



The Quality Management Focus—
Key Strategies for Navigating
the Road Ahead

White Paper
03-001

Inside: The 2002 OCS State of the Industry Report

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Summary of Data Findings

The OCS State of the Industry Report is a yearly analysis performed by OCS' team of benchmark experts, based upon the OCS proprietary benchmark data warehouse. This report focuses on key indicators of quality and utilization outcomes in home health, beginning with national norms and followed by geographic and organizational segmentations. The following is a brief summary of the data findings that emerged on a national level:

- ❑ **Case Weight:** Overall average start of care (SOC) case weight steadily declined from a high of 1.2987 in the fourth quarter of 2000 (4Q2000) to a low of 1.2263 in the first quarter of 2002 (1Q2002). After six consecutive quarters of decline, the industry experienced a slight increase in average SOC case weight to 1.2449 in the second quarter of 2002. This trend stabilized in the third quarter of 2002, remaining steady at 1.2464.
- ❑ **Domain Scores:** The recent increase in case weight appears to be primarily driven by the Service Domain, which evidenced a shift from the "low therapy" domain levels (S0 & S1) to the "high therapy" domain levels (S2 & S3) in 2Q2002. A slight shift in the Clinical Domain distribution, from C0 to C2, secondarily contributed to the case weight increase.
- ❑ **Diagnosis:** Approximately 40% of patients are concentrated in the top 10 primary diagnoses, although no single diagnosis stands out as the dominant diagnosis in home health.
- ❑ **Length of Stay:** Overall average length of stay (LOS) dropped during the fourth quarter of 2000, the same quarter as the implementation of PPS. The average LOS declined from 45.2 days (1Q2000) to 41 days (4Q2000 PPS). Since then, the average LOS has slowly inched back upward to near pre-PPS averages (43.8 days in 3Q2002).
- ❑ **Resource Utilization:** Agencies performed on average about 20 visits per patient during the second quarter of 2002. Approximately 9 of these visits were performed by skilled nurses, 7 by therapists, and 4 by home health aides. We noticed the same trends in visit data for the third quarter of 2002.
- ❑ **Outcomes & Quality of Care:** Outcomes overall (including improvement and stabilization rates) have either stayed the same or improved slightly in the quarters since the implementation of PPS. Outcome scores on many individual measures, however, vary noticeably by geographic region.

Recognizing that differences in data could be due to a number of factors, the goal of this report is to neither interpret the findings nor draw conclusions about the long-term implications for home health. Furthermore, this report is not designed to exhaust all potential avenues of home health data analysis. Rather, the information contained in this report will shed light on key measures of agency performance, while also offering meaningful information to help agencies use comparative information to manage their businesses and prepare for the future.

Setting the Stage: The Quality Management Focus

Experts agree—the home health industry is on the verge of an evolution, one that centers on an unprecedented focus on measuring and comparing quality and outcomes.

In the last several months, we learned that surveyors will be using OBQI reports to “red flag” specific aspects of agency performance, and, in the future, agencies with lower outcome scores could receive more frequent surveys than their counterparts with higher scores.

Perhaps more concerning to the industry is CMS’ plan to publicly release agency-specific outcomes data in 2003—first in 6 states and then nation-wide. CMS will identify a small number of measures that best reflect quality of patient care, benchmark each individual agency’s scores against reference norms, and then release this information publicly via the internet and possibly even full-page ads in local newspapers.

This quality management focus comes on the heels of industry developments that have challenged agencies’ ability to survive. In the last few years, most home health agencies successfully navigated through the institution of the Outcome Assessment and Information Set (OASIS) and the subsequent implementation of the Prospective Payment System (PPS). While the initial shock has subsided, the realities of PPS and the OASIS continue to act as a factor in how agencies manage their businesses.

The combination of an increased focus on outcomes data and the reimbursement limitations of PPS have created an environment where agencies must focus on maximizing quality outcomes while minimizing resource consumption.

In the coming year, the most successful agencies will be those that use the opportunity presented today to prepare for the challenges that lie ahead. While we do not know exactly what the home health public release of data will look like, and while it is unknown exactly how surveyors plan to use the information in the survey process, we do know this—the CMS OBQI reports will form the foundation for both. Today, every agency can access the very same data that will be used to judge their performance simply by going to the CMS website. Herein lies the opportunity.

The agencies that will best navigate the next two years will strategically position their organization in advance of the public release of data by minimizing problem areas, promoting successes, and knowing their own data better than the regulators, surveyors, payers, patients, and public. This involves detecting and fixing serious problems before the surveyor arrives at their agency and before the information is released publicly. More importantly, success requires that agencies focus on more than just potential problems; agencies must proactively harness the power of information that is at their disposal by creating and implementing marketing programs designed to demonstrate the value of the care that they provide.

Now more than ever, agencies must use comparative data to their advantage, in combination with their own expertise and experience, in order to paint an accurate and credible picture of performance. It is in this context that Outcome Concept Systems (OCS) releases our Second Annual State of the Industry Report.

Introduction

The OCS State of the Industry Report is a yearly analysis performed by OCS' team of benchmark experts. This report focuses on key indicators of quality and utilization outcomes in home health, including measures such as primary diagnosis, case weight, length of stay, anticipated therapy, resource utilization (in terms of visits by discipline), and OASIS-based clinical outcomes.

Recognizing that differences in data could be due to a number of factors, the goal of this report is to neither interpret the findings nor draw conclusions about the long-term implications for home health. Furthermore, this report is not designed to exhaust all potential avenues of home health data analysis. Rather, the information contained in this report will shed light on key measures of agency performance, while also offering meaningful information to help facilitate agencies' ability to use comparative information to manage their businesses and prepare for the future.

Methodology

Since 1998, OCS has collected and benchmarked data specific to the home health industry. The analyses included in this report are based upon data from the OCS proprietary benchmark data warehouse, which includes more than 5 million records and represents more

than 1000 agencies. The database consists of information about patients of all payer sources (unless indicated otherwise), represents agencies using a variety of MIS systems, and includes data from every state in the nation. Patient-level outcomes are based upon information contained in the OASIS data set. Segmentations by organizational characteristics (profit status, size, hospital affiliation, and setting) are based upon information collected from agencies that submit data to OCS. Visit data are gathered directly from participating agencies' electronic billing files and form a subset of the larger database (representing a national sample of more than 250 agencies).

Data generated by OCS' benchmark data experts were scrutinized by a variety of industry professionals to ensure accuracy and relevance. Through this rigorous review process, the data was fine-tuned and a series of meaningful findings emerged.

Findings

For the purposes of this analysis, a series of key indicators were selected to best reflect home health agency performance in terms of outcomes and quality of care in a PPS environment. This report focuses on trends that emerged on a national level, followed by segmenting the information by agency and patient characteristics. The segmented analyses are included in this report because there are, in most cases, differences in the results of the analysis by organization type. Different types of organizations, and agencies in different geographic areas, face different goals, operational restrictions, policies, and market conditions. Because of all of these differences, agencies may find tremendous value in comparing themselves to "like" agencies, for a more apples-to-apples perspective of their performance.

The following sections describe the findings in more detail.

Primary Diagnosis

We begin the analysis with an examination of primary diagnosis. This measure is important when developing a more detailed understanding of an agency's data, because data can vary significantly depending upon an agency's case mix. While case mix is composed of a variety of different factors, primary diagnosis is generally viewed as a key contributing patient characteristic.

Theoretically, risk adjustment controls for intrinsic differences in data caused by unique case mix factors and other patient characteristics across 29 of the 41 outcomes on the CMS OBQI reports. However, there are some limitations to risk adjustment, in that it does not control for differences in the remaining 12 descriptive outcomes and it is not used in the calculations of other important performance measures, such as case weight, length of stay, and visit information. Therefore, agencies would benefit from understanding how their patient population is similar to or different from the patient population that comprises the benchmark compare group. Using this information, agencies can better understand the drivers behind any differences that exist between their data and the compare group. Primary diagnosis is a good place to start in this inspection.

As **Figure 1** demonstrates, approximately 40% of all home health patients fall into one of the following top ten primary diagnoses. In each quarter that we have performed this analysis, these same ten primary diagnoses usually emerge at the top of the list.

Figure 1

Top 10 Primary Diagnoses in Home Health 2Q2002

715	Osteoarthritis	7%
428	Heart Failure	5%
250	Diabetes	5%
781	Symptoms involving nervous and musculoskeletal systems	5%
436	CVA-(Acute, ill-defined cerebrovascular Disease)	4%
414	Chronic ischemic heart disease	4%
486	Pneumonia	3%
707	Chronic skin ulcer	3%
820	Fracture of neck of femur (hip fractures)	2%
496	COPD	2%

Percent of SOC assessments collected during the 2nd quarter of 2002

Agencies will want to fully understand how their patient mix compares to the list above before initiating their OBQI process. Using this information, agencies will have a frame of reference for evaluating whether differences in agency data are due to differences in practice or intrinsic differences in patient populations. Furthermore, if an agency has a significant percentage of patients concentrated in any one diagnosis, they may benefit from drilling down to look specifically at this unique segment of their patient population in order to focus performance improvement efforts.

Case Weight

National Trends in Case Weight

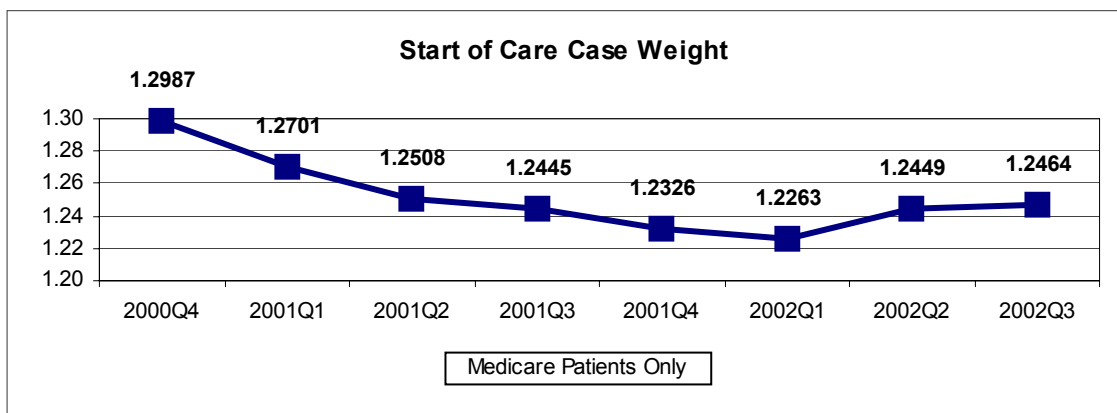
One of the most important measures in PPS is directly related to the core of the prospective payment methodology—case weight. A case weight is reflective of the relative resource intensity of caring for a patient with certain characteristics, as defined by the clinical, functional, and service domains of a patient’s HHRG (Home Health Resource Group). This resource intensity determines an agency’s reimbursement from Medicare for the 60-day episode of care. For all case weight and domain score analyses, only patients with a payment source of Medicare (traditional FFS/PPS—not Medicare, HMO) were included.

Example: How Does Case Weight Drive Reimbursement?

Caring for a patient with a 2.00 case weight is expected to consume twice the resources of caring for a patient with a 1.00 case weight. In this scenario, the agency would receive twice the reimbursement for the patient with the 2.00 case weight as the patient with the 1.00 case weight.

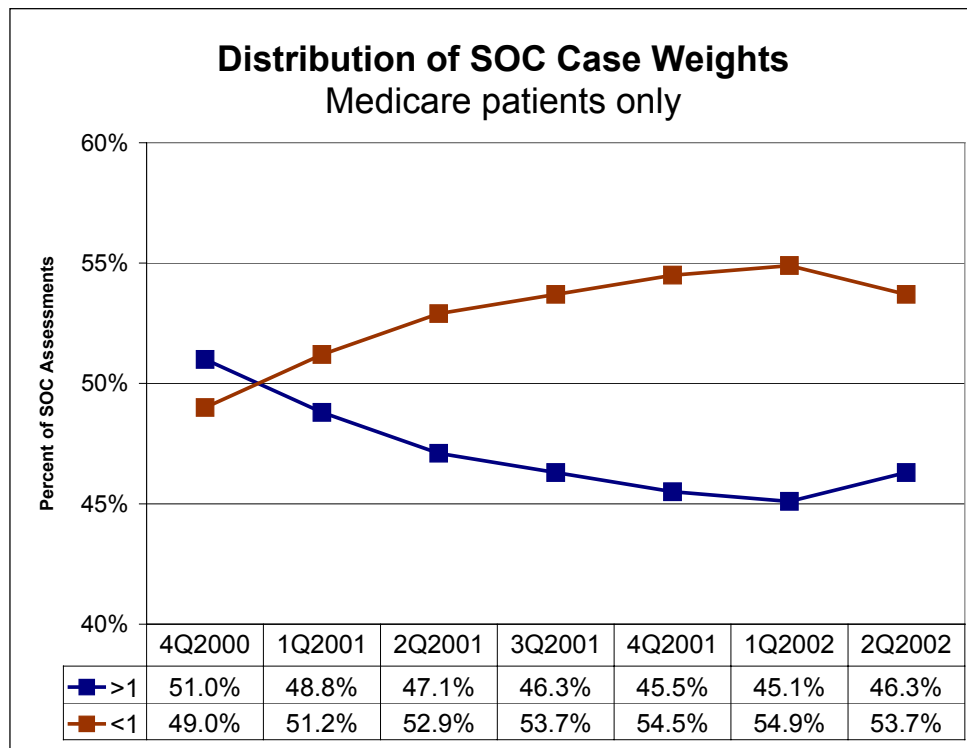
Since the onset of PPS, the national average start of care (SOC) case weight steadily declined from a high of 1.2987 in the fourth quarter of 2000 (4Q2000) to a low of 1.2263 in the first quarter of 2002 (1Q2002). After six consecutive quarters of decline, however, the industry experienced a slight increase in average SOC case weight to 1.2449 in the second quarter of 2002. This trend stabilized in the third quarter of 2002, remaining steady at 1.2464 (Figure 2).

Figure 2



In addition to a trended case weight analysis, a more detailed examination of the distribution of patients in each HHRG/case weight reveals another interesting finding. The case weight scale for PPS was designed to have a median case weight of 1.0. In other words, it was expected that 50% of episodes would have a case weight above 1.0, and 50% would have a case weight below 1.0. The following graph (**Figure 3**) depicts the distribution of start of care (SOC) case weights over time, i.e. the percent of assessments that score a case weight of greater than 1.0 (Blue) and the percent of assessments that score a case weight of less than 1.0 (Red). This analysis is trended from the fourth quarter of 2000 (onset of PPS) to the second quarter of 2002.

Figure 3



As **Figure 3** indicates, just over half (51%) of all SOC assessments had an assigned case weight higher than 1.0 during the first quarter of PPS (4Q2000), and just under half (49%) had a case weight of less than 1.0. The percent of patients with an SOC case weight of less than 1.0 steadily increased between fourth quarter of 2000 and first quarter of 2002, with a slight decrease in the second quarter 2002 (corresponding with the increased average SOC case weight in 2Q2002). As of the second quarter of 2002, less than half (46.3%) of the assessments scored a case weight of greater than 1.0 and more than half (53.7%) scored a case weight of less than 1.0.

In order to understand the recent increase in the average SOC case weight, the PPS analysis was taken to a more detailed level by looking at the components that make-up an HHRG—the domain scores.

The three domain scores, clinical, functional, and service, are generated at the patient-level based upon answers to the OASIS. Domain scores ultimately make up the HHRG, which translates directly to case weight and, therefore, Medicare reimbursement. The clinical domain measures patient clinical severity, ranging from least clinically severe (C0) to most clinically severe (C3). The functional domain measures patients' functional independence, ranging from least functionally impaired (F0) to more functionally dependent (F4). Finally, the service domain measures patient service needs, ranging from requiring fewer services (S0) to more services (S3). The service domain is primarily driven by the answer to the "therapy question," M0825. This question requires the person completing the OASIS to assess if the patient will require 10 or more therapy visits during their 60-day episode of care. If the agency anticipates that fewer than 10 therapy visits will be required, that patient's service domain would be either an S0 or an S1. Conversely, if the agency anticipates 10 or more therapy visits will be necessary, that patient's service domain would be either an S2 or an S3. Because therapy is the foundation for the service domain, the industry typically refers to the S0 and S1 domains as "low therapy" and the S2 and S3 domains as "high therapy."

Figure 4 offers a comparative analysis of domain score distributions across the clinical, functional and service domains between the first quarter of 2002 (1Q2002) and the second quarter of 2002 (2Q2002). The goal was to determine which domain drove the increase in average start of care case weight in the second quarter of 2002.

Figure 4
Trended Domain Score Distributions

Medicare patients only

Clinical	1Q2002	2Q2002
C0	28.0%	26.5%
C1	35.5%	35.7%
C2	30.8%	31.9%
C3	5.7%	5.9%

Functional	1Q2002	2Q2002
F0	8.4%	7.9%
F1	26.4%	26.5%
F2	47.1%	47.4%
F3	10.6%	10.7%
F4	7.5%	7.6%

Service	1Q2002	2Q2002
S0	58.3%	56.9%
S1	5.8%	6.1%
S2	27.2%	27.5%
S3	8.6%	9.5%

Percent of SOC assessments collected during the designated time frame

As the above tables demonstrate, the distribution of domain scores remained rather stable between the first quarter and second quarter of 2002. In the functional domain, the percent of start of care assessments in each of the levels remained the same. The clinical domain experienced a slight redistribution, with a slightly greater number of start of care assessments in higher (and therefore more severe) clinical levels in the second quarter of 2002 (2Q2002). This shift occurred primarily between C0 and C2.

While this minor change in the clinical domain contributed to the increase in case weight in 2Q2002, this shift alone cannot account for the case weight difference. The difference in case weight between two HHRGs with identical functional and service domain scores—one with a C0 and the other with a C2 clinical domain score—is approximately 0.30. Thus, the impact of the clinical domain on case weight in this scenario is too small to single-handedly cause the case weight increase.

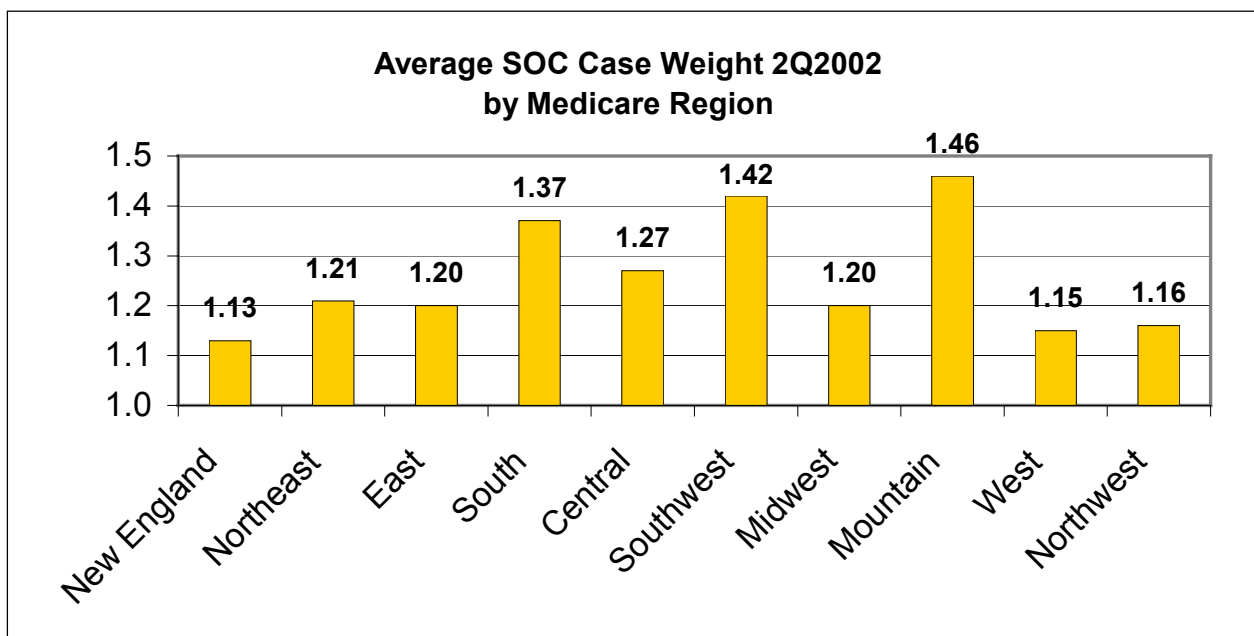
The service domain, on the other hand, plays a larger role in the increase in the average start of care case weight in the second quarter of 2002 (2Q2002). Although the change in domain distribution would appear to be insignificant—a 1% redistribution from S0 to S3—the relative weight assigned to the service domain has enough impact on the case weight that this shift accounts for the majority of the case weight increase in 2Q2002. The difference in case weight between two HHRGs with identical clinical and functional domain scores—one with an S0 and the other with an S3 service domain score—is more than a full point (1.0).

According to this analysis, a slight change in the service domain distribution, combined with another slight shift in the clinical domain, led to the first increase in average SOC case weight since the onset of PPS.

Case Weight Segmentations by Geography & Agency Characteristic

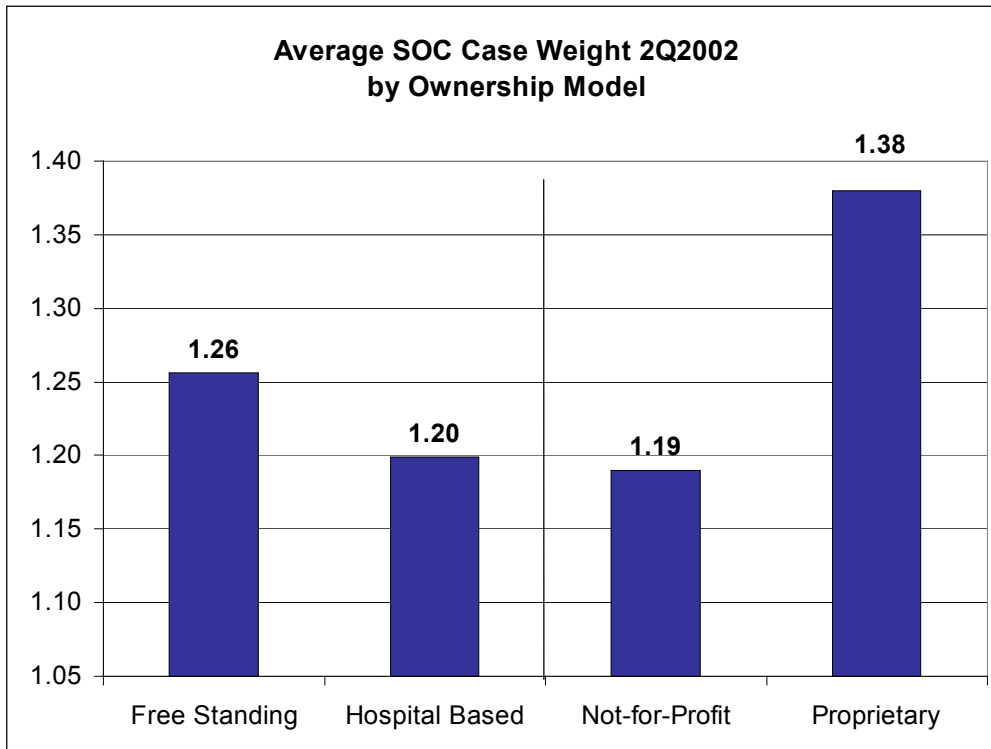
Though national averages provide an important aggregate perspective, average SOC case weight can vary substantially by geographic region and by organizational characteristic. As the graph below (Figure 5) demonstrates, we find lower case weights in the New England, West, and Northwest regions and higher case weights in the South, Southwest, and Mountain regions.

Figure 5



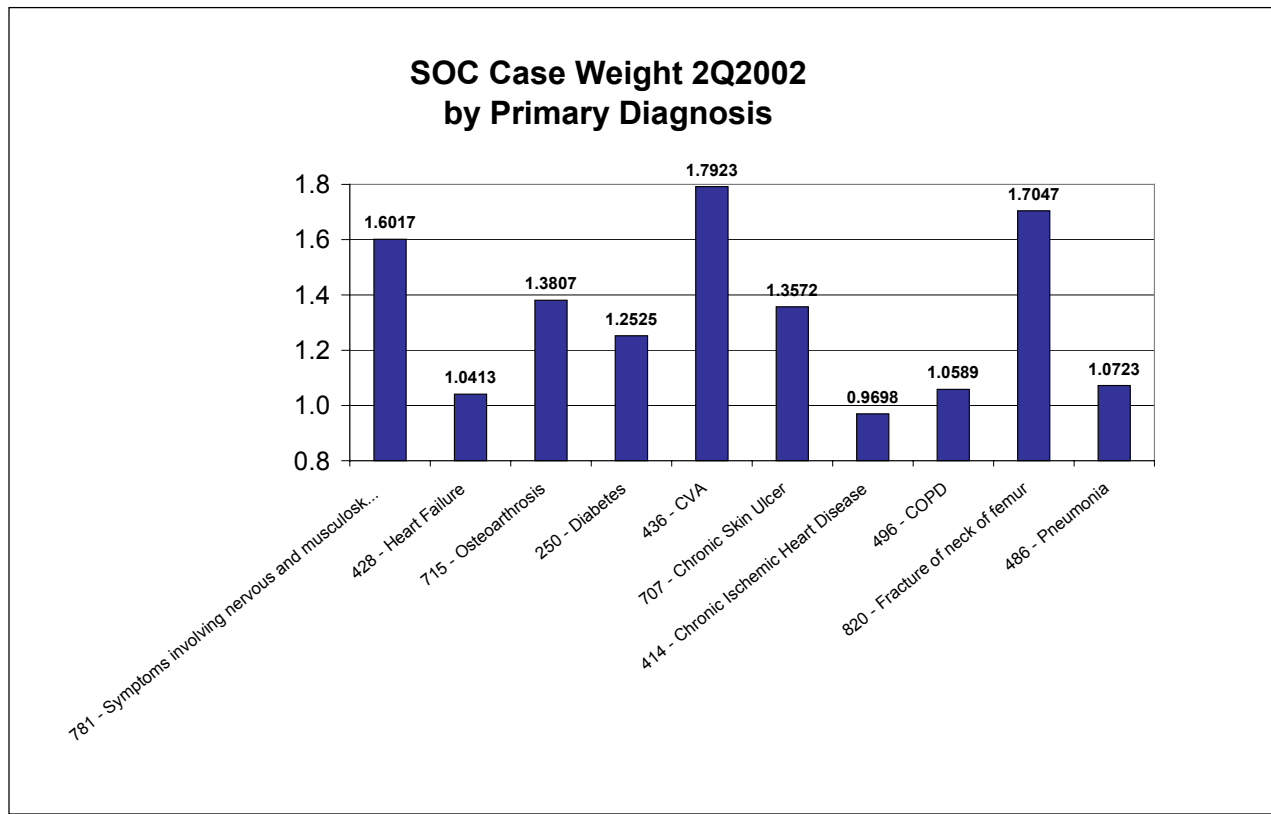
Furthermore, when the case weight analysis is segmented by organizational characteristic, we find a slight difference in case weight by hospital affiliation and a significant difference in case weight between proprietary and not-for-profit organizations (**Figure 6**).

Figure 6



In addition to segmenting case weight information by agency characteristics, it is also useful to evaluate differences in average SOC case weight by patient characteristics. Although there are several different criteria that can be used in a drill-down analysis such as this (for example, presence or absence of a caregiver, high risk factors, and age), primary diagnosis was used in this study to examine variations in case weight.

Figure 7



As one would expect, average SOC case weight varies considerably based for patients with different primary diagnoses (**Figure 7**). Patients with a primary diagnosis of Heart Failure (428) and Heart Disease (414) have lower average SOC case weights than patients with a primary diagnosis of CVA (436) and Hip Fracture (820). Because of this case weight variation, agencies would benefit from understanding how unique aspects of their patient population impact case weight and therefore reimbursement.

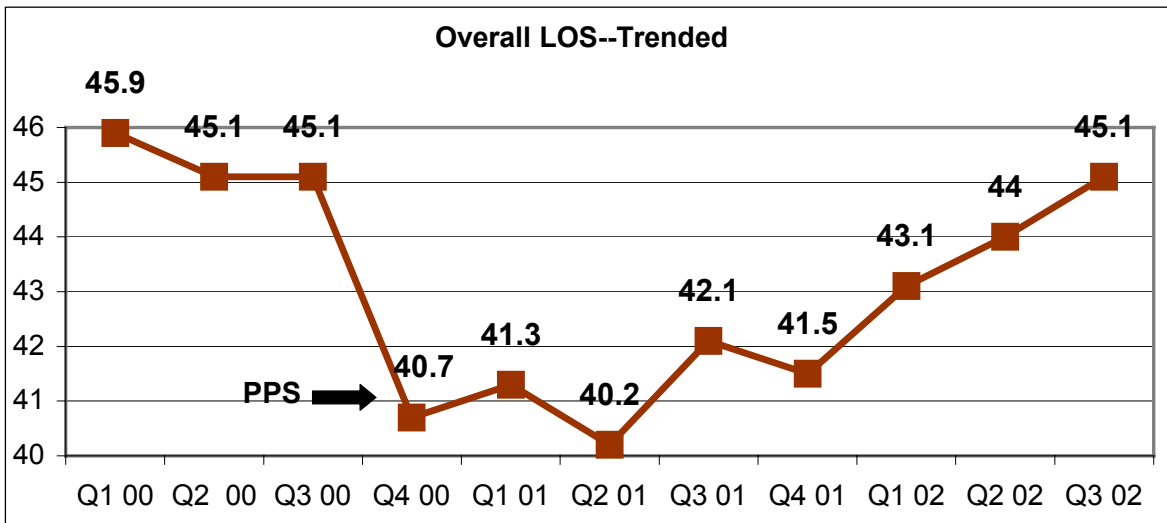
Length of Stay

When PPS was implemented, the government established parameters for a patient's "episode" of care in home health—60 days. While some argue that length of stay (LOS) is not a direct indicator of resource intensity in PPS, others find the measure to be useful because it specifically addresses the time frame for which a patient is on service.

As **Figure 8** indicates, average length of stay dropped from approximately 45 days to approximately 41 days during the fourth quarter of 2000, the same quarter PPS was implemented. Average LOS stabilized at approximately 40-41 days in subsequent quarters,

followed by a slow inching back up to almost pre-PPS averages (43.8 days in 3Q2002). Regardless of the perceived utility of LOS as a performance measure, many cite this as an example of the way in which market factors can influence industry data.

Figure 8



Like the case weight analysis, average length of stay can also vary depending on the organizational characteristic and geographic location of the agency. **Figures 9-11** demonstrate this variation.

Figure 9

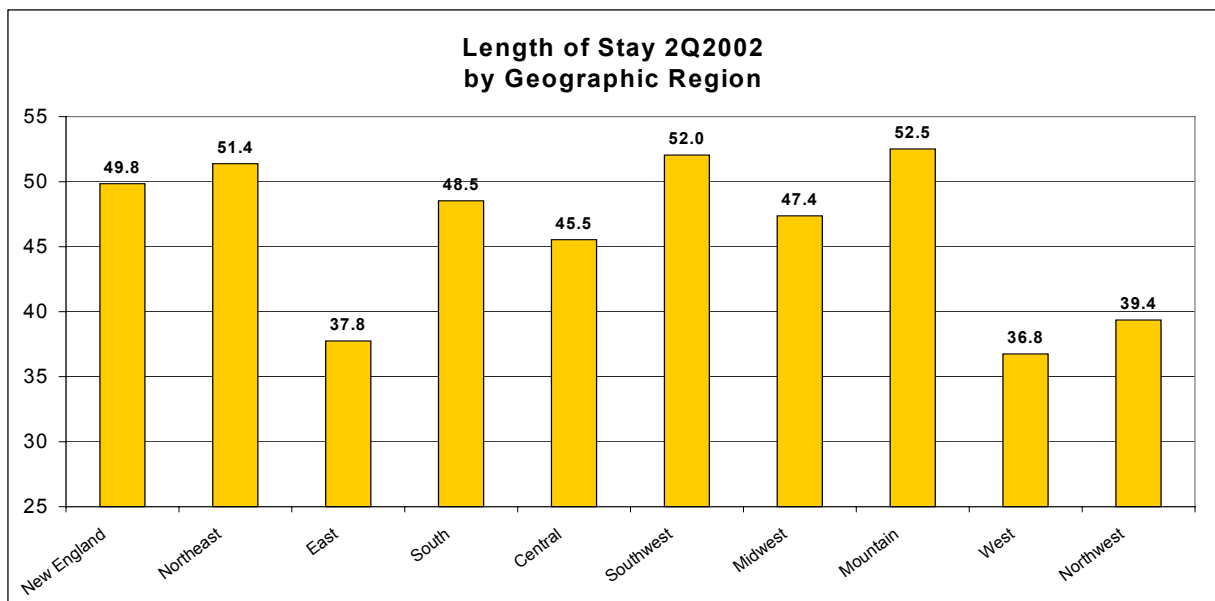


Figure 10

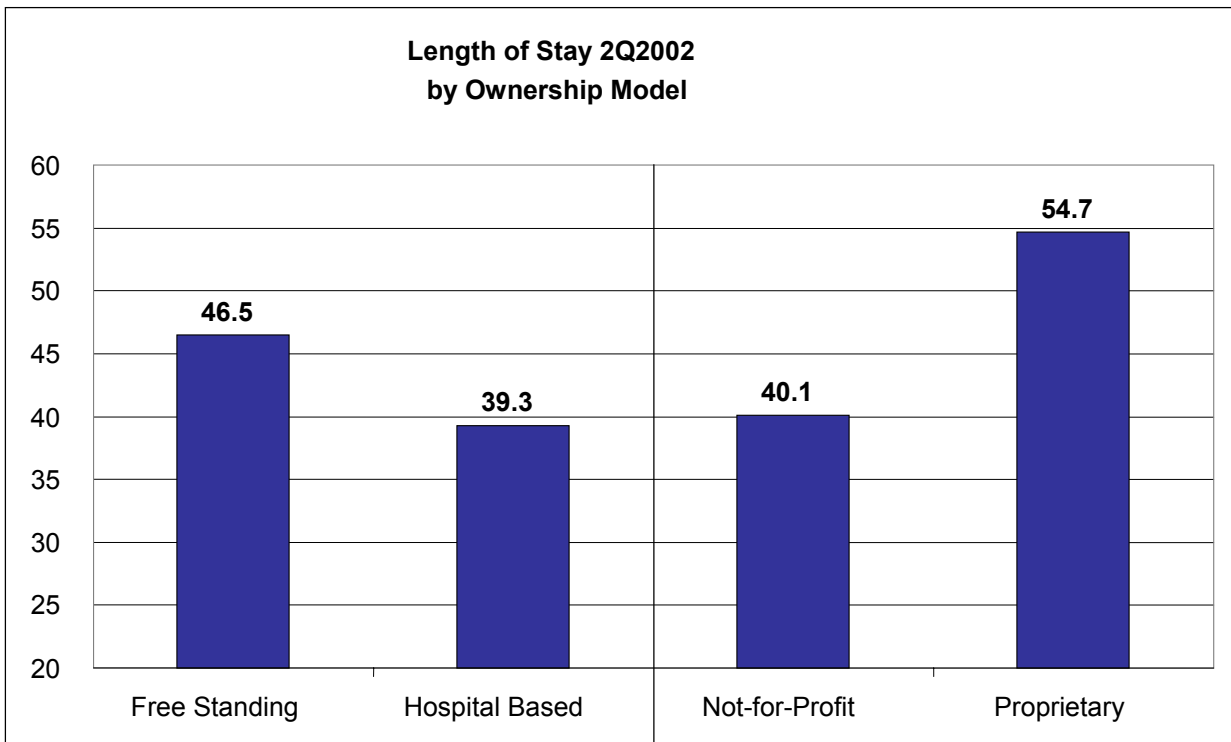
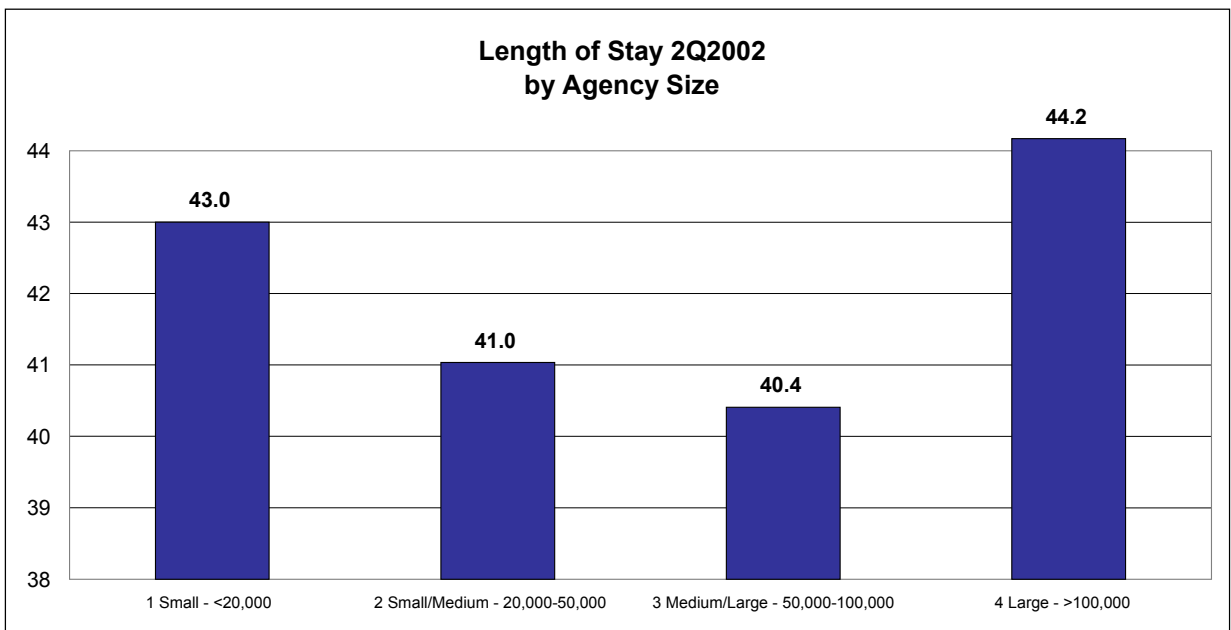
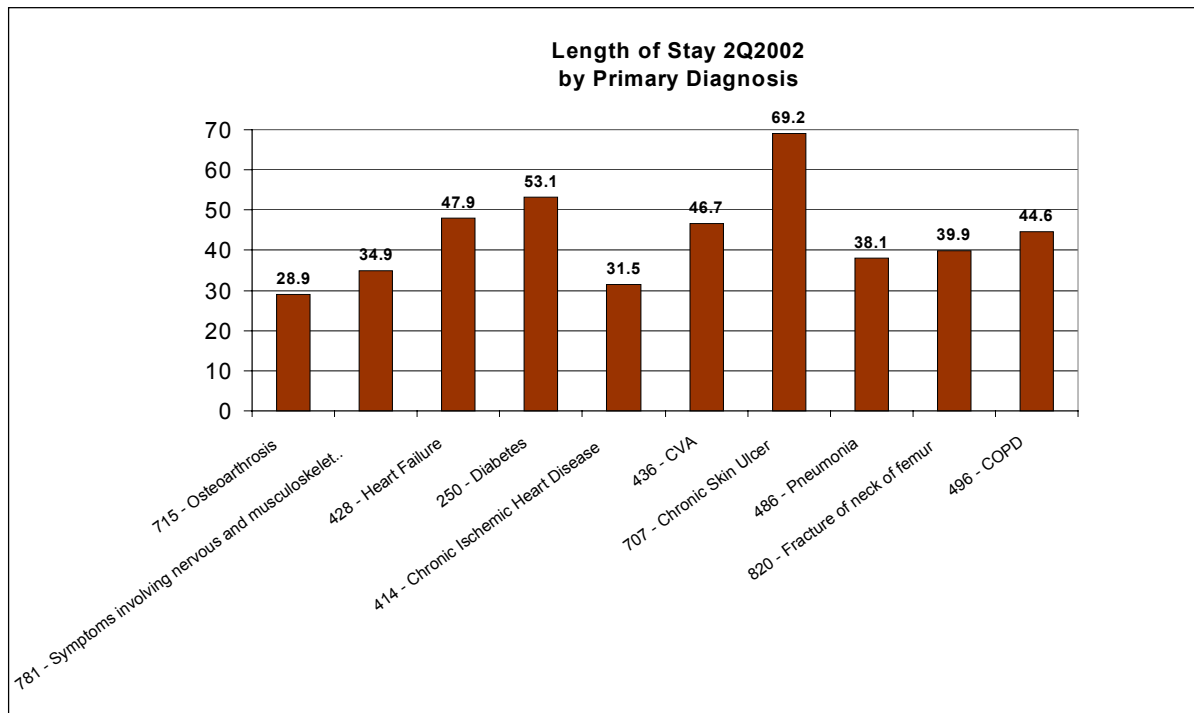


Figure 11



Furthermore, as would be expected, average length of stay fluctuates depending on patient characteristics. The following graph (Figure 12) offers an example of these differences.

Figure 12



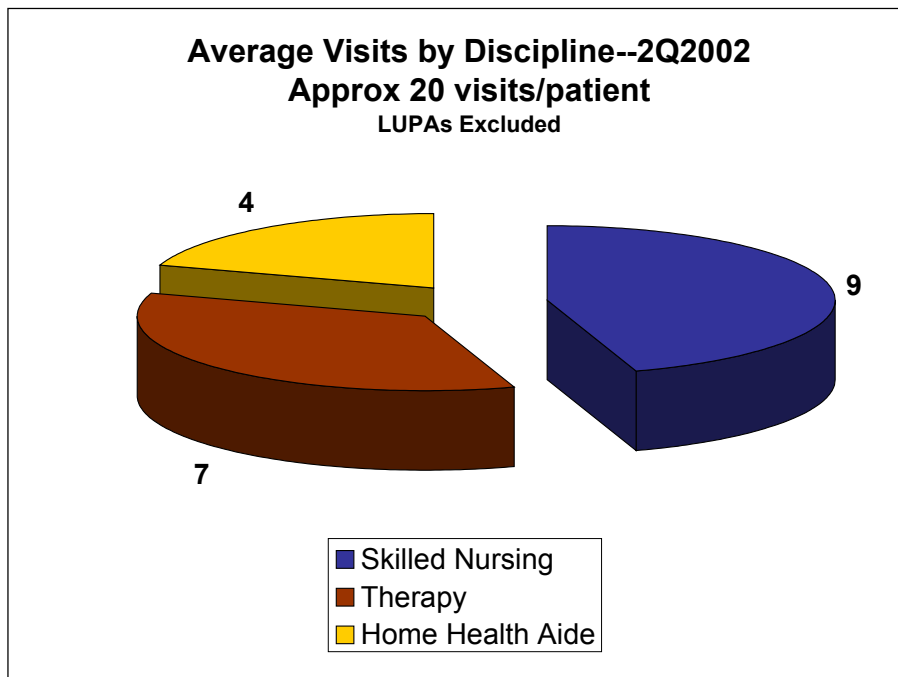
The above graphs demonstrate that average length of stay for different types of agencies can vary by as much as 15 days; for different types of patients the variation on the average can exceed 40 days. Because of these fluctuations, agencies that are interested in comparing average LOS will want to ensure that they are benchmarking themselves against a representative compare group.

Resource Utilization (Visits)

In a PPS environment, agencies must use data to constantly enhance the relationship between cost and quality. When evaluating the cost component of the equation, visit data is an important indicator of performance. Although it would seem ideal to measure resource consumption by cost, this indicator is not always comparable between organizations. Visit data, on the other hand, is a measure that is generally more consistent between organizations. Because visits tend to be the most costly component of care, agencies can typically compare, understand, and control the cost of care by comparing, understanding, and controlling the use of visits.

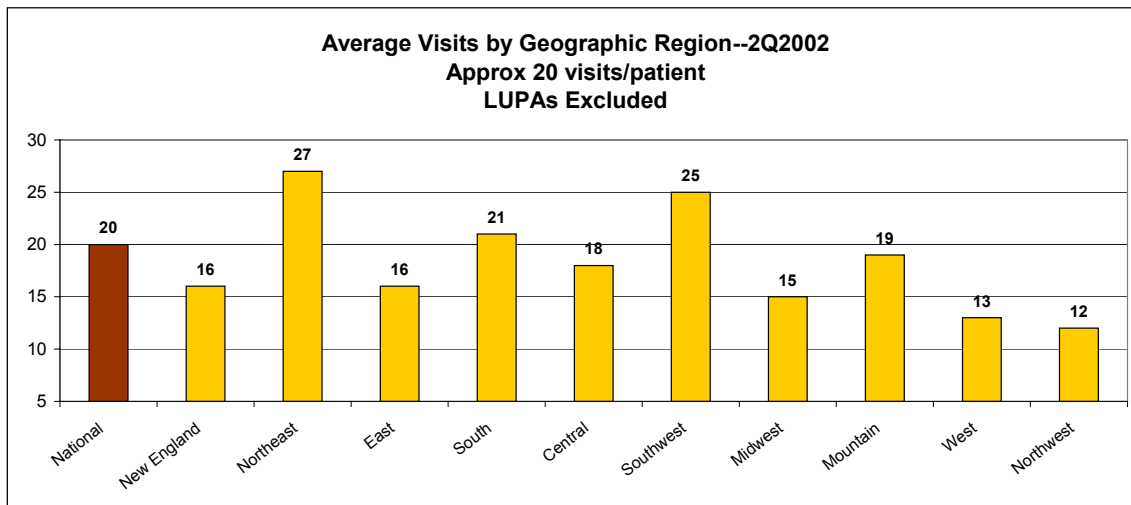
Nation-wide, during the second quarter of 2002 (2Q2002), agencies provided about 20 visits per patient, on average, during a complete case of care, admission to discharge (**Figure 13**). This is further segmented by discipline, with agencies performing an average of about 9 skilled nursing visits, 7 therapy visits, and 4 home health aide visits per patient. (Note: We observed the same trends in visit data for the third quarter of 2002.)

Figure 13



As with earlier analyses, a great deal of variation exists depending on geographic region. The chart below (**Figure 14**) demonstrates the differences that exist in resource utilization, with lower visits in the West and Northwest and higher visits in the Southwest and Northeast.

Figure 14



Further segmenting visit information by agency characteristic, we offer the following data to demonstrate differences (or lack thereof) in average number of visits per patient by hospital affiliation (Figure 15), profit status (Figure 16), and agency size (Figure 17)

Figure 15

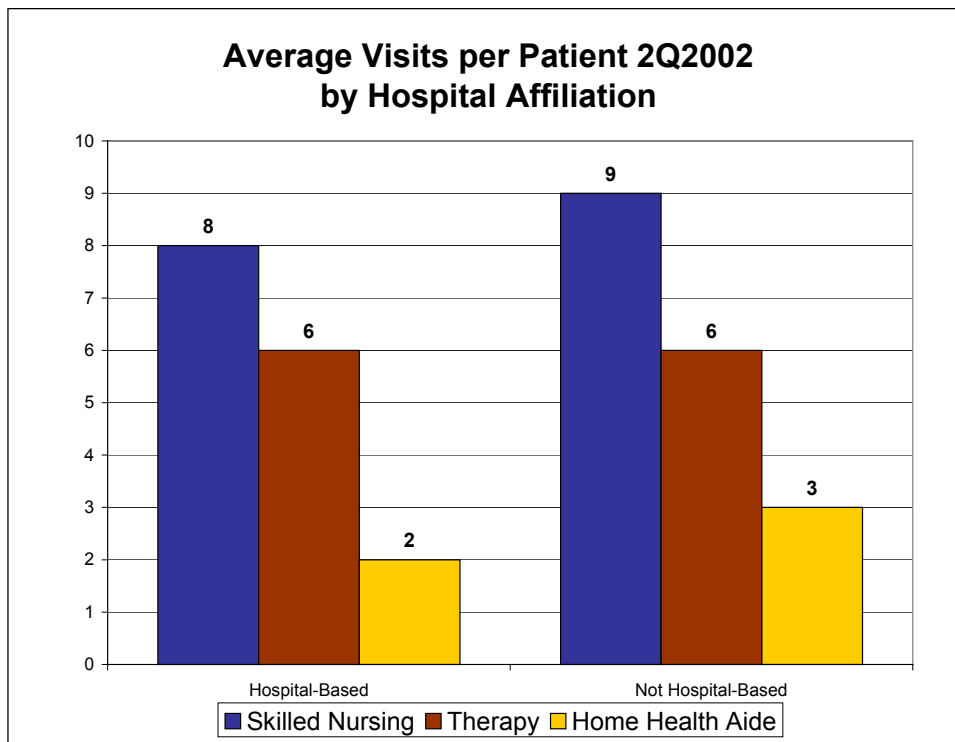


Figure 16

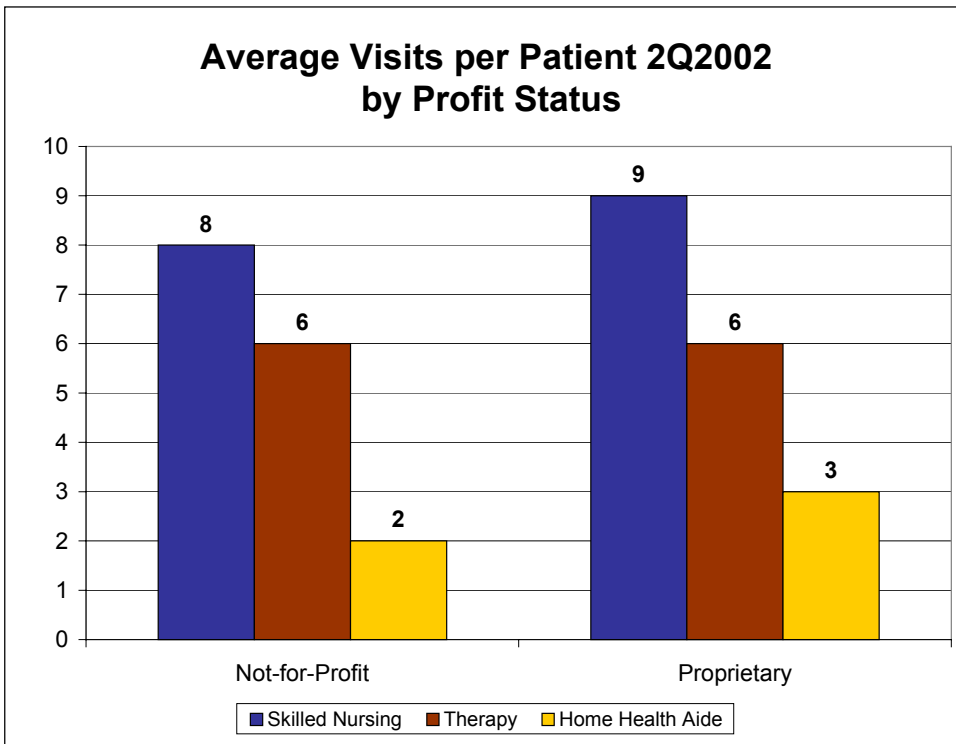
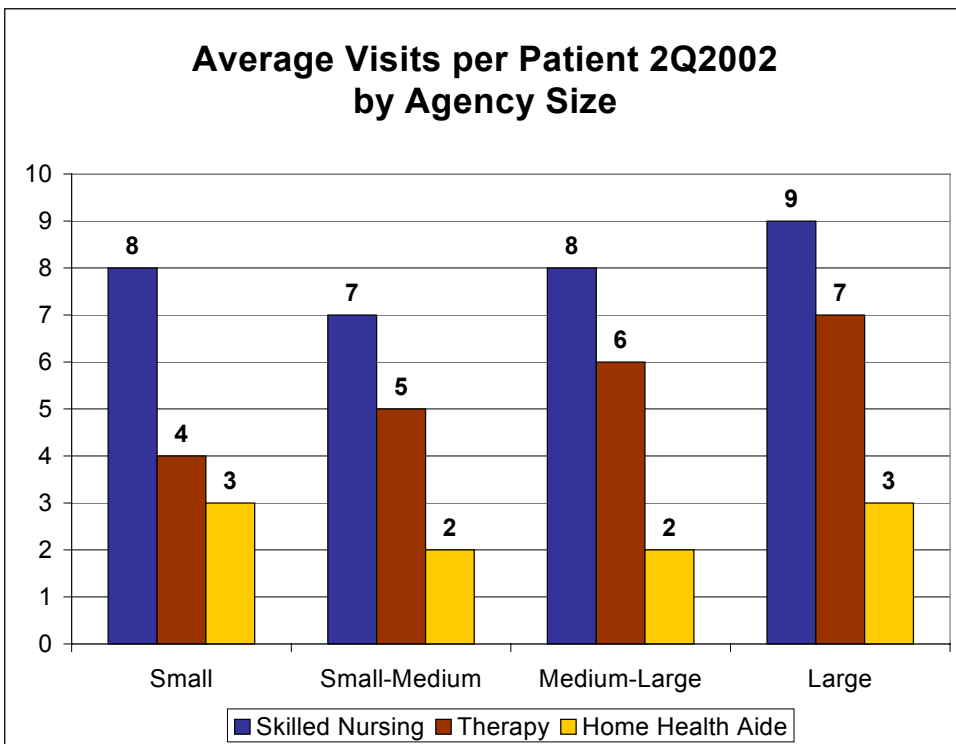


Figure 17



While average visits per patient differ only slightly by hospital affiliation and profit status, there is a more prominent trend in the differences that exist in average visits per patient by agency size (where average number of visits per year defines size). Although variation is minimal within the skilled nursing and home health aide disciplines (**Figure 17**), differences by agency size become more apparent in therapy utilization. The smallest agencies tend to perform, on average, about one-half the therapy visits per patient of the largest agencies, with each step up in agency size incrementally utilizing more therapy visits.

Anticipated Therapy

Visit information is also useful because it allows us to examine how well agencies are anticipating therapy (answer to M0825) at start-of-care (SOC). It is important to engage a specific analysis of anticipated therapy largely because therapy so dramatically impacts both the cost of providing care and reimbursement. Depending upon the answer to the M0825 question, whether or not it is anticipated that a patient will need ten or more therapy visits, an agency can expect a difference of approximately \$2000 in reimbursement for the care of that patient.

Using visit information, it is possible to correlate answers to M0825 with actual therapy visits performed—out of this formula, we determined national averages in “therapy accuracy.” It is important to recognize, however, that “therapy accuracy” is not always an indicator of whether the M0825 question was answered correctly. Several variables, including the patient refusing visits, therapist staffing shortages, and unexpected patient hospitalizations, can impact whether or not the agency actually performs the anticipated therapy visits. Agencies continue to remark, however, that correctly anticipating the ten therapy visit threshold presents significant challenges—it is in response to this common struggle that the relationship between M0825 and visits was analyzed.

As of the second quarter 2002, agency percentages remained high when predicting low therapy (fewer than ten therapy visits); fewer than ten therapy visits are actually provided in 96% of the cases that anticipate the need for fewer than 10 visits. The accuracy rate is lower, however, in high therapy (ten or more therapy visits) cases; agencies actually perform ten or more therapy visits 70% of the time when high therapy was anticipated.

Quality Outcomes

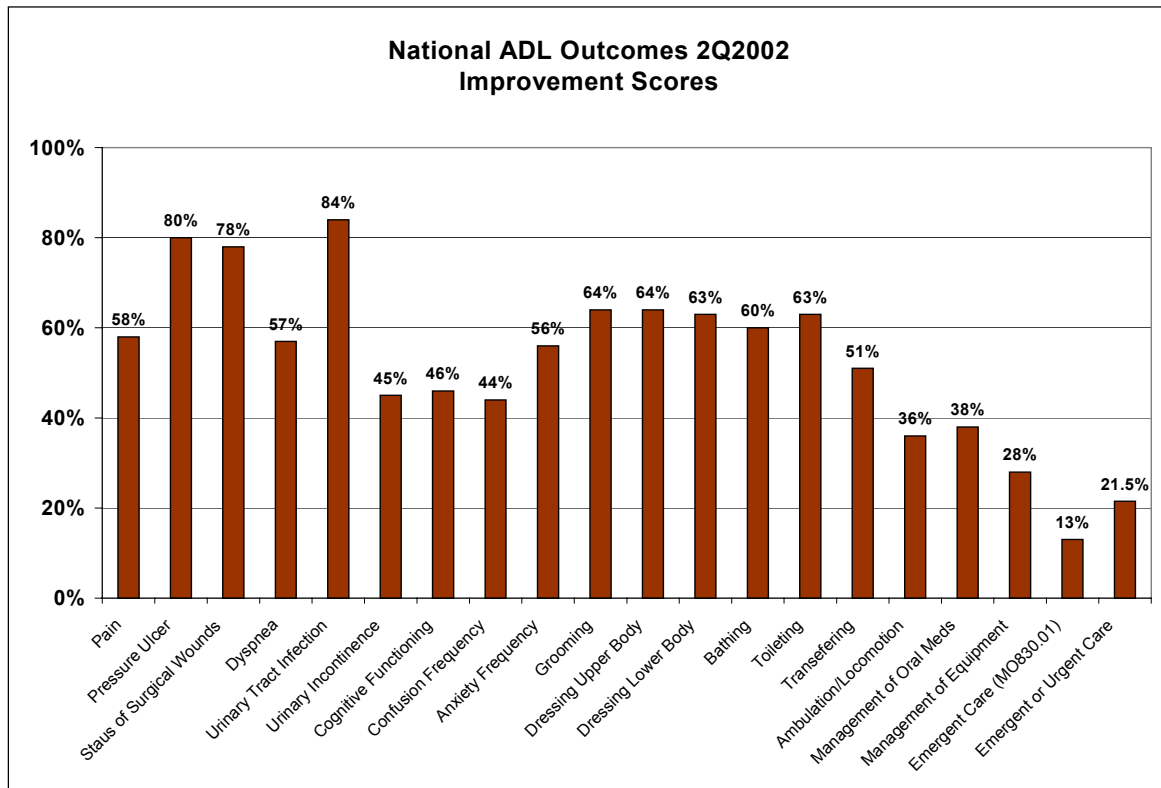
In addition to forming the second half of the delicate cost/quality balance, outcomes are a universal and fundamental aspect of operating a home health agency. Agencies are in the business of providing quality patient care, and in the coming year, the public, payers, agency competitors, and surveyors will all be using outcomes data to judge agency performance.

Quality outcomes for this portion of the analysis are based upon information contained in the OASIS data set. An outcome is measured by comparing the score on the OASIS assessment at start of care (SOC) to the score at Discharge. There are three different outcome measures that can be used:

- **Improved** measures how many patients DID improve out of those who COULD HAVE improved
- **Declined** measures how many DID decline out of those who COULD HAVE declined
- **Stabilized** measures how many DID stay the same or improve out of those who COULD HAVE

When evaluating outcomes, agencies must first understand how their performance compares to other organizations' nationally. It is in this context that we offer the following information (**Figure 18**) as a baseline for the outcomes analysis section of this report.

Figure 18



Using the CMS OBQI Reports

National data is made available for free from CMS in the form of the CMS OBQI Reports. Because this is the very same data that will be used to measure agency performance in the survey process and by the public, and because these are the only reports that offer a risk-adjusted perspective of agency performance, agencies will benefit from careful examination of this data.

It is important, however, to recognize the limitations of these reports. Specifically, the CMS OBQI Reports only offer information for one-year time frames. This makes performance tracking especially challenging because agencies lack the ability to determine in “real-time” whether or not their OBQI action plan is having the desired effect. In addition, the one-year time frame does not allow for any tracking of seasonal variations within an agency’s data. Thus, more frequent comparisons are important to accomplish the objective of outcomes enhancement, to prepare for a survey, and to position in light of the public release of information.

The Importance of Geographic Benchmarks

Another limitation of the CMS OBQI Reports is that they provide only a national reference norm. Agencies would benefit from greater flexibility in their benchmarks, including geographic and characteristic-based benchmarks. These comparisons not only provide significant value by offering peer level comparative data, but geographic benchmarks in particular become critical as agencies are preparing for the public release of outcomes data.

The following graphs offer a brief demonstration of how outcome scores vary by geographic area (Figures 19, 20, and 21).

Figure 19

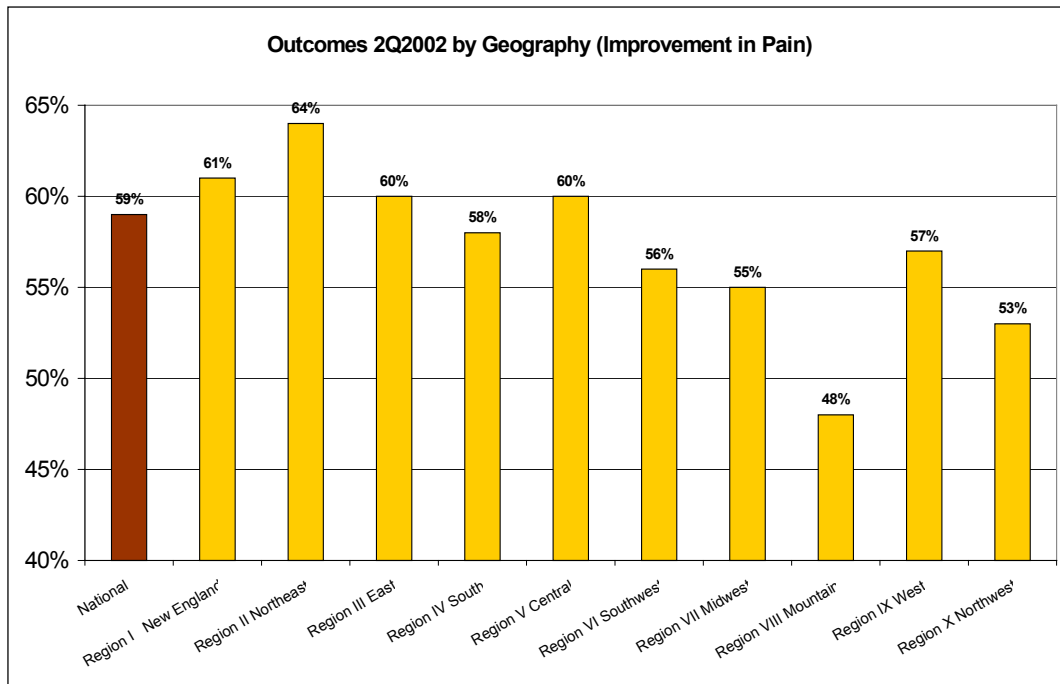


Figure 20

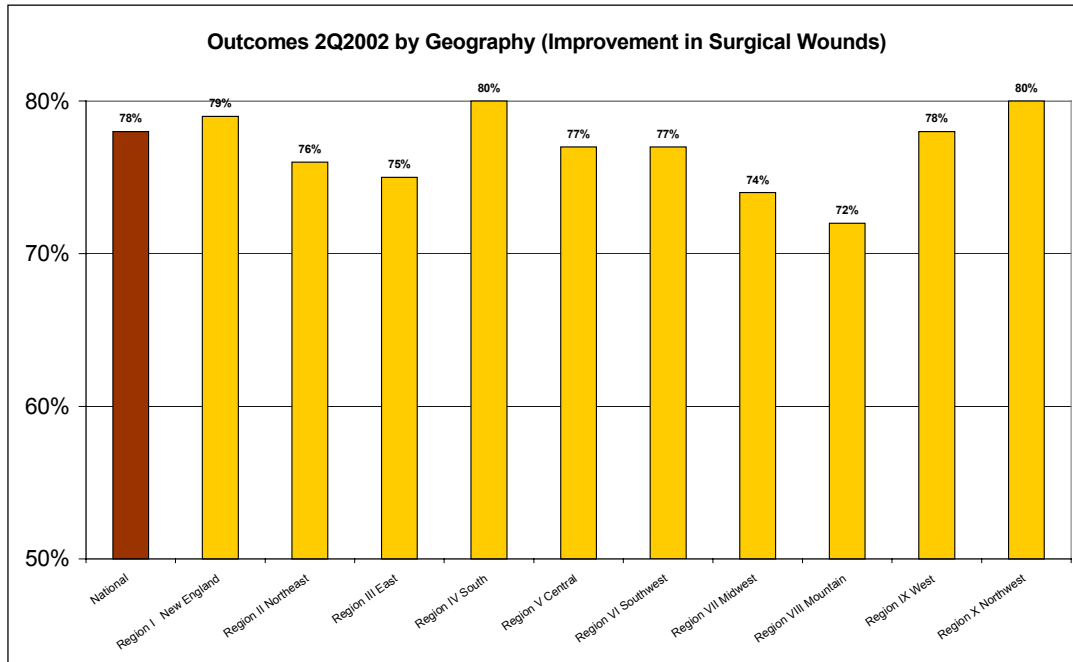
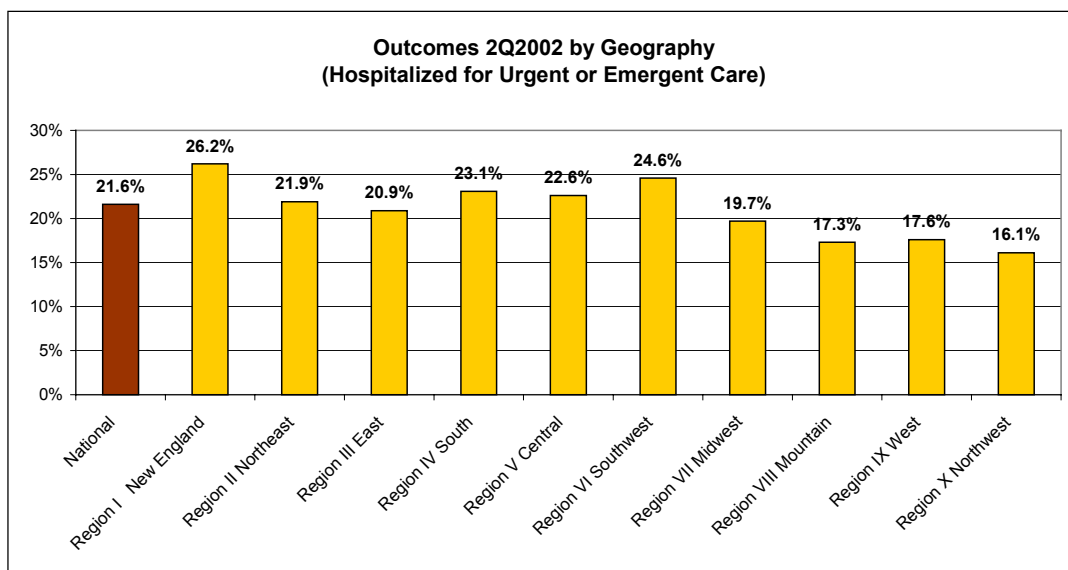


Figure 21



As the above graphs demonstrate, outcomes can vary by as much as 11% depending on the geographic region. When data is released publicly, individual agency information will be shown as compared to national and state averages, side by side with the information of other agencies in the area. Consumers will likely focus their attention on how individual agencies compare to each other as much, if not more than, how they compare to industry

norms. Thus, agencies will want to begin comparing themselves to local geographic norms in advance of the release of data so that they are more aware of how their outcomes will be viewed by the public.

Conquering Data Overload & Navigating the Road Ahead

Even the most progressive agencies are grappling with a new problem—the home health industry switched from “no data” to “too much data” in a very short time period. With this swing of the pendulum has come the problem of “data overload.”

So, what is the answer for data overload? *The answer is more data.*

How can this be?

The answer does not lie purely in increasing the volume of reports and adding different types of data; the key to success is more relevant and meaningful data. Agencies need access to the kind of information that *they* can control, rather than being controlled by the data itself. This data must provide a high-level depiction of overall performance while enabling them to “drill-down” into more narrowly defined aspects of their agency.

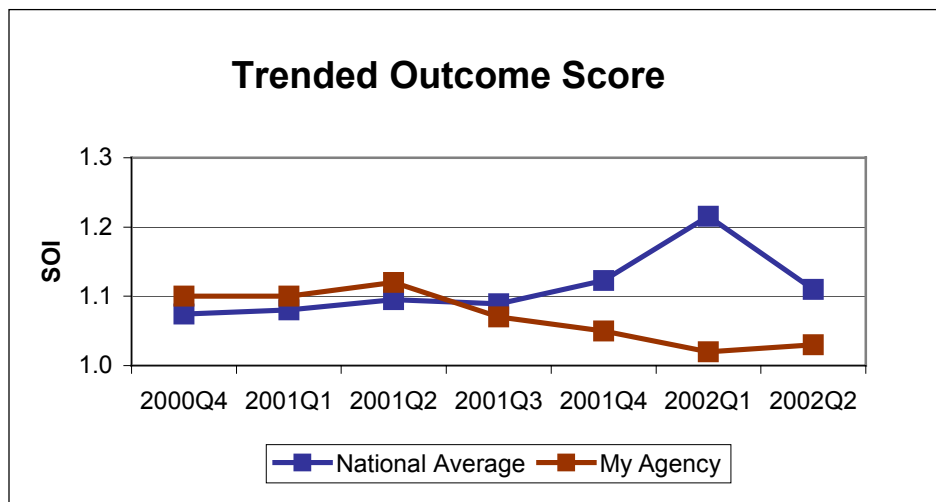
Summary executive-level reports are the first key to success. While it is important to examine individual outcomes as a part of OBQI and PI activities, executives might also want to understand how their agency performs overall in managing outcomes. Rather than trying to dig through multiple micro-level analyses to get at that answer, it would be useful to have a high-level portrait of performance. From there, executives can determine where to focus their time and attention.

But, how can one combine up to 50 different clinical and functional outcomes into one comprehensive picture?

The solution is to create a single number or “score” that represents an agency’s overall performance in managing quality outcomes. One approach to developing this type of score involves looking at various outcome measures to assign a patient score at start of care and discharge, and then comparing the two scores to identify the change in patient status. Each patient would then receive an individual outcome score, which could be “rolled-up” to the agency level.

This resulting outcome score could be used in a couple of different ways. First, an agency could trend their outcome score over time to identify any changes in overall performance, as demonstrated in the following graph:

Figure 22

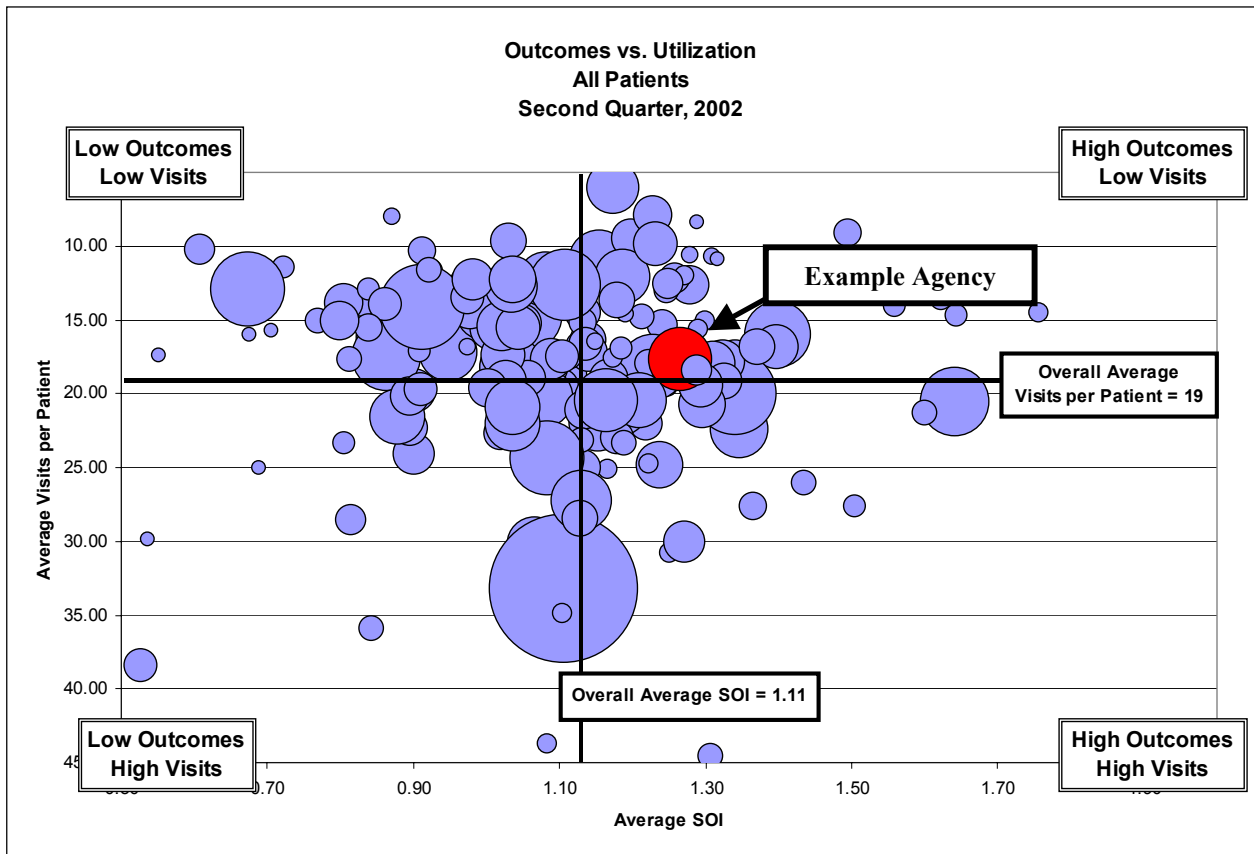


This trended analysis reveals that prior to the second quarter of 2001 (2001Q2), the example agency (“My Agency”) was consistently above the national average. By the third quarter of 2001 (2001Q3), the agency had dropped below the national average, and it remained there in the subsequent quarters. If this were a real agency, they would want to investigate any changes in agency practice or patient population between the second and third quarter that could have led to a decline in outcomes. They might also want to evaluate if this decline appeared across different groups of patients, or if it was isolated to a subset of patients.

Armed with this information, agency executives could then target their analysis in a more focused manner and determine whether they had a problem that needed “solving” or whether there was a certain group of patients that specifically contributed to this trend. In either case, it would be beneficial for agency management to understand this information before they faced questions by surveyors or the general public.

In addition to the trended analysis, a single outcome score can be used to cross-analyze different types of data from different sources. In the following bubble graph (**Figure 23**), average visits per patient were plotted against an outcome score in order to represent how well an agency is co-managing resources and quality of care.

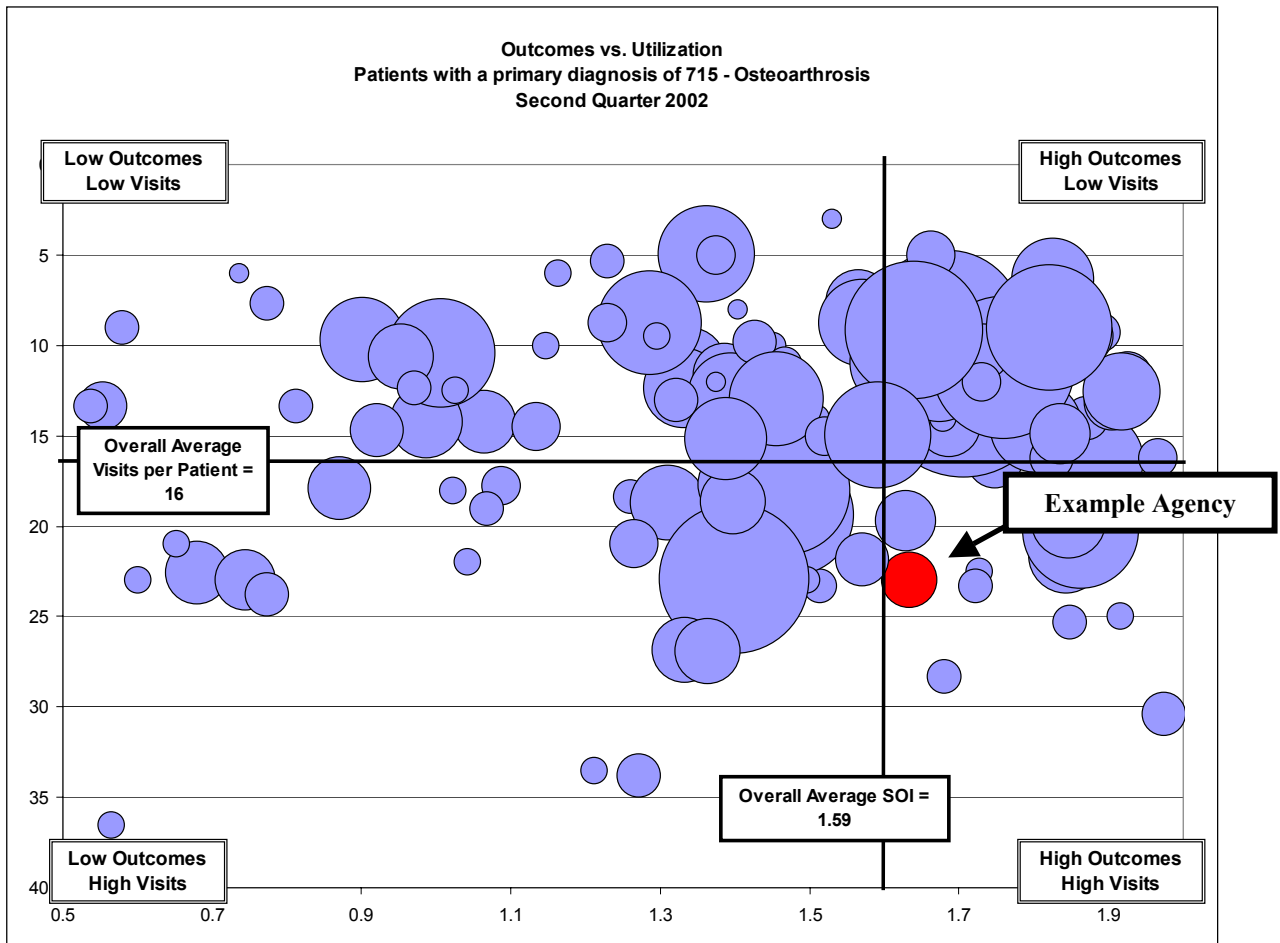
Figure 23



In the above bubble graph, the Example Agency can quickly determine that they are located in the category of agencies with above average outcomes and below average visits per patient. This graph would suggest that the agency is successfully balancing the outcomes/resource consumption equation.

High level executive analyses can also include a drill-down component. In the following graph (Figure 24), the same summary bubble graph concept of cross-analyzing visits and outcomes is applied to understand agency performance in caring for a subset of patients, those with a primary diagnosis of Osteoarthritis.

Figure 24



The above graph (**Figure 24**) demonstrates that the Example Agency is achieving higher than average outcomes while expending higher than average visits for their Osteoarthritis patients as compared to other Osteoarthritis patients nationally. Given this information, agency executives may want to perform additional analyses to answer some very important follow-up questions. For example, they may want to first determine if they are making or losing money on these patients. If they are not losing any money, and they are still achieving higher than average outcomes, they may question if it is even a problem that they are expending higher than average visits. They may want to instead consider if it is an agency goal to identify ways to achieve even greater outcomes for this segment of their patients. Given their high outcomes, would the agency benefit from setting up a marketing program designed to increase the number of Osteoarthritis patients referred to them?

In the above example, it may be an agency goal to move their “bubble” into the upper right hand quadrant. How would one strategically use data to accomplish this goal? A bubble

graph analysis not only helps individual agencies assess their performance, but it can also be used to tell us more about the most successful home care organizations. Starting with a comparison like this, we can ask ourselves what is different about the organizations that fell into the “best practices” quadrant with low visits and high outcomes. We can begin to solve this mystery by identifying the operational characteristics of the agencies in the upper right hand quadrant. This type of information could help executives determine whether changes in their own practices might help them achieve better outcomes and/or lower resource consumption.

The second key to success is benchmark data drill-down. In addition to a summary perspective, agencies need to have better control over how they dig into the information to identify the root of a problem or the reason for a success. The concept of drill-down can be defined as the practice of narrowing the focus of outcomes analysis. Rather than looking at aggregated outcomes for your entire patient population, drill-down allows you to examine outcomes for a specific subset of patients. This subset can be identified by characteristics such as diagnosis, referring physician, HHRG, case weight range, payer source, discharge disposition, or any combination of these.

The following table (**Figure 25**) demonstrates the degree to which data can vary by patient characteristic. In this case, we examine select case mix measures and notable outcomes, and compare the data for COPD patients with that of national averages.

Figure 25

Drill-Down by Diagnosis COPD

Case Mix	COPD	NA
Average Length of Stay	44.7	43
Average SOC Case Weight	1.054	1.2449
High Risk Factor: Heavy Smoking	19%	8%
High Risk Factor: Obesity	15%	15%
Anticipated need for 10+ therapy visits	22.6%	36%
Patient Lives Alone	33%	26%
Notable Outcomes	COPD	NA
Speech & Language: Improved	52%	46%
Pain: Improved	57%	58%
Urinary Incontinence: Improved	52%	45%
Cognitive Functioning: Improved	52%	46%
Confusion Frequency: Improved	47%	44%
Behavioral Problem Frequency: Improved	77%	64%
Eating: Improved	61%	57%
Caregiver Mgmt of Equipment: Improved	41%	30%
Average Visits per Case	19	20

While some of the data is similar, there are distinct differences in data between COPD patients and the national sample. For example, COPD patients have a higher percentage of patients with a high risk factor of heavy smoking and a lower anticipated need for high therapy. As an agency or clinical director, this data might help shed light on how to better meet the needs of this subset of patients and how these patients may impact resource allocation. An agency with a particularly large segment patients in the primary diagnosis of COPD may want to drill-down to compare the outcomes of their COPD patients against the outcomes of other COPD patients nationally to identify any strengths or potential improvement areas.

The key to using drill-down reports in your data analysis process is providing clear perspective of the performance of specific patient groups. These types of reports can offer a more focused view of how to manage your organization in light of the patients you serve. They may help uncover the needs of certain types of patients, the costs incurred and resources required to care for them, and the potential impact they will have on your revenue and bottom line. Detailed drill-down reports can also demonstrate areas of strength or weakness in the outcomes of the patient subset that can be used for referral source management and marketing opportunities.

Unfortunately, too many agencies start with the drill-down concept and “get lost” in the details. When this happens, PI programs and benchmarking analyses are sometimes abandoned because there’s too much data and agencies don’t know where to start. This problem can be avoided if agencies first use summary information to identify the problem or issue (as described above), and then focus drill-down activities on the specific areas that require further analysis.

Harness the Power of Data

Many in the industry are concerned about the public release of agency-specific outcomes data. While there is nothing that agencies can do to prevent this, they have the ability to begin preparing for it. In the coming year, the key factor that will distinguish the most successful agencies from those that are simply surviving will be how they strategically position themselves today. Using comparative data to their advantage, the most successful organizations will be those that harness the power of data to efficiently and effectively correct problem areas and market successes in advance of this focus on quality management in home health. They will know their data better than anyone else—they will be able to credibly tell their own story.

About Outcome Concept Systems

Founded by a team of home care professionals, OCS has been providing home care organizations with performance improvement solutions since 1992. With over 1,200 clients spanning all 50 states, OCS maintains the nation's largest proprietary home health benchmark database comprised of clinical outcome and utilization information. OCS uses this information to provide the industry with education as well as products and services to guide decision-making and improve outcomes. Endorsed by trade associations throughout the country and recommended by major MIS vendors, OCS is the premier quality management vendor for home health, hospice, infusion, DME, and private duty organizations.

Suggested Reading from the OCS White Paper Series:

Download from www.ocsys.com

Benchmarking & Beyond, Outcome Concept Systems, 2002

PPS & Patient Outcomes a Year in Review, Outcome Concept Systems, 2002

OBQI & the New Approach to Performance Improvement, Outcome Concept Systems, 2002

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