 23.3% | 23.0% | 20.5% |
| 31 to 35 patients | 2.6% | 3.3% | 6.6% | 5.1% |
| More than 35 patients | 10.5% | 6.7% | 4.9% | 9.0% |
| Median number of patients per case manager | 23 | 23 | 23 | 23 |

Thirty of the 78 agencies answered the question regarding whether or not they had implemented any changes in case management in the last four years. Of these agencies, **almost two-thirds (61.5%) said that they had implemented significant changes.** The most frequently mentioned changes included:

- a select group or a specific person now had case management responsibility (23.4%);
- the nurse who provided primary direct care now did case management, and it was no longer the responsibility of one person (12.8%);
- increased supervision of admission, discharge, and/or recertification (12.8%); and
- development of a team environment and specialty teams (10.6%).

In most cases, agencies felt the changes they made in case management strategies had been “*very successful*” or “*somewhat successful*” at reducing visits-per-patient while maintaining clinical quality (26.7% and 30.7%, respectively, out of a total of 78 agencies).

Finally, we asked agencies to **rank a series of factors** according to their importance in their practices for scheduling patient visits (for all disciplines). A rank of “1” meant “*most important*,” and a rank of “4” meant “*least important*” (see Figure D and Table 7). Only one of the factors examined, the special needs of the patient, was consistently ranked as “*most important*” by the agencies (56.4%). Availability of staff was least likely to be ranked as “*most important*” (7.7%), although fewer than one-fourth ranked geographic proximity of patients being visited by a staff person (16.7%) or maintaining the primary caregiver assignment with patients (19.2%) as “*most important*.”

These results were consistent regardless of agencies’ ability to maintain or reduce their overall Medicare visits per patient, except that agencies with low visits per patient ranked the special needs of the patient somewhat lower than did other agencies, and they tended to rank maintaining primary caregiver assignments as more important.

FIGURE D

**PERCENT OF AGENCIES RATING FACTORS AS
“MOST IMPORTANT” IN THEIR PRACTICES FOR SCHEDULING PATIENT
VISITS (ALL DISCIPLINES)**

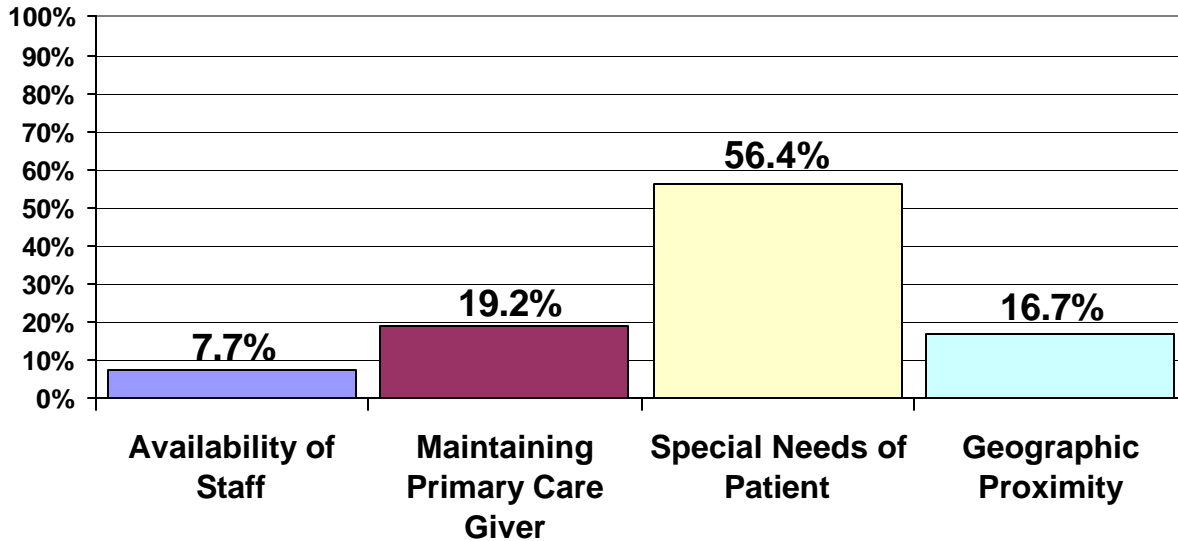


TABLE 7

**RELATIVE IMPORTANCE OF FACTORS
IN AGENCIES’ PRACTICES FOR SCHEDULING
PATIENT VISITS (ALL DISCIPLINES)**

| Rating of Factor According to Importance in Agency’s Practice of Scheduling Patients | Rank of Availability of Staff | Rank of Maintaining Primary Care Giver | Rank of Special Needs of Patient | Rank of Geographic Proximity |
|--|-------------------------------|--|----------------------------------|------------------------------|
| | N=78 | N=78 | N=78 | N=78 |
| No response | 1.3% | 1.3% | 1.3% | 1.3% |
| 1=Most Important | 7.7% | 19.2% | 56.4% | 16.7% |
| 2 | 14.1% | 48.7% | 20.5% | 15.4% |
| 3 | 24.4% | 17.9% | 15.4% | 41.0% |
| 4=Least Important | 52.6% | 12.8% | 6.4% | 25.6% |

Trends in Utilization Review

Utilization review was managed by agencies in various ways. The results suggested that the primary responsibility for utilization review was assigned to a variety of staff, with no consistencies among agencies in this respect. In some cases, utilization review was handled primarily by the RNs or therapists responsible for direct patient care (28.2%). In other cases, this responsibility was assigned to RNs or therapists who assigned and supervised direct care staff (19.2%), and in other cases the responsibility was assigned to an RN or therapist who only did utilization review (19.2%). In many cases (29.5%), other staff handle this responsibility, such as:

- coordinators;
- group case conferencing;
- interdisciplinary teams;
- QI, quality management, or performance improvement staff; or
- committees.

Utilization data that was most often collected and analyzed included:

- visits per patient by diagnosis (85.9%);
- total visits per patient (75.6%);
- visits per patient by payor (64.1%).

Some collected data on visits per patient by discipline (35.9%), visits per patient by staff member responsible for developing care plans (29.5%), and visits per patient by case manager (11.5%). Utilization data were most often shared on a regular basis with:

- agency directors (96.2%);
- governing boards (93.6%);
- managers and supervisors (79.5%);
- professional advisory boards (79.5%);
- insurance companies (65.4%); and
- clinical staff (50.0%).

Agencies rarely shared utilization data with all staff on a regular basis (6.4%). **Patterns of utilization** were most often compared against visit standards (averages) for all patients (50.0%), or against care plans (41.0%), although some

compared this data against care maps or pathways (35.9%), against clinical outcomes (33.3%), or against visit standards for specific patient groups (26.9%). This information was occasionally compared between individual caregivers (21.8%) or between teams (19.2%). Patterns of utilization (comparisons) were most often shared with managers and supervisors (78.2%), agency directors (74.4%), clinical staff (66.7%), or professional advisory boards (53.8%).

Two-thirds (66.7%) of the agencies surveyed implemented changes in utilization review in the past four years. This was especially true for agencies who decreased their Medicare visits per patient ratios by 25% or more—three-fourths (76.3%) of these agencies had implemented changes in utilization review in the past four years. The changes implemented most often included:

- having better follow-up and/or more formal tracking (29.8%);
- having PI committees, utilization review coordinators, and/or interdisciplinary teams (23.4%); and,
- having all case managers and/or all staff do utilization review, because the agency couldn't afford specific staff for this position (14.9%).

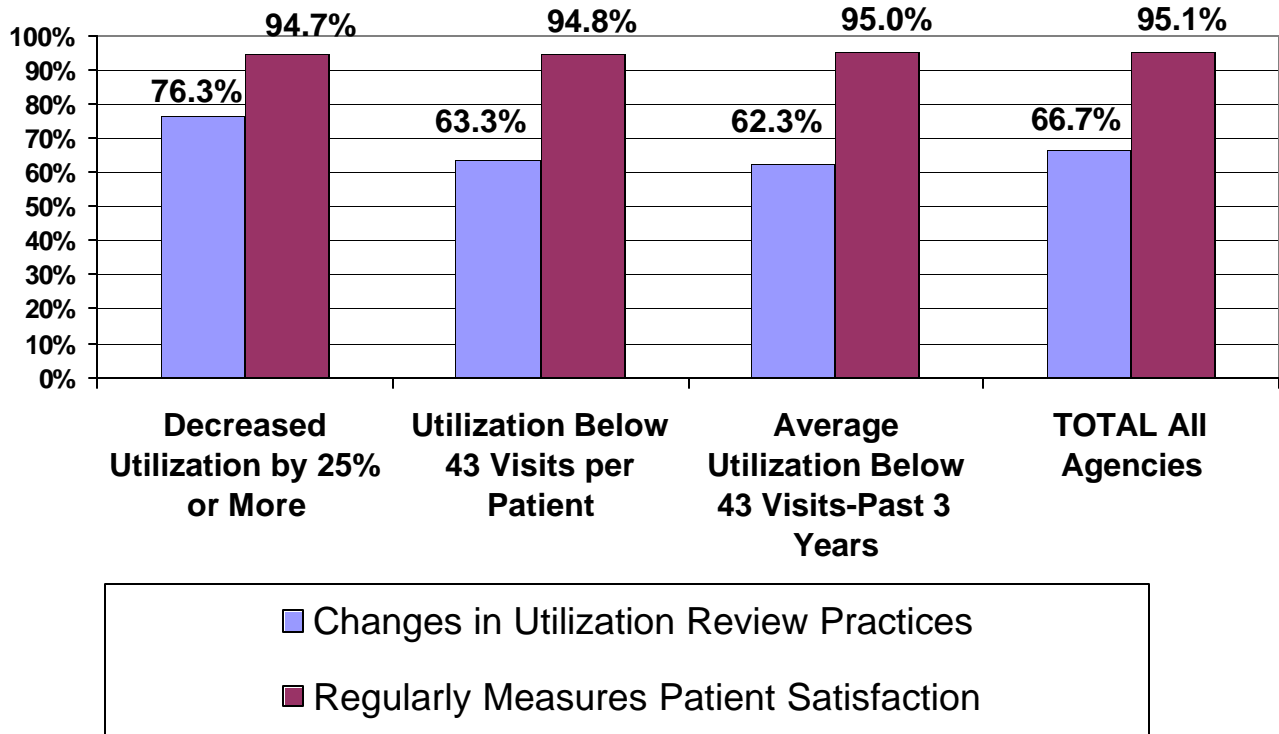
In most cases the agencies felt these changes were “*very successful*” or “*somewhat successful*” at reducing their Medicare visits per patient (36.8% and 23.7%, respectively, out of a total of 78 agencies). These results were generally consistent among agencies regardless of their success at maintaining or reducing overall Medicare visits per patient.

Nearly all (95.1%) of the agencies reported that they **regularly measured patient satisfaction** (see Figure E). These agencies were most likely to routinely measure patient satisfaction with a tool they developed internally (61.5%), although some measured patient satisfaction with a national tool that allowed comparisons of local results with those of other agencies (33.3%).

Patient satisfaction data were most frequently shared with agency directors (88.7%), managers and supervisors (87.2%), professional advisory boards (84.6%), clinical staff (78.2%) and governing boards (70.5%). Most (82.1%) also shared this information with all staff on a regular basis.

FIGURE E

PERCENT OF AGENCIES WHO HAVE IMPLEMENTED CHANGES IN UTILIZATION REVIEW PRACTICES IN PAST FOUR YEARS, AND WHO MEASURE PATIENT SATISFACTION



Trends in Outcomes Measurement

The majority, but not all, of the agencies we surveyed measured clinical outcomes on a regular basis. About one-fifth (19.2%) did not regularly measure clinical outcomes. Those agencies that did measure clinical outcomes typically did so by regularly conducting **case reviews** (44.9%), by using a **standardized system** that allowed comparison of results with other agencies (29.5%), or by using an **in-house system** to measure clinical outcomes (24.4%). Clinical outcome data were most often shared with:

- clinical staff (74.4%);
- agency directors (73.1%);
- managers and supervisors (65.4%);
- professional advisory boards (65.4%); and
- governing boards (44.9%).

Nearly half (46.2%) of the agencies that measured clinical outcomes shared this information on a regular basis with all staff. **In general, there were no differences in clinical outcome measurement practices between the groups of agencies in the study.**

Point of Service Technology

The majority (76.9%) of agencies surveyed did not use computerized technology (such as laptops or hand-held devices) for recording patient information in the field. In a small number of cases (2.6%), all visiting staff used this technology, and about one-fifth (20.5%) of the agencies used this technology some of the time, or some staff used computers and some did not.

TABLE 8

HOW AGENCIES MEASURE CLINICAL OUTCOMES

| How Measures Clinical Outcomes | N=78 |
|---|-------|
| Routinely measures clinical outcomes with standardized system that allows comparison of results with other agencies | 29.5% |
| Routinely measures clinical outcomes with system developed in-house | 24.4% |
| Regularly conducts case reviews | 44.9% |
| Does not regularly measure clinical outcomes | 19.2% |
| Other | 16.7% |

Activities on the First Patient Visit

Agencies were asked about activities that took place regularly on the first visit with a patient. The activities reported as most likely to happen with a patient on the first visit included:

- **coverage criteria** and benefits of payor for the services provided (100.0%);
- **education** relating to managing the patient’s condition with greater independence (98.7%);
- **assessment** (94.7%); and,
- **discussion of discharge** (82.7%).

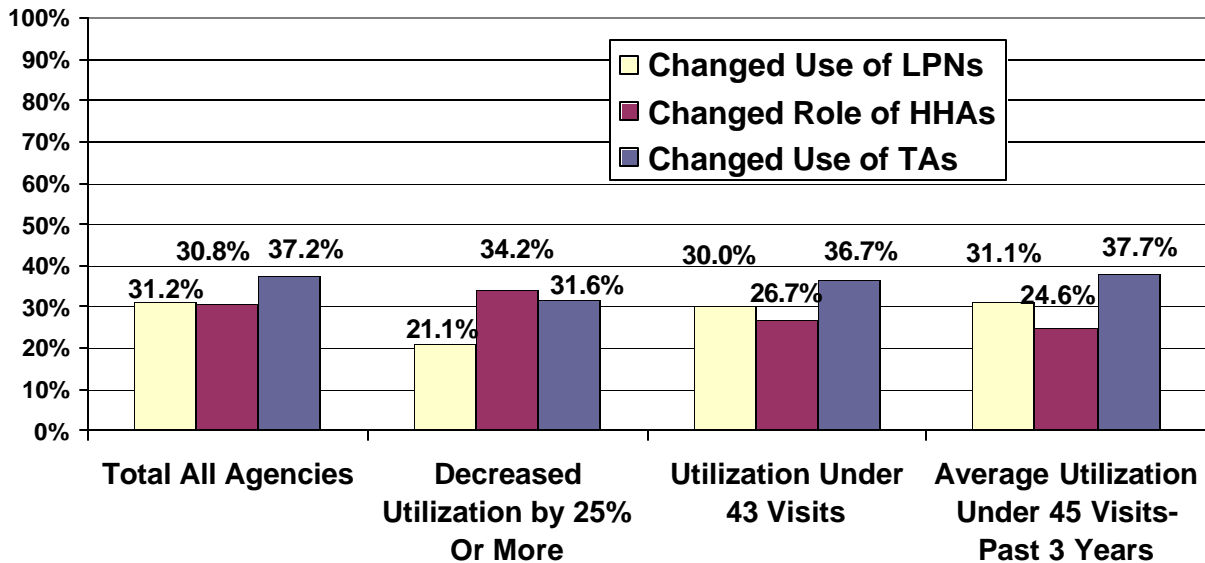
Discussion about discharge on the first visit was reported more often by agencies that achieved a 25% or greater reduction in visits per patient than for other agencies (86.8% vs. 77.5%), although it is clear that nearly all agencies were for the most part discussing discharge on a regular basis.

Trends in Staffing

Between one-fourth and one-third of the agencies surveyed made some type of change in staffing patterns in the past two years as a way of helping to reduce costs or visits (see Figure F). Agencies were most likely to have made changes in use of **therapy assistants** (37.2%), followed by changes in the role of **home health aides** (30.8%) and use of **licensed practical nurses** (31.2%). The trend was generally toward an increase in the use of LPNs and therapy assistants, with a corresponding decrease in the use of home health aides, although this varied somewhat from agency to agency.

Agencies had mixed perceptions about the efficacy of these changes in helping to reduce visits and costs—some thought the changes were very successful, while others thought the changes were not successful. These results were consistent across agency groups in the study.

FIGURE F
CHANGES IN USE OF STAFF AS A MEANS OF REDUCING VISITS OR COSTS



Summary of Factors Critical to Reducing Visits Per Patient

In order to determine precisely which factors were most important for predicting which agencies will be highly successful at reducing their visits per patient and which will be less successful, Fazzi Associates conducted a series of **multiple regression analyses**. These analyses examined the interrelationships between visits per patient, cost factors, and the following issues:

- agency characteristics;
- structure of clinical services;
- case management processes;
- utilization review processes;
- measurement of patient satisfaction and outcomes measurement;
- use of technology; and
- and use of staff (LPNs, home health aides, therapy assistants).

Overall, the multiple regression results indicated that agencies that relied on interdisciplinary team structures for clinical services and were most aggressive about implementing changes in their clinical processes (it didn't matter what kind of changes within those discussed above) were most likely to have lower visits per patient. No single factor was most critical; rather, agencies with the following characteristics tended to have lowest visits per patient:

- clinical services structured by **interdisciplinary team**;
- staff who were **salaried** rather than pay-per-visit;
- implementation of significant **changes** in structuring of clinical services;
- implementation of significant **changes** in case management;
- use of **measurement** (particularly utilization review, but also patient satisfaction and measurement of clinical outcomes);
- **changes** in staffing, particularly use of LPNs and home health aides.

Two factors were especially critical in predicting declines in visits per patient for **agencies that decreased average their number of visits per patient by 25% or more in the past four years**. These agencies tended to have higher visits per patient to begin with, and they made the most dramatic changes in their number of visits per patient (other agencies had already decreased their visits per patient to the point where large declines were no longer possible). These agencies were differentiated from other agencies on three factors:

- they paid particular attention to their use of nurses, both increasing their numbers of visits per patient and reducing the costs associated with those visits;
- they decreased their use of home health aides while maintaining, or in some cases even increasing, the cost per visit associated with those staff; and,
- they made aggressive use of utilization review, using a variety of measurements and sharing the information with a broad array of staff.

Effects of the Interim Payment System on Agencies

All of the agencies surveyed were being reimbursed under Medicare's Interim Payment System (IPS) at the time of the study. We asked participants about the effect that IPS had on their agencies.

Agencies reported that IPS affected them in a variety of ways (see Table 8). About a third (33.3%) of the agencies had to **lay off administrative staff**, and another third (32.1%) had to **reduce expenses because they exceeded per visit cost limits** (see Table 7). Roughly one-fourth had to: reduce expenses because their costs exceeded the aggregate beneficiary cap (25.6%); lay off direct care or clinical staff (24.4%); reduce pay and/or benefits for staff (23.1%); or, lay off management staff (20.5%).

About one-fifth (19.2%) of the agencies reduced services to patients as a result of IPS. Some (12.8%) discharged patients that they otherwise would have continued to serve, and about one-tenth (9.0%) refused admission for some newly referred patients they otherwise would have accepted. Almost one-half (44.9%) experienced other challenges as a result of IPS.

Hospital departments were less likely to have taken actions to reduce administrative or management staff, reduce expenses because their costs exceeded the per beneficiary limit, reduce pay or benefits, or refuse admissions to patients they would have otherwise accepted.

The seven agencies in the sample who reported more than 200,000 visits in their last cost reporting year were more likely to have taken all of the actions listed in Table 8 than agencies reporting fewer than 200,000 visits.

The findings confirmed that IPS was having an impact on all agencies in the study regardless of size, location, or whether the agency maintained or reduced its visits per patient over the past three years.

TABLE 8**HOW MEDICARE IPS AFFECTED AGENCIES**

| How IPS Affected Agencies | N=78 |
|---|-------|
| Agency had to lay off administrative support staff | 33.3% |
| Agency had to reduce expenses because it exceeded per visit cost limits | 32.1% |
| Agency has had to reduce expenses because it exceeded aggregate beneficiary cap | 25.6% |
| Agency had to lay off direct care or clinical staff | 24.4% |
| Agency had to reduce pay and/or benefits for staff | 23.1% |
| Agency had to lay off management staff | 20.5% |
| Agency had to reduce services to some patients | 19.2% |
| Agency had to discharge patients that it otherwise would have continued to serve | 12.8% |
| Agency refused admission for some newly referred patients otherwise would have accepted | 9.0% |
| Other effects of IPS on agency | 44.9% |

Recommendations

There are ten recommendations suggested by the data in this study for agencies seeking to reduce or maintain low visit utilization levels for their Medicare patients.

- 1. Reduce utilization to under 40 visits per patient.** The average utilization for agencies in this study in their most recent cost reporting year was 35 visits per patient. The group with the highest utilization averaged 37 visits and the group with the lowest utilization averaged 27 visits. These are likely to be the utilization levels for the future, especially under the Prospective Payment System (PPS).
- 2. Reduce utilization of home health aides so that there are fewer visits per patient on average by home health aides than nurses.** There were 1.23 nurse visits for every home health aide visit for all agencies in the study. If the group with the highest utilization (agencies that decreased utilization by 25% or more) is not included, the remaining agencies averaged over 1.55 nurse visits for every home health aide visit. This utilization pattern is also consistent with the findings in the PPS Demonstration Project.
- 3. Use the RN or therapist who has the primary responsibility for providing direct care to patients to develop the plan of care.** This was the strategy used by nearly every agency in the study. Invest in education to ensure that these staff have the skills to develop care plans that both meet regulations and effectively address patient needs with the fewest visits.
- 4. Use standardized care plans, care maps, pathways or disease management protocols.** Nearly three-fourths of the agencies in the study used these tools for some or all of their patients. These tools help to reduce utilization while facilitating consistently appropriate care.
- 5. Use the RN or therapist who has the primary responsibility for providing direct care to patients to perform case management.** This was also the clearly preferred strategy for case management by most agencies in the study. It is cost effective but requires an investment in education and in some instances, close supervision to ensure appropriate utilization levels.

- 6. Use salaried staff (as opposed to pay per visit staff) to develop plans of care, to perform the case management function, and to conduct utilization review.** The agencies in the study seldom used pay per visit staff to perform these important control functions. One reason is that while reducing utilization is in the best interests of the agency, it is not in the best interests of staff paid on a per-visit basis.
- 7. Educate patients to manage their condition and discuss discharge with patients on the first visit.** Nearly every agency in the study reported that they began education with patients on the first visit. Over four-fifths of the agencies in the study discussed discharge on the first visit with patients. Both of these activities were seen as important for establishing patient expectations and shaping staff attitudes toward the goal of maximizing the independence of patients and their caregivers.
- 8. Consider organizing clinical services by interdisciplinary teams.** While two-fifths of the agencies in the study structured and managed their clinical services by interdisciplinary teams, the interdisciplinary team structure was a characteristic of those agencies that had the lowest levels of utilization.
- 9. Measure clinical and patient satisfaction outcome data.** While measuring outcome data is useful for helping to determine appropriate levels of utilization, it also allows agencies to determine the impact of changes that are being implemented to reduce costs and utilization. Systems that allow comparison of outcomes with other agencies are especially powerful for determining an agency's strengths and weaknesses. It is strongly recommended that agencies take full advantage of the OASIS data by subscribing to a program that will provide comparative data.
- 10. Establish clear "survival goals" and broadly disseminate utilization and outcome data throughout the agency.** A requirement for all effective change efforts is the establishment of measurable goals and the provision of regular feedback to the people expected to change their behavior and those who supervise them. Agencies seeking to reduce utilization must set realistic goals and publish the results.