1997

Pay-per-visit for Home Health Agency nurses

Paula Beth Peoples

Follow this and additional works at: https://scholarworks.lib.csusb.edu/etd-project

Part of the Health Services Administration Commons

Recommended Citation
https://scholarworks.lib.csusb.edu/etd-project/1410

This Thesis is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.
PAY-PER-VISIT FOR HOME HEALTH AGENCY NURSES

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Health Services Administration

by
Paula Beth Peoples
March 1997
PAY-PER-VISIT FOR HOME HEALTH AGENCY NURSES

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

by
Paula Beth Peoples
March 1997

Approved by:

Thomas Timmreck, PhD, Chair
Department of Health and Human Ecology

Joseph Lovett, PhD
Department of Health and Human Ecology

Lynn Campbell, BSN, MSN
VNA of the Inland Counties

5Mar'97
ABSTRACT

The objective of this study was to determine whether it is beneficial to a home health agency to pay nurses on a piecework (pay-per-visit) system as opposed to an hourly rate of pay. The study looked at the behavior of seventeen registered nurses employed by Ramona VNA and Hospice who worked for at least nine months prior to and nine months immediately following the implementation of a pay-per-visit system. Variables studied included productivity, amount of time spent performing patient care related functions, length of home visits, and the amount of time spent in patient conferences, inservices and meetings. A survey was also sent to the nurses in the study to determine how they felt about the pay-per-visit system and what they perceived to be its impact on patient care.

The findings of the study clearly illustrated that nurses' behaved differently when being paid on a pay-per-visit system. Their productivity was higher, they became more efficient in the use of their time, and they spent less time in conferences and meetings. Most of the nurses preferred the pay-per-visit system and felt that it had had
a positive effect on their income, although they expressed concern that the pay-per-visit system would have a negative impact on the quality of patient care and would discourage teamwork.
TABLE OF CONTENTS

ABSTRACT ........................................ iii
LIST OF TABLES ................................. vii
LIST OF GRAPHS ................................ viii
DEFINITION OF TERMS ........................... ix

CHAPTER ONE - STATEMENT OF THE PROBLEM

Introduction .................................. 1
Statement of the Problem ...................... 2
Research Questions ............................ 3

CHAPTER TWO - LITERATURE REVIEW

Introduction .................................. 5
Performance Based Pay ......................... 7
Variable Pay .................................. 10
Merit Pay ..................................... 18
Individual Incentives and Goal Setting .... 20
Piece Rate Incentives ......................... 29
Team Incentive Plans .......................... 32
Summary ....................................... 37

CHAPTER THREE - METHODOLOGY

Design of the Study ............................ 38
Sampling ....................................... 38
Methods and Procedures ........................................ 39
Analysis of the Data ............................................ 45

CHAPTER FOUR - FINDINGS

Introduction ..................................................... 46
Data Collected ................................................... 47
Productivity ...................................................... 56
Patient Care Related Time .................................... 57
Length of Patient Visit ....................................... 58
Patient Conference and Inservice Time ................... 60
Survey Results .................................................. 61

CHAPTER FIVE - CONCLUSIONS

Conclusions and Implications ............................... 67
Limitations of the Study ....................................... 73
Recommendations ............................................... 74
Application of Study Findings to VNAIC .................. 75

APPENDIX A - Service Personnel Route and Time Sheet .................................................. 77
APPENDIX B - Data Collection Sheet ........................ 78
APPENDIX C - Survey ........................................... 79
APPENDIX D - VNAIC Pay Per Visit Plan .................. 80
REFERENCES .................................................. 83
LIST OF TABLES

Table 1. Number of Randomly Selected Days Worked . . . 42
Table 2. Definition of Variables . . . . . . . . . . . 43
Table 3. Data Before Implementation of Pay-Per-Visit . 48
Table 4. Data After Implementation of Pay-per-visit . 49
Table 5. Calculated Variables Before Pay-Per-Visit . . 55
Table 6. Calculated Variables After Pay-Per-Visit . . 56
Table 7. Survey Question #1 . . . . . . . . . . . . . 62
Table 8. Survey Question #2 . . . . . . . . . . . . . 62
Table 9. Survey Question #3 . . . . . . . . . . . . . 63
Table 10. Survey Question #4 . . . . . . . . . . . . . 64
Table 11. Survey Question #5 . . . . . . . . . . . . . 64
Table 12. Survey Question #6 . . . . . . . . . . . . . 65
Table 13. Survey Question #7 . . . . . . . . . . . . . 66
LIST OF GRAPHS

Graph 1. Billable Visits Made .................. 51
Graph 2. Hours Worked .......................... 51
Graph 3. Patient Care Related Time ............ 52
Graph 4. Patient Visit Time ..................... 52
Graph 5. Hours in Team Conference .............. 53
Graph 6. Time in Inservices ..................... 53
Graph 7. Total Miles Driven .................... 54
Graph 8. 8 Hour Days Worked ................. 54
Graph 9. Visits per 8 Hours Worked .......... 57
Graph 10. Care Related Time/Visit ............. 58
Graph 11. Visit Time per Visit ................. 59
Graph 12. Average Miles per Visit ............. 59
Graph 13. Conference Time ..................... 60
Graph 14. Inservice Time ....................... 61
DEFINITION OF TERMS

A Home Health Agency is an organization licensed by the state Department of Health for the purpose of providing skilled medical services to individuals in their homes. Services typically include nursing; physical, occupational, and speech therapy; social services; and home health aide services. The unit of service is a home visit for which there is a charge. Revenue is based on the charge per visit which is billed to the patients' third party payors. Most home health agencies are also certified by Medicare and MediCal so they can bill these publically funded programs.

Pay-per-visit is a method of compensation which is based on piece work. Patient care staff are paid a rate for each home visit made. The visit rate paid is a factor of the staff member's hourly wage. The factor for each type of visit is determined by the complexity of the visit and the standard productivity for the type of staff making the visit. In addition to the per-visit rate, employees are also paid on an hourly basis for certain activities such as patient care conferences, meetings and inservices, and non-patient care related activities. Staff members are required
to account for all of their work time, whether paid at the hourly or per-visit rate for purposes of figuring overtime, benefits, and other accounting functions.

Nursing productivity is typically measured in home health care settings by the number of visits a nurse makes in an eight hour day. For the purposes of this study, productivity was defined as the number of "billable visits" made per eight hours worked. Home Health Aide Supervision visits were counted as billable visits even though they are not technically a billable visit because they are mandated by licensure and certification regulations. Non billable admission visits were also counted in determining productivity. Other types of non-billable visits and not home visits were not counted as billable visits made. Typically the purpose of not counting non revenue producing visits toward a nurse's productivity is to encourage them to make as few as possible and to make sure that the nurse has confirmed with the patient that they are home, expecting a visit, before driving to the patient's home.

A Nursing visit is a visit to an individual patient by a registered nurse for the purpose of providing skilled nursing service(s) as ordered by the patient's physician.
Services include, but are not limited to, physical assessment, patient education, and treatments such as wound care, intravenous infusions, etc. The nurse contacts the patient before the visit to confirm it with the patient or the patient's caregiver. Appropriate documentation is completed both during and after the visit. It may be necessary to follow up with phone calls and other coordination activities to ensure that the patient's needs are being met appropriately.

A **billable visit** is a revenue producing visit; one that the home health agency will bill a third party payor for. For the purposes of this study, even though home health aide supervision visits are not technically billable, they were included as billable visits, because they are mandated by licensure and certification requirements. Non billable admission visits were also included because these are nursing visits made to open a patient to rehab services which will be revenue producing. Other types of nonbillable visits and not home visits were not included as billable visits.

**Patient care conferences** are formally organized multidisciplinary team conferences. They are prescheduled
and mandatory. They do not include the occasional informal discussions that occur between team members relative to current patient care issues.

Inservices are educational sessions organized by the management staff. Most are either mandatory or attendance is encouraged. The nurses' are paid an hourly rate for the time spent in attendance whether they are on an hourly or pay-per-visit compensation system.

Staff meetings are formally organized meetings which are called by management staff. Attendance is usually mandatory or encouraged. The nurses' are paid an hourly rate for the time spent in attendance whether they are on an hourly or pay-per-visit compensation system.

Service Personnel Route and Time Sheet "Route Sheet" is a document used to track patient visit activity as well as time worked by patient care staff. Each visit made is documented and coded for appropriate billing status. The nurse documents all time worked according to the type of activity being performed. Both billing and payroll information is obtained from this form.
CHAPTER 1 - STATEMENT OF THE PROBLEM

Introduction

The home care industry, like most industries today is looking for ways to decrease the cost of production and improve the efficiency of its labor force. For home care providers, the key is to reduce the cost of providing service, or more commonly referred to as reducing the cost per visit which is the unit of service in home health.

Although reimbursement for home care services was once heavily dominated by Medicare which pays on a cost-based reimbursement system, an increasing share of revenue is now coming from managed care. The revenue per unit of service from managed care third party payors is much less than the reimbursement allowed in the Medicare program and even continues to decrease. In addition, it is expected that within the next year the federal government will make changes in its reimbursement system for home health agencies. No longer will the industry enjoy cost based reimbursement, but will be reimbursed on a per episode or prospective pay type methodology. In light of these reimbursement issues, it is imperative that costs of
providing home health services be reduced.

One way that home health agencies have chosen to deal with this problem is to convert clinical staff from hourly to pay-per-visit mechanisms of pay. Rehabilitation staff, i.e., physical therapists have been traditionally reimbursed on a pay-per-visit method both as independent contractors and agency staff. However, pay-per-visit is a relatively recent phenomenon for nursing staff in home health settings. Some home health agencies have many years of history paying nurses pay-per-visit. Some agencies have recently implemented it, and others are grappling with whether or not pay-per-visit is the answer for them.

Ramona VNA and Hospice in Hemet, California, is one home health agency that decided to change its compensation method for nurses from hourly to pay-per-visit. This provided an opportunity to conduct a study to compare the nurses' behavior before and after implementation of the pay-per-visit system.

Statement of the Problem

Does a pay-per-visit system incentivize home health nurses to be more productive, thus reducing direct costs and
yet maintain quality patient care and employee satisfaction?

Research Questions

1. Is there a difference in nursing productivity as a result of implementing pay-per-visit?

2. Is there a difference in the direct cost of a nursing visit between hourly and pay-per-visit systems?

3. Is there a difference in the length of time nurses spend in patients' homes when nurses are paid per visit as opposed to hourly?

4. Is there a difference in the amount of time spent by nurses in patient care conferences when they are paid per visit?

5. Is there a difference in the amount of time spent in inservices and staff meetings when nurses are paid per visit?

6. Are nurses satisfied with pay-per-visit? Do they want to continue or would they prefer to return to hourly pay?

7. Do nurses feel that they are receiving fair and equitable compensation with pay-per-visit?

8. Do nurses feel that quality of care is jeopardized by a
pay-per-visit system?
CHAPTER 2 - LITERATURE REVIEW

Introduction

In this era of managed care, cost containment, and health care organization downsizing the forces that shape wage and benefit programs are changing rapidly. Variation in pay levels from one healthcare organization to another in a given market will narrow as pressures mount from competing in a managed care environment. The key for an organization to gain a competitive edge may be in the way they pay employees. Healthcare organizations that are able to develop a cost advantage in their wage and benefit programs gain a competitive edge as managed care continues to become more pervasive.

In order to gain a competitive edge healthcare organizations must develop pay systems that provide competitive pay and incentives for increased productivity and cost control. They must reward quality, productivity, and cost containment. Employee benefit systems need to be developed that provide cost-containment incentives while meeting organizational recruitment and retention objectives. As labor shortages continue to ease, pay will be based more
frequently on the performances of individuals and organizations and less frequently on the pressures of the labor market. (Miller 1995)

U.S. business in general can no longer be satisfied with traditional pay systems that are based on entitlement, internal equity, and bureaucratic and hierarchical concepts of organizational design that detract from the ability to compete effectively in a global economy. Pay is a key communicator of goals, values, directions, and strategies. Unless organizations communicate the importance of total organizational success, product and service quality, customer value, and teamwork and collaboration for the effective deployment of all resources, important opportunities will be lost. (Schuster and Zingheim 1993)

Many companies, including health care organizations, are dealing with the task of motivating superior performance and increasing productivity while also dealing with smaller salary increase budgets and pressures to "hold the line" on fixed costs. The need to increase incentives for productivity may result in a restructuring of compensation for home health managers as well as nurses. This paper addresses some of the possibilities for creating a pay
structure to do that. The paper will look only at salary and assume that a benefit package is structured to be both competitive and financially sound for the organization so as not to impact recruitment and/or retention in a negative way.

Creatively managed compensation systems can dramatically enhance a company's ability to compete. They can also improve employee relations. Increasingly, companies are making decisions on the basis of deliberate strategies which shift the focus from effectively administering a plan to ensuring that the plan helps the business compete. It is important to identify which compensation issues are believed to be critical to the success of the organization and how these can be linked with performance. According to Milkovich and Milkovich (1992), one particular pay structure does not necessarily fit all. Differences must be the result of deliberate strategy and subsequent financial performance. He concluded that developing a pay strategy is more a matter of choosing how to pay, not how much.

Performance Based Pay
Pegging base pay either above or below the market may jeopardize competitiveness. In contrast, incentives, bonuses, and other forms of variable pay provide flexibility. For example, deemphasizing base pay and emphasizing incentives can conserve cash for a rapidly growing company. Tying pay to productivity can reduce risk for firms with fluctuating product demand and high labor costs. The research indicates that successful organizations make deliberate choices that enable them to link their compensation policies to their business strategy. (Milkovich and Milkovich 1992) Business interests favor variable compensation plans because they shift some business risk to labor and provide incentives to the workforce. Variable pay is a way to ensure that compensation costs rise, and more importantly, fall at the same rate as corporate earnings.

Use of a high base may attract the best talent; a high bonus-to-base ratio may focus employees' attention on outcomes; and long-term incentives may encourage people to stay with the firm long enough to reap the payoffs of their research. Research supports the notion that compensation strategies can contribute to the organization's success, most likely by communicating and reinforcing the performance
required by the business strategy. (Milkovich and Milkovich 1992)

Companies are making their nonmanagement employees eligible for awards under variable pay programs more frequently each year. The trend of extending eligibility in variable pay programs to lower levels of the organization is likely to continue. (Zitaner 1992)

The variety among performance-based pay plans is almost as great as the number of work behaviors they seek to encourage. The National Academy of Science assembled a team of experts in an effort to understand the current state of knowledge regarding performance-based pay. These experts categorized the wide variety of available plans using two dimensions. The first level at which performance is measured is whether individual or group performance determines payment. The second dimension is the way that performance payments are made. These performance-based pay plans are loosely grouped under the heading "variable pay." (LeBlanc 1994)

Plans that are designed in harmony with strategy and culture, and that are monitored for their impact on achieving desired goals, will ultimately be viewed by both
plan designers and plan participants as highly "successful."
Perhaps part of the reason plans are viewed as less than
successful is that they are being asked to address goals and
objectives that they were not designed to influence.
(Schuster and Zingheim 1993)

**Variable Pay**

Variable pay is defined as any kind of pay given
strictly on the basis of employee or corporate performance.
(Hayes 1993) This new tool lets a company reward good
employees and still keep payroll costs down. Variable pay
can take on many forms, covering the gamut from once-in-a-
lifetime cash awards to profit-sharing, so each firm must
choose just the right kind for them.

At the very least, variable pay programs can help
companies control compensation costs. When properly
designed and implemented, variable pay plans can hold out
the very real potential of shaking up any type of
organization. Incentive pay can pull a company out of the
doldrums of complacency and create a new, vibrant operating
environment in which all truly espouse the concept of
"shared destiny" and believe that every individual can make
a difference. Year by year, the list of major firms that have at least attempted to implement a variable program continues to increase. (Bacher and Gross 1993)

Base pay, which is well suited to reflect the economic and competitive market value, as well as the strategic value, of jobs or skills, is not an effective reward for performance because it ignores the importance of overall organizational results. It is often viewed by employees as a cost-of-living entitlement and it focuses only on the individual and not on the team. Therefore, it cannot be used as a reward for effective product and/or service quality, and/or customer value, which are "team sports." (Milkovich and Milkovich 1992) Variable pay or incentives, for the very reasons that base pay increases are not well suited to performance recognition, fits the bill as a strong performance recognition tool. It offers employees the opportunity to share in organizational success.

The traditional annual bonus remains by far the most frequently used form of variable compensation. Spot awards and individual incentive plans, the second and third most frequently used type of plans, are used considerably more often outside the manufacturing sector. A company's base
salary strategy has a considerable effect on the types of variable pay approaches it adopts. Companies paying below-market levels use annual bonuses and individual incentives more frequently than those in other categories. Companies whose base pay levels are targeted above the market reported more frequent use of spot awards as compared with other categories. (Zitaner 1992)

While traditional variable pay is added on top of base pay (add-on), new variable pay can be add-on, at risk, or potential base pay at risk. If the organization reduces base pay by a certain amount (e.g., five percent) and offers variable amounts of pay for performance improvement, then the former fixed base pay becomes at-risk variable pay. The decision on which form to use is best resolved within the context of setting performance targets, the overall competitiveness of the organization's total compensation program, and the organization's ability to pay. Normally, the higher the performance standards set before variable pay begins to pay out, the more likely variable pay can be add-on. (Whitaker 1993)

In order for a program to be successful, both managers and employees must be committed to it. Employees have to
believe that the plan is not just another fad, but a fair program, and that its goals are practical and achievable. The plan should not be perceived as a way to make up for a significantly below-average base pay system. Teamwork, trust, and involvement at all levels are critical to a plan's ultimate fate. The plan should provide an opportunity for employees to earn additional rewards without increasing base pay above competitive practices since it may be difficult to justify the cost of an "add-on" incentive plan to already high base pay levels.

Employees often fear an erosion of base pay when their companies move into alternative rewards. They also feel that they have to earn back what was previously guaranteed them. The subsequent low morale often leads to reduced productivity until the variable pay plan has proven worthwhile and gained the confidence of the employees. (Feldman 1991)

Plans should be structured around clear goals, unambiguous measurements, and line-of-sight linkage to employee efforts. Effective employee involvement requires that employees be provided with information about quality, customer feedback, and results achieved. They need to have
power to make decisions and changes, knowledge about work processes, and rewards from results achieved. (Schuster and Zingheim 1993) Employee education, communication, and training are critical to the likelihood of success. (Bacher and Gross 1993) Employees want to know how to achieve the goal on which awards are based so communication about what affects the measure(s) and how employees can accomplish the objective(s) is critical. (Schuster and Zingheim 1993)

Quality is a new pay priority and an important element of new variable pay. Whether quality measures are built into a variable pay design depends on a variety of factors, including the level of trust of employees, the degree of employee pride in creating a good work product, the ability to hide quality problems, the length of time between reduced quality and impact on profitability, and the extent of communication and employee understanding of the relationship between quality and financial results. (Schuster and Zingheim 1993)

For the best possible chance for lasting positive value by making employees partners in the organization's future, three key issues are: (1) Is variable pay to be add-on, at risk, or potential base pay at risk? (2) How will
performance be measured for variable pay purposes? and (3) What is the relationship between results and variable pay awards? (Schuster and Zingheim 1993)

Measurement is key to the development of new variable pay because it communicates the important outcomes that the organization needs and employees can impact. What gets measured and rewarded gets attention. The number of measures used for variable pay should be limited to five or less to ensure that the organization is communicating a strong, clear message about what it wants employees to accomplish. Acceptable measures of performance for variable pay are within the influence of pay plan participants and most often result in bottom-line gain for the organization, which is then shared with employees. Some possible measures include profit, financial ratios, quality, customer satisfaction, and productivity.

Profit as a measure is preferable to cost or productivity because profit (or the excess or revenue over expense) is necessary to sustain an organization. Also, it does not need interpretation in terms of trying to determine what affects its performance. If profit is a measure, the organization must be willing to communicate profit results
and to grant awards when it meets its profit goal even if employees have little to do directly with that achievement.

Labor-intensive organizations, where most of the cost is labor, may be interested in using profit as a measure because improving productivity in labor costs can leverage significant gains, and because the organization cannot afford to pay out an award of any meaningful size to employees unless profit is at an acceptable level. It is important, however, to make sure that the use of profit as a measure does not communicate the wrong message to employees and customers. (Schuster and Zingheim 1993)

Threshold sharing is the minimum level of projected performance the organization must reach before any money in the form of variable pay will be shared with the employees participating in the plan. The threshold is close to but below goal performance. The use and size of threshold awards depend on the degree to which pay is at risk. The more pay at risk or potential base pay at risk, the more likely a threshold performance level will be used and the larger the awards can be at threshold. If variable pay is add-on, having threshold levels may not be appropriate unless reaching a target is difficult because of tough goal
setting or significant influence by external variables.

(Schuster and Zingheim 1993)

According to Bacher and Gross (1993), a variable pay program is more likely to be successful if it includes the following factors:

1. Participation that is as broad as possible and that encourages team efforts, rather than singling out selected groups or individuals.

2. Measurement that is quantitative, simple, and structured to permit a line of sight to the desired work outcome.

3. Baselines that are determined through a collaborative effort, with as many viewpoints considered as possible, rather than engineered and imposed by an unseen or unchallenged source.

4. Timing of measurements and payout that is shorter rather than longer.

5. Employee risk that is lower rather than higher.

6. Awards that are large enough to make a real difference to employees. One month's pay is an award size typical of successful plans, but can vary from five to 100 percent of base salary.
**Merit Pay**

Merit pay is the most widely used plan for managing performance. The message of merit pay is that individual employees matter; that is, they can make a difference and that difference is valued and recognized with pay. Most managers believe that merit pay fits into an overall human resources system that emphasizes meritocracy as the basis for making pay and promotion decisions. Merit pay typically combines individual performance evaluation with corporate-wide guidelines that translate a specific performance rating and position in the pay range into an increase percentage. These guidelines control costs and ensure consistent treatment across organizational units. While managers are certainly concerned with the accuracy and fairness of the measurement, of greater concern is how employees feel at the end of the appraisal process and how these feeling affect their subsequent work behavior. Studies of job satisfaction and performance indicate that these may be positively affected by merit pay. (Milkovich and Milkovich 1992)

The design and administration of most merit plans call for yearly performance evaluations and pay adjustments. Sometimes this long time frame makes it hard for employees
to connect today's pay with meritorious behavior that occurred months ago. In addition, an annual increase results in only a small change in weekly paycheck. The difference between the pay increase for employees whose performance was exemplary and that for employees whose performance was average was not enough to motivate performance at a higher level. Many employees and managers do not realize the financial impact of rolling increases into a base each year. The extra pay, however small, recurs in every year that the employee stays at the job. Employees need to realize that merit increases should be viewed in the context of their entire career because of their continuing effect on pay and not an insignificant small percentage increase in pay. (Milkovich and Milkovich 1992)

A lump sum merit program allows employers to reward performance but not get stuck with an increase in base salaries. Usually, it is the same amount that the employee would get as a merit raise, only it is given all at one, eliminating a permanent raise.

There is a growing belief that merit pay is mismanaged: Too much money is going to too many people with too little
effect on their performance or productivity. The heart of the problem lies in the way merit pay is managed - as a cost control, not a motivational mechanism. If performance motivation, rather than cost control, were an objective, then more attention would be devoted to designing merit grids that motivate employees. (Milkovich and Milkovich 1992)

**Individual Incentives and Goal Setting**

Individual incentive systems, such as commissions or piece rates, avoid the pitfalls of performance evaluation by using objective measures to calculate pay. Properly structured incentive plans meet many of the conditions that psychological theory requires for pay to affect performance. The accomplishment of performance goals requires behaviors and conditions that are under the control of the individual, the payment is clearly linked to goal achievement, and the payment is big enough to justify the effort required to reach the goal. These three issues - line of sight, clear message, and meaningful increases are crucial to the success of an incentive plan. (Milkovich and Milkovich 1992)

Goals and incentives, if used properly, are valuable
tools for increasing productivity. Linking an individual's pay to his or her performance can significantly increase that performance. As a whole, the large body of research provides substantial, highly convincing evidence that piece-rate arrangements, gainsharing, and similar systems result in higher productivity. (Sullivan 1991) Research shows that increases in productivity of up to thirty percent can be obtained through the use of properly structured incentives.

An "incentive" is something that incites or has a tendency to incite to determination or action. An opportunity to gain a promotion through demonstrating proficiency and effectiveness in a given position would be a form of incentive. (Cumming 1994) They provide opportunities to earn and receive tangible symbols of success. Individual incentives appear to work best when they are applied to structured jobs where employees work mostly by themselves. (Milkovich and Milkovich 1992)

According to goal-setting theory, monetary incentives also play an important role in determining task performance by (1) encouraging individuals to set higher goals, (2) causing individuals to set goals spontaneously when they would not have done so otherwise, and/or (3) increasing
individuals' commitment to achieving a goal. (Wright 1994)
Specific goals lead to higher performance than easy or "do
your best" goals. Such goals boost individuals' efforts,
increase their persistence, direct their attention, and
cause them to develop strategies for goal attainment.
(Wright 1994)

Goal-setting/incentive schemes can be both beneficial
and destructive. Their effect depends on how they are used.
According to Wright, two motivational techniques, goal
setting and monetary incentives, have proven extremely
effective in motivating higher performance, but these
techniques can also produce disastrous consequences for
those who mishandle them. (Wright, 1994) They can actually
work too well and produce counterproductive effects.
Incentives can also motivate unethical as well as ethical
behavior. (Milkovich and Milkovich 1992) When managers
misapply goals and incentives, negative consequences can
occur. It is their misapplication that causes the negative
results. (Wright 1994)

In real-world situations, the unintended negative
effects of imposing individual incentives are well
documented. Employees won't bother doing job tasks if
these tasks are not the basis for payments even though they are part of the job. Goals, particularly when tied to incentives, can create a "goal only" mentality, whereby individuals focus all of their time and energy on the goal-driven task and fail to perform other behaviors that may be quite important. A high commitment to goals coupled with bonuses for goal attainment was strongly negatively related to helping behavior. (Wright 1994) Some individuals will even attempt to sabotage coworkers. Numerous studies have documented clashes between high producers and other members of a work group. Such clashes appear to be motivated by fear of new, higher performance standards or even of job loss. (Milkovich and Milkovich 1992)

Individuals make systematic trade-offs between quantity and quality: When they are assigned difficult goals, they may increase their effort in pursuit of quantitative performance, but this increased effort will entail quality costs. (Wright 1994)

Individuals have a tendency to continue to do things the same way, regardless of whether this is the most effective course of action. One of the major problems with goal setting and particularly with setting difficult goals,
is that it can produce a dysfunctional inertia, encouraging individuals to cling to ineffective approaches rather than developing better ways of doing things. Goals can inhibit task revision and the inertia effect often results in an escalation of resources committed to a failing course of action. (Wright 1994)

The most dangerous potential pitfall of goal-setting and incentive programs is their tendency to encourage individuals to develop strategies that are destructive to the organization. Individuals assigned to goal/incentive systems engage in impression-management tactics: They seek to convince others of their lack of ability in an effort to justify setting what are actually easy goals. Even when individuals know their bonus will not be based on a goal they set by themselves, they still seek to negotiate easier goals. When individuals are assigned goal-based bonuses, an inverted-U relationship exists between goals and performance, with the lowest performance observed among those assigned the most difficult goals. It appears that when individuals are assigned difficult goals under a goal-based incentive scheme, many simply reject them and set much lower, personal goals.
Where employees trust management to set fair standards and do not fear losing their jobs, individual incentives can have a positive effect on individual performance. But few jobs completely fulfill the conditions that psychological theories require for individual incentives to affect performance. Most work is complex, and most tasks interdependent thus it is not surprising that surveys of compensation managers report tremendous interest in group incentives to influence group performance. (Milkovich and Milkovich 1992)

Incentives based on the behavioral conditioning model seldom, if ever, work very effectively. Companies are restructuring their incentive programs to serve more as a means of recognizing employee contributions than as a bribe to get employees to do things they would otherwise not want to do. (Cumming 1994)

There are several considerations when using goals and incentives. First, incentives should not be tied to goal attainment. Goal-driven incentives can cause employees to set lower goal levels, reject difficult goals, and over-emphasize goal attainment regardless of the organizational, social, or ethical costs. It is possible to use incentives
in conjunction with goals. An ideal motivational program would direct supervisors and employees to agree on performance goals based on the employee's ability and the organization's needs. The reward system would then reward performance, regardless of the individual's ability. Rewards must be tied to absolute levels of performance, rather than to increases in performance relative to an individual's ability or past accomplishments. Equity occurs naturally with piece-rate systems. The goals motivate individuals to increase their own level of performance, the incentives reward performance based on the contribution that performance makes to organizational success. (Wright 1994)

It must be remembered that the same goal is not equally difficult for all and the goal, therefore, will likely motivate only a very few individuals to achieve higher performance. The key to effective goal setting is to decide upon goals that encourage employees to improve their performance - but not at the expense of other important aspects of the job. Each employee's goals should differ from those of other employees, because they should reflect that individual's own capabilities. The best goal-setting process calls for managers and employees to agree on goals
that will be challenging but will by no means require an individual to devote all of his or her energy and attention to achieving them. (Wright 1994)

Goals should be set for all performance-related activities. When only one goal exists, employees will often seek to reach only that goal, ignoring other important performance-related activities. Thus, a key challenge for managers is to set goals for all major aspects of job performance. In order to do this, the manager must first identify all important performance-related activities. Then, goals are set for each activity, regardless of whether the goal can be measured objectively. Finally, the manager should prioritize the employee's goals to demonstrate how each contributes to the organization's success. (Wright 1994)

Once they have agreed on a goal or set of goals, the manager and employee need to specify the means for attaining them, keying in on the most effective, efficient, and ethical strategies. They must then constantly evaluate these strategies to ensure their efficacy. If the chosen strategies falter, the manager and employee must devise new ones. When individuals are told to pay attention to what
they should do (i.e., the task strategy), as opposed to how much they should do, their effectiveness increases. (Wright 1994)

Cumming (1994) outlines the following simple principles which can help guide the design of effective incentives and avoid incentives that can actually prove counterproductive:

1. Attainment of incentive goals should have obvious value to the organization, and the participants should be fully aware of how this value will result from their efforts.

2. Incentive goals should be consistent with the overall strategy and vision of the organization.

3. The organization should be aligned to support the processes and results the incentive awards are emphasizing.

4. The results on which incentive awards will be based should be objectively measurable and clearly set forth beforehand.

5. The attainment of incentive goals should appear realistic and at least partially under the control of the participants.
Piece Rate Incentives

Incentive workers, or piece-rate workers, are often viewed as producers of poor quality work, while nonincentive workers are viewed as "slow and lazy." Piece-rate incentive systems have a long history in American industry. They became popular when Frederick Taylor's approach to work simplification became the standard organizing concept for American businesses. Piece-rate incentive systems are based on the premise that if jobs involve simple tasks, then the incentive plan would motivate workers to produce maximum units.

Firms with piece rate systems, however, frequently find significant organizational problems. For instance, employees and managers were frequently in conflict about work priorities. The employees may be more concerned with producing the number of units needed to earn their desired incentive pay than to produce units of superior quality or meet the customer's delivery requirements. Secondly, attempts to introduce new technology or innovative processes may fail. Employees are sometimes reluctant to accept such changes unless management can demonstrate how they could earn more incentive pay with these changes.
Piece-rate incentive systems may cause employees to distrust managers and vice versa. Employees may feel that they need to be protected from being exploited by managers. Supervisors may feel that employees constantly had to feel threatened to meet quality objectives and delivery schedules. Supervisors may also feel that they can not manage employee performance. If a worker does not work to standard, the supervisor may feel powerless and if an employee produces a better-than-average-rate, they didn't have the tools to reward superior performance. Consequently, supervisors must rely on threats and punishment to manage performance. (Wilson 1992)

Quality improvement efforts frequently are seen as management's job. Workers fear that the consequences of implementing such ideas might be an increase in their work standards. Preventive maintenance may be ignored as may be process changes in order to minimize the negative impact on employees. Because the piece rate incentive system is based on the number of units produced, there is little reward for quality, delivery, or the efficient use of labor, materials, and related costs. Employees and supervisors care about the success of the business, but they seldom found meaningful
solutions to problems. These patterns of self-interest, mutual distrust, and resistance to change emerged from a long history of ineffective management systems and practices. Employees kept just ahead of their production quotas and the supervisors spent most of their time chasing and correcting problems. Both felt powerless to change. Fear and reinforcement of self interests ruled these workplaces and many others like them. (Wilson 1992)

There are, however, beneficial features of the piece-work incentive pay programs, such as the following. Employees know what they need to do and the tasks and performance standards are clear and well-communicated to them. Feedback is specific, immediate, meaningful, and clearly related to performance. Employees always know how well they are performing. Even if the company does not provide feedback, the employees often invent their own feedback system. Employees have a sense of control over what they do and the pace at which they do it. If they want to work hard and earn a large check, they can. If they want to operate at a slower pace, they can do that as well. There are clear consequences to employee performance.

Higher output results in higher pay; lower output results in
lower pay. Since consequences are specific, directly related to individual actions, and usually meaningful.

The employee often invents processes to improve productivity. Frequently, however, they are not encouraged to share this know-how with coworkers and hence, the "tricks of the trade" are not used by the overall organization to increase its competitiveness in the marketplace. This is positive to the employee but inhibits the organization's ability to compete. In effect, employees are in business for themselves and may consider the company to be the competitor. This may be one reason for moving from piece work to gainsharing or team incentives. (Wilson 1992)

**Team Incentive Plans**

An increasing number of organizations are turning to team incentive plans because they realize that individualized incentives are often out of sync with a work culture that relies on team-work and group commitment to achieve a common set of goals. (Cumming, 1994) In addition, companies are seeking new ways to increase flexibility, encourage innovation, increase quality, and combat turnover and absenteeism. Too often the emphasis is on individual
competition in situations where collective effort toward a common goal is critical. If team incentive plans are to be implemented, managers must rethink traditional reward systems which are oriented toward rewarding individuals. Because everybody in the team is affected by the outcome, high producers will work with and encourage the low producers to keep them up to the performance standards. (Bartol and Hagmann 1992)

When responsibility for integrating multiple task outcomes is transferred from a single boss to a team of workers, it allows workers to better understand how their performance affects the organization as a whole and provides them the opportunity to gain intrinsic satisfaction from knowing that their work has made a real difference and has added real value. Incentives that are structured to reinforce employee perceptions of creating value will serve to enhance their level of intrinsic satisfaction rather than replace it.

What makes a particular group or team incentive effective is not simply the fact that it is based on group rather than individual results, but that it has been tied to results or accomplishments that, by themselves, can be
viewed by participants as evidence of their success. Incentive awards that are a source of pride, that cause others to view the recipients with respect, and that communicate tangible appreciation for what has been accomplished will engender feelings of good will and commitment on the part of the recipients toward the organization. These feelings are quite different from the feelings of bitterness that may result when employees feel they are being manipulated by incentives to perform work they would otherwise be unwilling to perform. (Cumming 1994)

Companies that wish to implement a work-team concept face a dual challenge in designing pay systems for the teams. They must design pay plans that not only reward and motivate employees but also encourage the worker involvement and cooperation needed for teamwork.

Group incentive systems typically provide for uniform awards to all members of a formally established group on the basis of their collective achievement of a predetermined objective. Generally, there are two basic types of group incentive plans: gainsharing and profit sharing. The typical gainsharing plan focuses on production cost savings as the performance measure at team or facility levels.
Profit-sharing plans focus on changes in profitability as the performance measure and a portion of profits above a targeted level is distributed among employees, generally as a percentage of base salary. (Milkovich and Milkovich 1992)

Gainsharing provides an opportunity for employees to share in the gains realized by the company from their efforts. It is usually employed to increase production volumes. Gains are shared with all employees in a defined unit, according to a predetermined formula, calculated on the value of production over labor and other costs. Milkovich and Milkovich (1992) discuss the fact that a number of case studies and surveys report impressive increases in performance connected with the introduction of gainsharing. By and large, the reports agreed that the introduction of a gainsharing plan initially increased employee suggestions for work improvements, reduced costs, led to improved quality, and fostered more cooperative employee-management relations. Those plans where improvement in productivity did not occur were hampered by infrequent bonus payouts, poor union-management relations before and during the study period, and a lack of employee input into the plan design and production standards.
Productivity improved and labor costs and grievance rates declined after introduction of gainsharing.

Gainsharing can result in an increase in productivity that can be sustained over a long time, but gainsharing must be part of an overall approach to human resources that is built on solid employee relations and that emphasizes employee participation in decision making. Employee involvement in the design and administration of a gainsharing plan is crucial to its success.

A performance management system must involve implementation of effective performance tracking as well as feedback on a daily, weekly, and monthly basis. Progress reports should be given to employees during the performance period as opposed to waiting until the period closed as this enables employees to make immediate adjustments to improve their performance record.

Under a profit sharing plan employee rewards are tied to the company's overall yearly profit. Profit sharing can provide potential benefits including improved employee commitment to and understanding of the firm's business. A problem is that the "line-of-sight" is often obscure. very few employees see a direct connection between their behavior
and their firm's profits. Forces inside the organization as well as outside weaken the link between individual work behavior and corporate profits, particularly for lower-level employees. Milkovich and Milkovich cited research that concluded that managerial bonuses and profit sharing can affect corporate performance.

**Summary**

Each organization must tailor a specific performance based pay program that is compatible with its environment, that meets corporate policies and supports the overall philosophy and intentions of the company, and ensures fair employee relations. Employee involvement in the design of the program is critical as well as a system of ongoing communication with employees. Management must ensure a consistent and timely method of measuring productivity and performance that is objective and communicated to employees. A pay system that is consistent with the company's approach to managing human resources communicates the organization's philosophy and values and strengthens the link between behaviors and rewards.
CHAPTER 3 - METHODOLOGY

Design of the Study

The study was a retrospective case comparison with the purpose of comparing chosen variables before and after the event of implementation of pay-per-visit. The sample was a sample of convenience as defined below. The sample population served as its own control group in that the same nurses were used in both the "before" and "after" sample. The group was used as the control group before implementation of pay-per-visit when they were being paid on an hourly basis as they had been since employment. The introduction of pay-per-visit was the variable that was theorized as having an effect on the behavior of the nurses. Each nurse could then be compared to themselves as well as the group compared to itself.

The data obtained from the study was qualitative and nonparametric. Descriptive statistics and analysis was used to analyze and discuss the findings.

Sampling

A sample of convenience was used for the purposes of this study. The sample of nurses was defined as registered
nurses who were employed by Ramona VNA and Hospice for at least nine months prior to implementation of pay-per-visit as well as nine months after the change from their hourly method of pay to pay-per-visit.

Ramona VNA and Hospice has three branch offices, one of which has never converted to pay-per-visit. Therefore, the nurses in that branch were not selected as part of the sample population. Also, nurses who work in the Hospice program were not selected, because they have not converted to pay-per-visit. The total sample consisted of seventeen nurses. Each nurse chosen for the sample was listed alphabetically and consecutively assigned a number from one (1) to seventeen (17).

Methods and Procedures

A comparison was made of variables related to home health nurses' behavior and productivity when they were paid on an hourly rate before the implementation of pay-per-visit and after pay-per-visit was implemented. The purpose of looking at the particular variables chosen was to determine which factors or behaviors changed when pay-per-visit was implemented and when there was a change, whether the change
was positive or negative for the home health agency.

The comparison was made using registered nurses employed by Ramona VNA and Hospice in Hemet, California who were employed both before and after implementation of a pay-per-visit system.

The variables considered included:

1. Nurses' productivity.
2. Nurses' patient-care related time per billable visit.
3. The length of a nursing visit.
4. The amount of time nurses spent in Patient Care Conferences.
5. The amount of time nurses spent in inservices and staff meetings.
6. The number of miles driven per billable visit made.

The first step in answering the above questions was to determine what data was needed to provide the information to be used for comparison. It was decided that data pertaining to the work practices of the sample nurses would be retrospectively gathered. The period of time to be looked at was determined to be the nine months prior to implementation of pay-per-visit and the nine months after the implementation of pay-per-visit. Since pay-per-visit
was implemented on August 1, 1994, the nine month period prior to implementation was defined as November 1, 1993 to July 31, 1994. The nine month period following the implementation of pay-per-visit was defined as August 1, 1994 to April 30, 1995.

Thirty dates were randomly selected within each nine month period using Quattro Pro. A total of sixty dates was selected. Data was then gathered from the work records of each nurse for each of the sixty days that they worked.

Depending on the part-time or full-time status of each nurse, they all worked different numbers of days within the sixty randomly selected dates.
### TABLE 1

**Number of Randomly Selected Days Worked**

<table>
<thead>
<tr>
<th>Nurse</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>6</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>27</td>
<td>13</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>11</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>12</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>13</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>14</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>15</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>16</td>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td>17</td>
<td>32</td>
<td>27</td>
</tr>
</tbody>
</table>

The relative number of days that each nurse worked out of the thirty randomly selected dates before and after implementation of pay per visit was fairly consistent for each nurse. The result was that the comparison for each nurse was based on approximately the same amount of data before and after implementation of pay-per-visit.

Each of the variables to be considered was further defined and formulas were developed to calculate each one mathematically. Data elements needed to compute the formulas were identified. The following table defines each
variable and the data elements needed.

TABLE 2

DEFINITION OF VARIABLES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>DESCRIPTION</th>
<th>FORMULA</th>
<th>DATA ELEMENTS REQUIRED FROM ROUTE SHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity</td>
<td>Number of billable visits made per 8 hours</td>
<td>a. Total hours worked ÷ 8 = number of 8 hour days worked. b. Total billable visits made ÷ 8 hour days worked.</td>
<td>a. Total hours worked b. Number of billable visits.</td>
</tr>
<tr>
<td>Patient care time per billable visit</td>
<td>All time spent performing activities related to patient care. Includes all patient visits, both billable and non-billable, travel, charting, and care coordination time. Excludes time spent in inservices, meetings, and other non-patient care related activities.</td>
<td>Patient care time ÷ billable visits</td>
<td>a. Total of the following unless specified as non-patient care related: Subtotal patient hours Charting Office/other out of office/other Travel time Breaks b. Number of billable visits</td>
</tr>
<tr>
<td>Length of visit</td>
<td>Actual time spent in the patient's home plus travel time</td>
<td>Total billable patient visit time ÷ billable visits</td>
<td>a. Total of &quot;Total time&quot; for each billable visit b. Number of billable visits made</td>
</tr>
<tr>
<td>Time spent in Patient Conferences</td>
<td>Time spent in format patient care conferences</td>
<td>Total hours spent in Patient Care Conferences ÷ billable visits</td>
<td>a. Patient Care Conference time b. Number of billable visits</td>
</tr>
<tr>
<td>Time spent in inservices or staff meetings</td>
<td>Time spent in approved inservices and staff meetings whether mandatory or voluntary.</td>
<td>Total hours spent in inservices and staff meetings ÷ billable visits</td>
<td>a. Total of: Agency meetings/Inservice b. Number of billable visits made</td>
</tr>
<tr>
<td>Miles</td>
<td>Number of miles driven for patient care related purposes</td>
<td>Miles ÷ billable visits</td>
<td>a. Patient care miles b. Number of billable visits</td>
</tr>
</tbody>
</table>
This information was obtained from the Service Personnel Route and Time Sheets that the nurses complete each day that they work. (See Appendix for sample Route and Time Sheet.)

Work records were retrieved for each of the sample nurses for each of the randomly selected dates that the nurses worked. Each of the necessary data elements was retrieved and recorded for each day that each nurse worked during the defined periods of time. The information was recorded on Data Collection Worksheets (See appendix for sample Data Collection Worksheet). Two worksheets were set up for each nurse, one to record data before implementation of pay-per-visit and the other to record data after implementation. After the data was collected for each day worked, the data elements were totaled.

The second aspect of the study was to determine the nurses' level of satisfaction and perception of fair compensation with pay-per-visit. A survey was conducted of the nurses in the sample to determine whether they feel satisfied with the pay-per-visit system compared to the previous system of hourly compensation. The survey included questions pertaining to their feelings about fair compensation as well as quality of patient care (See
appendix for sample survey). Each question was developed using a five point Likert Scale.

**Analysis of the Data**

After the data was collected, it was entered into a spreadsheet format in order to tabulate and analyze the data to produce tables and graphs. The data elements described in Table 2 were used to calculate the variables to be compared before implementation of pay-per-visit and after. The formulas were also entered into the spreadsheet so that the table included the results. One table was prepared for the data collected relative to before implementation of pay-per-visit and one was prepared for the data collected relative to after implementation of pay-per-visit. Tables and graphs were developed to compare each variable for each nurse. Descriptive statistics were used to describe the differences between the variables before and after implementation of pay-per-visit.

Data from the survey was collected and tabulated and the mean and standard deviation were determined for each question.
CHAPTER 4 - FINDINGS

Introduction

The purpose of this study was to determine the answers to the questions, (1) Is there a difference in nursing productivity as a result of implementing pay-per-visit, (2) Is there a difference in the direct cost of a nursing visit between hourly and pay-per-visit systems, (3) Is there a difference in the length of time nurses spend in patients' homes when nurses are paid per visit as opposed to hourly, (4) Is there a difference in the amount of time spent by nurses in patient care conferences when they are paid per visit, (5) Is there a difference in the amount of time spent in inservices and staff meetings when nurses are paid per visit, (6) Are nurses satisfied with pay-per-visit and do they want to continue or would they prefer to return to hourly pay, (7) Do nurses feel that they are receiving fair and equitable compensation with pay-per-visit, and (8) Do nurses feel that quality of care is jeopardized by a pay-per-visit system. Findings for these questions are included in this chapter. Also included with these findings are data related to the variables used to answer the questions.
Data Collected

The study sample consisted of seventeen (17) nurses who were employed at Ramona VNA and Hospice for at least nine months prior to and nine months after implementation of pay-per-visit. Data was collected from a review of the nurses' Route and Time Sheets for the days randomly selected to be part of the study. The data was entered into tables showing the findings for each of the variables collected for each of the nurses in the study. Table 3 shows the data collected pertaining to the days studied before implementation of pay-per-visit.
Table 3. Data Before Implementation of Pay-per-Visit

<table>
<thead>
<tr>
<th>Nurse #</th>
<th>Total Hours Worked</th>
<th>Total Patient Visit Time</th>
<th>Hours in Team Conferences</th>
<th>Hours in Inservice/Staff Meetings</th>
<th>Number of 8 hour Meetings</th>
<th>Miles</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>280.50</td>
<td>131.50</td>
<td>0.75</td>
<td>10.00</td>
<td>980</td>
<td>35.06</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>225.50</td>
<td>131.00</td>
<td>4.25</td>
<td>12.00</td>
<td>1,104</td>
<td>28.19</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>208.00</td>
<td>115.75</td>
<td>0.00</td>
<td>17.75</td>
<td>784</td>
<td>28.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>199.50</td>
<td>90.50</td>
<td>1.00</td>
<td>2.25</td>
<td>452</td>
<td>24.94</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>90.75</td>
<td>46.00</td>
<td>0.00</td>
<td>0.00</td>
<td>406</td>
<td>11.34</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>109.00</td>
<td>55.25</td>
<td>2.00</td>
<td>7.75</td>
<td>324</td>
<td>13.63</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>15.00</td>
<td>28.25</td>
<td>0.00</td>
<td>1.50</td>
<td>156</td>
<td>3.53</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>218.75</td>
<td>117.25</td>
<td>1.00</td>
<td>7.00</td>
<td>622</td>
<td>27.34</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>3.50</td>
<td>3.25</td>
<td>0.00</td>
<td>0.00</td>
<td>27</td>
<td>0.44</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>127.75</td>
<td>75.00</td>
<td>2.00</td>
<td>4.50</td>
<td>322</td>
<td>15.97</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>214.50</td>
<td>94.50</td>
<td>0.00</td>
<td>13.50</td>
<td>911</td>
<td>26.81</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>216.25</td>
<td>118.25</td>
<td>3.00</td>
<td>9.50</td>
<td>982</td>
<td>27.03</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>157.25</td>
<td>84.50</td>
<td>0.00</td>
<td>5.50</td>
<td>484</td>
<td>19.66</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>77.25</td>
<td>55.00</td>
<td>0.00</td>
<td>3.50</td>
<td>442</td>
<td>9.66</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>160.50</td>
<td>83.50</td>
<td>2.25</td>
<td>4.00</td>
<td>850</td>
<td>20.06</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>222.25</td>
<td>114.75</td>
<td>0.00</td>
<td>6.25</td>
<td>650</td>
<td>27.78</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>223.50</td>
<td>151.00</td>
<td>1.00</td>
<td>13.25</td>
<td>1,066</td>
<td>27.94</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>2,763.00</td>
<td>1,481.75</td>
<td>17.25</td>
<td>118.25</td>
<td>10,442</td>
<td>345.38</td>
<td></td>
</tr>
</tbody>
</table>
Table 4 shows the data collected which pertains to the days studied after implementation of pay-per-visit.

**Table 4. Data After Implementation of Pay-per-Visit**

<table>
<thead>
<tr>
<th>Nurse #</th>
<th>#Billable Visits</th>
<th>Total Hours Worked</th>
<th>Total Patient Time</th>
<th>Patient Visit Time</th>
<th>Hours in Team Meetings</th>
<th>Hours in Inservice/Staff Meetings</th>
<th>Miles</th>
<th>Number of 8 hour Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>171</td>
<td>257.75</td>
<td>253.00</td>
<td>63.25</td>
<td>2.50</td>
<td>2.25</td>
<td>1,023</td>
<td>32.22</td>
</tr>
<tr>
<td>2</td>
<td>105</td>
<td>160.00</td>
<td>156.50</td>
<td>114.00</td>
<td>0.00</td>
<td>3.50</td>
<td>204</td>
<td>20.00</td>
</tr>
<tr>
<td>3</td>
<td>54</td>
<td>68.00</td>
<td>67.00</td>
<td>60.25</td>
<td>0.00</td>
<td>1.00</td>
<td>159</td>
<td>8.50</td>
</tr>
<tr>
<td>4</td>
<td>92</td>
<td>155.00</td>
<td>153.75</td>
<td>74.50</td>
<td>1.25</td>
<td>0.00</td>
<td>505</td>
<td>19.38</td>
</tr>
<tr>
<td>5</td>
<td>86</td>
<td>123.75</td>
<td>122.75</td>
<td>67.25</td>
<td>1.00</td>
<td>0.00</td>
<td>612</td>
<td>15.47</td>
</tr>
<tr>
<td>6</td>
<td>57</td>
<td>73.25</td>
<td>69.25</td>
<td>42.50</td>
<td>2.00</td>
<td>2.00</td>
<td>339</td>
<td>9.16</td>
</tr>
<tr>
<td>7</td>
<td>20</td>
<td>20.50</td>
<td>20.50</td>
<td>19.75</td>
<td>0.00</td>
<td>0.00</td>
<td>68</td>
<td>2.56</td>
</tr>
<tr>
<td>8</td>
<td>66</td>
<td>102.75</td>
<td>100.75</td>
<td>67.00</td>
<td>2.00</td>
<td>1.00</td>
<td>339</td>
<td>12.84</td>
</tr>
<tr>
<td>9</td>
<td>13</td>
<td>15.00</td>
<td>15.00</td>
<td>13.25</td>
<td>0.00</td>
<td>0.00</td>
<td>156</td>
<td>1.88</td>
</tr>
<tr>
<td>10</td>
<td>106</td>
<td>162.05</td>
<td>154.65</td>
<td>100.75</td>
<td>2.25</td>
<td>4.25</td>
<td>651</td>
<td>20.26</td>
</tr>
<tr>
<td>11</td>
<td>102</td>
<td>166.25</td>
<td>164.25</td>
<td>136.50</td>
<td>0.00</td>
<td>2.00</td>
<td>1,016</td>
<td>20.78</td>
</tr>
<tr>
<td>12</td>
<td>124</td>
<td>189.00</td>
<td>184.50</td>
<td>127.75</td>
<td>0.00</td>
<td>4.50</td>
<td>878</td>
<td>23.63</td>
</tr>
<tr>
<td>13</td>
<td>47</td>
<td>69.75</td>
<td>67.50</td>
<td>36.00</td>
<td>0.00</td>
<td>2.25</td>
<td>233</td>
<td>8.72</td>
</tr>
<tr>
<td>14</td>
<td>46</td>
<td>69.50</td>
<td>69.50</td>
<td>54.00</td>
<td>0.00</td>
<td>0.00</td>
<td>359</td>
<td>8.69</td>
</tr>
<tr>
<td>15</td>
<td>96</td>
<td>148.25</td>
<td>145.25</td>
<td>95.75</td>
<td>1.50</td>
<td>1.50</td>
<td>675</td>
<td>18.53</td>
</tr>
<tr>
<td>16</td>
<td>126</td>
<td>199.75</td>
<td>192.50</td>
<td>107.75</td>
<td>4.25</td>
<td>3.00</td>
<td>614</td>
<td>24.97</td>
</tr>
<tr>
<td>17</td>
<td>127</td>
<td>177.75</td>
<td>173.75</td>
<td>135.50</td>
<td>1.00</td>
<td>3.00</td>
<td>506</td>
<td>22.22</td>
</tr>
<tr>
<td>Totals</td>
<td>1433</td>
<td>2,158.30</td>
<td>2,110.30</td>
<td>1,315.75</td>
<td>17.75</td>
<td>30.25</td>
<td>9,444</td>
<td>269.81</td>
</tr>
</tbody>
</table>

During the thirty days randomly selected before implementation of pay-per-visit the nurses worked a total of 2,765 hours. During the thirty days randomly selected after implementation of pay-per-visit they worked 2,160 hours. This translates to a total of 345.6 eight hour days worked before and 270 eight hour days worked after implementation of pay-per-visit. During the days studied, a total of 1,426
billable visits were made before and 1433 were made after implementation of pay per visit. The following graphs show the data for each nurse with a comparison of before and after implementation of pay-per-visit.
Graph 3. Patient Care Related Time

Graph 4. Patient Visit Time
Graph 5. Hours in Team Conference

Graph 6. Time in Inservices
Graph 7. Total Miles Driven

Graph 8. 8 Hour Days Worked
After the data was collected and a calculation was made to determine the number of eight hour days each nurse worked on the days studied, the variables being studied were calculated in order to state them in useable terms. For example, it was determined how many visits were made for every eight hours that the nurses worked. Patient care related time was looked at in terms of the time per visit. The following tables show each of the variables that would be used to answer the research questions.

Table 5. Calculated Variables Before Pay-per-Visit

<table>
<thead>
<tr>
<th>Nurse #</th>
<th>Visits per 8 hours Worked</th>
<th>Patient Time per Visit</th>
<th>Length of Visit</th>
<th>Conference Time per 8 Hours Worked</th>
<th>Inservices/Staff Meetings per 8 Hours Worked</th>
<th>Average Miles per Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.08</td>
<td>1.72</td>
<td>0.92</td>
<td>0.02</td>
<td>0.25</td>
<td>6.65</td>
</tr>
<tr>
<td>2</td>
<td>4.26</td>
<td>1.74</td>
<td>1.03</td>
<td>0.15</td>
<td>0.43</td>
<td>9.20</td>
</tr>
<tr>
<td>3</td>
<td>3.31</td>
<td>2.21</td>
<td>1.35</td>
<td>0.00</td>
<td>0.68</td>
<td>9.12</td>
</tr>
<tr>
<td>4</td>
<td>4.57</td>
<td>1.72</td>
<td>0.73</td>
<td>0.04</td>
<td>0.08</td>
<td>4.23</td>
</tr>
<tr>
<td>5</td>
<td>4.67</td>
<td>1.71</td>
<td>0.67</td>
<td>0.00</td>
<td>0.06</td>
<td>7.66</td>
</tr>
<tr>
<td>6</td>
<td>4.40</td>
<td>1.62</td>
<td>0.92</td>
<td>0.15</td>
<td>0.57</td>
<td>5.40</td>
</tr>
<tr>
<td>7</td>
<td>4.25</td>
<td>1.78</td>
<td>0.96</td>
<td>0.00</td>
<td>0.42</td>
<td>10.40</td>
</tr>
<tr>
<td>8</td>
<td>3.95</td>
<td>1.96</td>
<td>1.05</td>
<td>0.04</td>
<td>0.28</td>
<td>5.57</td>
</tr>
<tr>
<td>9</td>
<td>6.65</td>
<td>1.17</td>
<td>1.08</td>
<td>0.00</td>
<td>0.00</td>
<td>9.00</td>
</tr>
<tr>
<td>10</td>
<td>4.83</td>
<td>1.64</td>
<td>1.01</td>
<td>0.13</td>
<td>0.28</td>
<td>4.35</td>
</tr>
<tr>
<td>11</td>
<td>3.10</td>
<td>2.34</td>
<td>1.14</td>
<td>0.00</td>
<td>0.50</td>
<td>10.98</td>
</tr>
<tr>
<td>12</td>
<td>4.00</td>
<td>1.89</td>
<td>1.03</td>
<td>0.11</td>
<td>0.35</td>
<td>9.09</td>
</tr>
<tr>
<td>13</td>
<td>4.53</td>
<td>1.71</td>
<td>0.95</td>
<td>0.00</td>
<td>0.26</td>
<td>5.44</td>
</tr>
<tr>
<td>14</td>
<td>4.66</td>
<td>1.64</td>
<td>1.22</td>
<td>0.00</td>
<td>0.36</td>
<td>9.82</td>
</tr>
<tr>
<td>15</td>
<td>4.14</td>
<td>1.86</td>
<td>1.01</td>
<td>0.11</td>
<td>0.20</td>
<td>6.99</td>
</tr>
<tr>
<td>16</td>
<td>4.10</td>
<td>1.89</td>
<td>1.01</td>
<td>0.00</td>
<td>0.22</td>
<td>4.82</td>
</tr>
<tr>
<td>17</td>
<td>4.58</td>
<td>1.63</td>
<td>1.18</td>
<td>0.04</td>
<td>0.47</td>
<td>8.09</td>
</tr>
<tr>
<td>Average</td>
<td>4.36</td>
<td>1.78</td>
<td>1.04</td>
<td>0.05</td>
<td>0.32</td>
<td>7.47</td>
</tr>
</tbody>
</table>

55
Table 6. Calculated Variables After Pay-per-Visit

<table>
<thead>
<tr>
<th>Nurse #</th>
<th>Visits per 8 hours Worked</th>
<th>Patient Care Time per Visit</th>
<th>Length of Visit</th>
<th>Conference Time per 8 Hours Worked</th>
<th>Services/Staff Meetings per 8 Hours Worked</th>
<th>Average Miles per Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.31</td>
<td>1.48</td>
<td>0.37</td>
<td>0.08</td>
<td>0.07</td>
<td>5.98</td>
</tr>
<tr>
<td>2</td>
<td>5.15</td>
<td>1.52</td>
<td>1.11</td>
<td>0.00</td>
<td>0.18</td>
<td>8.36</td>
</tr>
<tr>
<td>3</td>
<td>6.55</td>
<td>1.24</td>
<td>1.32</td>
<td>0.00</td>
<td>0.12</td>
<td>10.36</td>
</tr>
<tr>
<td>4</td>
<td>4.75</td>
<td>1.67</td>
<td>0.61</td>
<td>0.06</td>
<td>0.06</td>
<td>5.49</td>
</tr>
<tr>
<td>5</td>
<td>5.66</td>
<td>1.43</td>
<td>0.76</td>
<td>0.06</td>
<td>0.00</td>
<td>7.12</td>
</tr>
<tr>
<td>6</td>
<td>6.23</td>
<td>1.21</td>
<td>0.75</td>
<td>0.22</td>
<td>0.22</td>
<td>5.95</td>
</tr>
<tr>
<td>7</td>
<td>7.50</td>
<td>1.03</td>
<td>0.99</td>
<td>0.00</td>
<td>0.00</td>
<td>3.40</td>
</tr>
<tr>
<td>8</td>
<td>5.06</td>
<td>1.55</td>
<td>1.03</td>
<td>0.16</td>
<td>0.08</td>
<td>5.22</td>
</tr>
<tr>
<td>9</td>
<td>5.87</td>
<td>1.36</td>
<td>1.20</td>
<td>0.00</td>
<td>0.00</td>
<td>14.18</td>
</tr>
<tr>
<td>10</td>
<td>5.23</td>
<td>1.46</td>
<td>0.95</td>
<td>0.11</td>
<td>0.21</td>
<td>6.14</td>
</tr>
<tr>
<td>11</td>
<td>4.91</td>
<td>1.61</td>
<td>1.34</td>
<td>0.00</td>
<td>0.10</td>
<td>9.96</td>
</tr>
<tr>
<td>12</td>
<td>5.25</td>
<td>1.49</td>
<td>1.03</td>
<td>0.00</td>
<td>0.25</td>
<td>7.08</td>
</tr>
<tr>
<td>13</td>
<td>5.33</td>
<td>1.44</td>
<td>0.77</td>
<td>0.00</td>
<td>0.26</td>
<td>6.02</td>
</tr>
<tr>
<td>14</td>
<td>5.29</td>
<td>1.51</td>
<td>1.17</td>
<td>0.00</td>
<td>0.00</td>
<td>7.80</td>
</tr>
<tr>
<td>15</td>
<td>5.18</td>
<td>1.51</td>
<td>1.00</td>
<td>0.08</td>
<td>0.08</td>
<td>7.03</td>
</tr>
<tr>
<td>16</td>
<td>5.05</td>
<td>1.53</td>
<td>0.86</td>
<td>0.17</td>
<td>0.15</td>
<td>4.87</td>
</tr>
<tr>
<td>17</td>
<td>5.72</td>
<td>1.37</td>
<td>1.07</td>
<td>0.05</td>
<td>0.14</td>
<td>3.98</td>
</tr>
<tr>
<td>Average</td>
<td>5.54</td>
<td>1.44</td>
<td>0.96</td>
<td>0.06</td>
<td>0.16</td>
<td>7.03</td>
</tr>
</tbody>
</table>

Productivity

Productivity, which is stated in terms of average billable visits made per each eight hour day worked, is reflected in Graph 9. The graph shows the productivity of each nurse with a comparison of before and after implementation of pay-per-visit. Average productivity increased 27%, from a mean of 4.36 visits per eight hours worked to a mean of 5.54 visits per eight hours worked. All but one of the individual nurses showed an increase in
productivity. The one nurse who had a decrease in productivity worked the least amount of time which was 3.5 hours before and fifteen hours after implementation of pay-per-visit.

**Graph 9. Visits per 8 Hours Worked**

<table>
<thead>
<tr>
<th>Nurse</th>
<th>Visits Before Pay Per Visit</th>
<th>Visits After Pay Per Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>9</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>10</td>
<td>17</td>
<td>16</td>
</tr>
</tbody>
</table>

**Patient Care Related Time**

Patient care related time which includes the actual visits and all preparation and follow-up activities decreased 22% from a mean of 1.76 hours/visit before implementation of pay-per-visit to 1.44 hours/visit after implementation of pay-per-visit. All but one nurse showed a decrease, again the nurse who had an increase in patient care related time was the one who worked very little during the study time frame. Graph 10 shows patient care related
time for each nurse, contrasting before and after implementation of pay-per-visit.

Graph 10. Care Related Time / Visit

Length of Patient Visit

Twelve nurses showed a decrease and five showed an increase in the length of their patient visits. Patient visit time includes the actual time spent in the patient's home plus travel time. The mean length of nursing visits decreased after implementation of pay-per-visit by 8%. The mean length of patient visits before pay-per-visit was 1.04 hours/visit while the mean length of the visits after implementation of pay-per-visit was 0.96 hours/visit. Graph 11 shows average patient visit time for each nurse, contrasting before and after implementation of pay-per-visit.
Since patient visit time includes travel time, mileage data was collected in order to compare the miles per visit before and after implementation of pay-per-visit. Average miles per visit changed less than one half mile per visit, from 7.47 to 7.0. See Graph 12.

**Graph 11. Visit Time per Visit**

**Graph 12. Average Miles per Visit**
Patient Conference and Inservice Time

Time spent in patient conferences, inservices, and staff meetings was measured in terms of hours per eight hours worked. Time spent in patient conferences changed very little after implementation of pay per visit showing an increase from an average of 0.5 hours/eight hours worked to 0.6 hours/eight hours worked. However, the amount of time the nurses spent in inservices and staff meetings decreased markedly. The mean amount of time decreased from .32 hours/eight hours worked to .10 hours/eight hours worked. This is a decrease of 69%. See Graph 14.

Graph 13. Conference Time

- Before Pay Per Visit
- After Pay Per Visit
Survey Results

The other data collected was from a survey sent to the seventeen nurses who participated in the study. A copy of the survey tool is included in the appendix C. Eleven of the seventeen nurses responded. The questions and responses follow.

The first question asked the nurses if they like being paid by the visit instead of by the hour. Two nurses felt strongly that they did not like pay-per-visit. The rest were either neutral (3 on the scale) or positive about pay-per-visit. The mean response was 3.364 indicating that overall, the nurses liked pay-per-visit more than hourly pay.
Do you like being paid by the visit instead of by the hour?

1=NO; 5=YES

<table>
<thead>
<tr>
<th>VALUE</th>
<th>FREQ</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>36.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 3.364
Standard Deviation: 1.690

The second question asked the nurses if they would prefer to be paid by the hour instead of by the visit. As expected, the response was the reverse of the responses to question #1. Four nurses felt strongly that they would not prefer hourly pay. The mean was 2.727, indicating that overall, the nurses did not prefer to be paid by the hour.

<table>
<thead>
<tr>
<th>VALUE</th>
<th>FREQ</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>36.4</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 2.727
Standard Deviation: 1.618
The third question asked the nurses whether they thought that pay-per-visit encourages or discourages quality patient care. None of the nurses indicated that they felt strongly that pay-per-visit encouraged quality of patient care. Most felt neutral or strongly that pay-per-visit discourages quality patient care. See Table 9.

**TABLE 9 - Survey Question #3**

Do you think pay-per-visit encourages or discourages quality patient care?  
1 = DISCOURAGES; 3 = NO EFFECT; 5 = ENCOURAGES

<table>
<thead>
<tr>
<th>VALUE</th>
<th>FREQ</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>45.5</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>45.5</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 2.182  
Standard Deviation: 1.168

The fourth question of the survey asked nurses whether they felt that the pay-per-visit system promoted or detracted from a "team approach" to patient care. 63% of the nurses who responded felt that pay-per-visit had no effect on team approach. The rest of the nurses felt that pay-per-visit detracted from a team approach.
TABLE 10 - Survey Question #4
Does pay-per-visit promote a “team approach” to patient care or does it detract from a “team approach” to patient care.

1 = DETRACTS; 3 = NO EFFECT; 5 = PROMOTES

<table>
<thead>
<tr>
<th>VALUE</th>
<th>FREQ</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>63.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 2.455
Standard Deviation: .820

The fifth question on the survey asked the nurses whether they felt pay-per-visit had a positive or negative effect on their income. Only three nurses felt that their income had been negatively affected. The rest were either neutral or felt that pay-per-visit had had a positive effect on their income.

TABLE 11 - Survey Question #5
Has pay-per-visit had a positive or negative effect on your income?

1 = NEGATIVE; 3 = NO EFFECT; 5 = POSITIVE

<table>
<thead>
<tr>
<th>VALUE</th>
<th>FREQ</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 3.273
Standard Deviation: 1.489
The sixth question asked the nurse if they perceived a change in the actual visit time of their visits. All but one nurse felt that their visit time had not been influenced by pay-per-visit. See Table 12.

<table>
<thead>
<tr>
<th>TABLE 12 - Survey Question #6</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the average, has your actual visit time (travel time plus time in the patient’s home) increased or decreased since implementation of pay-per-visit?</td>
</tr>
<tr>
<td>1 = DECREASED; 3=NO CHANGE; 5=INCREASED</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VALUE</th>
<th>FREQ</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>90.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 2.818  
Standard Deviation: .603

The final question on the survey asked nurses if the pay-per-visit system motivated them to make more visits per day than when they were paid by the hour. The responses were very scattered, with a mean of 2.818.
TABLE 13 - Survey Question #7

Does the pay-per-visit system motivate you to make more visits per day than when you were paid by the hour?

1 = NO; 5 = YES

<table>
<thead>
<tr>
<th>VALUE</th>
<th>FREQ</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>36.4</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>11</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Mean: 2.818

Standard Deviation: 1.471
CHAPTER 5 - CONCLUSIONS

Conclusions and Implications

Does a pay-per-visit system incentivize home health nurses to be more productive, thus reducing direct costs and yet maintaining quality patient care and employee satisfaction? In order to address this problem, as described in Chapter 1, eight research questions were asked. The questions will be answered in the following discussion of the results of the study. The actual findings of the data collection and computation of the variables considered are presented in Chapter 4.

1. Is there a difference in nursing productivity as a result of implementing a pay-per-visit system? In all but one case, the nurses' productivity increased in the nine months following implementation of pay-per-visit. The average change in productivity was an increase of 27 percent. The one nurse whose productivity decreased was very part time and only worked two of the randomly selected days before and two days after pay-per-visit was implemented. The data for this nurse was probably not sufficient to make a statistically meaningful comparison.
In addition to the above findings, the nurses who responded to the survey were fairly neutral regarding the motivational factor of pay-per-visit. Five nurses felt that pay-per-visit did not motivate them to make more visits per day and five nurses felt that pay-per-visit did motivate them to be more productive. Only one nurse felt neutral about whether pay-per-visit affected her motivation. It would appear that even when the nurses did not perceive a difference in their motivation, their behavior changed. The data suggests that they were definitely more productive after implementation of pay-per-visit. It is possible that some nurses did not necessarily make more visits per calendar day, but worked less hours because of more efficient use of their time. The way the survey question was worded may have influenced them to think in terms of a calendar day whereas the study was based on eight hour work days.

In answer to the question, there was a significant difference in productivity as a result of pay-per-visit.

2. Is there a difference in the direct cost of a nursing visit between hourly and pay-per-visit systems?

This question could not be directly answered with the data
obtained from the study since actual salary data was not collected. However, if the nurses' productivity increased, the direct nursing cost per visit should decrease.

It would probably be safe to infer that the cost per visit would decrease after implementation of a pay-per-visit system based on the data obtained from the study. In addition to increased productivity, the nurses spent much less time performing patient care related activities after implementation of pay-per-visit. Before pay-per-visit, nurses spent an average of 1.76 hours per billable visit in patient care related activities. This included the actual visit, travel time, non-revenue producing visits, and office and charting time. After pay-per-visit was implemented, the average time per visit decreased 22 percent to 1.44 hours per billable visit.

Because of the increased productivity and decreased patient care time spent per visit, it would indicate that the direct nursing cost per visit would decrease with a pay-per-visit system since the cost is no longer dependent on hours worked. The pay-per-visit system provided an incentive for the nurses to work more efficiently. Further analysis of the data coupled with actual salary information
would be necessary to accurately answer this question.

3. Is there a difference in the length of time nurses spend in patient's homes when nurses are paid per visit as opposed to hourly? This question was certainly answered by the data obtained. Before implementation of pay-per-visit, the nurses spent an average of 1.04 hours per visit. This time included the travel and actual time in the patient's home since there was no mechanism for separating travel time from the actual visit time. After implementation of pay-per-visit, the nurses spent an average of 0.96 hours per visit. This was a decrease of eight percent. Average miles per visit decreased less than one half mile per visit or six percent. This indicates that the majority of the time saved was in actual visit time.

4. Is there a difference in the amount of time spent by nurses in patient care conferences when they are paid per visit? The data indicates that nurses spent more time in patient care conferences after the implementation of pay-per-visit, however, the difference was small. Before implementation of pay-per-visit, the nurses spent an average of 0.05 hours in patient conferences per eight hours worked compared to 0.06 hours per eight hours worked after
implementation of pay-per-visit. Even though the actual time difference was only 0.01 hour, it was an increase of twenty percent. This may indicate that the nurses continued to view patient conferences as an important function in maintaining quality care and appropriate coordination of services.

5. Is there a difference in the amount of time spent in inservices and staff meetings when nurses are paid per visit? There was a very remarkable difference in the amount of time the nurses spent in staff meetings and inservices after the implementation of pay-per-visit. The actual time decreased from 0.32 hours per eight hours worked to 0.10 hours which is a decrease of 69 percent.

6. Are nurses satisfied with pay-per-visit? Do they want to continue or would they prefer to return to hourly pay? As shown in the survey results, most nurses are satisfied with pay-per-visit and do not wish to return to hourly pay. The mean response on a scale of one to five was 3.364 in favor of continuing pay-per-visit.

7. Do nurses feel that they are receiving fair and equitable compensation with per-per-visit? Although the survey question was not worded in a manner that directly
answers this question, most nurses who responded to the
survey felt that the pay-per-visit system had had a positive
impact on their income. The question failed to ascertain
whether they felt a sense of fairness in comparison to other
nurses, nurses in other settings, or hourly pay.

8. Do nurses feel that quality of care is jeopardized
by a pay-per-visit system? Most nurses felt that pay-per-
visit discourages quality of care. 45.5% of those
responding felt strongly that quality of care was
discouraged and 45.5% felt that pay-per-visit had no effect
on quality. One nurse responded that pay-per-visit
encouraged quality of care. When asked about the effect on
team approach to patient care, the majority of nurses
(63.6%) felt that there was no impact. The remaining 36.4%
felt that pay-per-visit detracts from team approach. This
question was not adequately answered by the study, because
the nurses were not asked to respond to whether they
themselves had altered the quality of care that they
performed. The concept of pay-per-visit may cause them to
think that quality of care would be affected, but whether or
not they saw evidence of that was not explored.
Limitations of the Study

The size of the sample population of nurses was limited to those who worked an entire eighteen month period as defined by the study. They also were confined to one Home Health Agency. While this method provided a valid comparison of the nurses' behavior before and after implementation of pay-per-visit, it would have been preferred to have a larger sample size and look at nurses at more than one agency.

While nurse opinions are probably quite valid, there was no mechanism to measure the outcome of care which would be appropriate in determining whether pay-per-visit had any real effect on the quality of care. This is an ongoing problem in the home care industry and to date, there have not been any developments recognized within the industry to adequately measure actual outcomes of care. This is an ongoing project in the industry.

As mentioned earlier, the study did not provide any financial data which would substantiate whether pay-per-visit actually provided cost savings. The answer to this questioned had to be inferred from the increased productivity and efficiency of the nurses. A further and
more in depth look could be undertaken to review the actual financial data of the Ramona VNA & Hospice to accurately answer this question.

The survey questions did not elicit an opinion from the nurses about the quality of the care that they individually provided. It would have been interesting to compare how they felt in general about the effect of pay-per-visit on quality of care compared to how they perceived their own quality of care.

**Recommendations**

Future research is indicated to further determine the effect of pay-per-visit on team work and quality of patient care. It would also be interesting to differentiate between nurses who are case managers and those who are not, since their responsibilities are different. Casemanagers have more responsibility in the overall management implementation of the patient's plans of care. The nurses in the study comprised a mixture of case managers and other nurses without case management responsibilities.

As mentioned in the above section, further study would be appropriate to determine actual cost savings to the Home
Health Agency.

Application of Study Findings to VNAIC

As a result of the findings of the above study, the Visiting Nurse Association of the Inland Counties developed and implemented a pay-per-visit policy tailored to meet the needs of that agency. The overall goal was cost-containment and providing incentives for staff to be efficient and productive.

Because of the nurses responses which indicated concern about the impact of pay-per-visit on team work and quality of care, it was decided that nurse casemanagers, who have overall responsibility for coordination of patient care, would remain on hourly pay. Other disciplines and nurses who do not have case management responsibility were included in the pay per visit plan.

It would appear in initial review of the financial data for the first month of implementation that the conversion of many employees to pay-per-visit has had a positive impact. Informal conversations with staff have also indicated a positive level of satisfaction. A very small number of staff who were changed to pay-per-visit have resigned,
stating that they prefer not to work under that plan. These individuals were ones who had previously been identified as having low productivity. Some staff members who were very concerned about the change have expressed relief and actual satisfaction with the plan, stating that they now feel that they have some control over the amount of money they earn and they feel a much more direct relationship between their efforts and their pay.

In the short amount of time since implementation of the pay-per-visit plan, the Visiting Nurse Association of the Inland Counties is viewing it as successful in providing cost-containment and incentives for staff to work more efficiently. The plan is contained in Appendix D.
## APPENDIX B - DATA COLLECTION SHEET

**NURSE #**

<table>
<thead>
<tr>
<th>DATE</th>
<th># BILLABLE VISITS</th>
<th>TOTAL HOURS WORKED</th>
<th>TOTAL PATIENT CARE TIME</th>
<th>PATIENT VISIT TIME</th>
<th>PATIENT CONFERENCE TIME</th>
<th>INSERVICE / STAFF MEETING TIME</th>
<th>MILES</th>
<th>PATIENT VISIT TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

78
APPENDIX C - SURVEY

1. Do you like being paid by the visit instead of by the hour?

   1  2  3  4  5
   NO           YES

2. Would you prefer to be paid by the hour instead of by the visit?

   1  2  3  4  5
   NO           YES

3. Do you think pay-per-visit encourages or discourages quality patient care?

   1  2  3  4  5
   DISCOURAGES QUALITY CARE NO EFFECT ON QUALITY ENCOURAGES QUALITY CARE

4. Does pay-per-visit promote a “team approach” to patient care or does it detract from a “team approach” to patient care?

   1  2  3  4  5
   DETRACTS FROM TEAM APPROACH NO EFFECT ON TEAM APPROACH PROMOTES TEAM APPROACH

5. Has pay-per-visit had a positive or negative effect on your income?

   1  2  3  4  5
   NEGATIVE EFFECT NO EFFECT POSITIVE EFFECT

6. On an average, has your actual visit time (travel time plus time in the patients’ homes) increased or decreased since implementation of pay-per-visit?

   1  2  3  4  5
   DECREASED NO CHANGE INCREASED

7. Does the pay-per-visit, system motivate you to make more visits per day than when you were paid by the hour?

   1  2  3  4  5
   NO           YES
POLICY

Agency administration determines which clinical employees are paid on a per-visit rate and which are paid on an hourly rate. The pay-per-visit (PPV) program is based on each employee's hourly wage, which is determined according to Agency policies regarding compensation. Being paid on a per-visit basis does not affect the employee's classification or benefit status.

As of September 1, 1996 the following Home Health and Hospice employees are paid on a per-visit basis, according to the following procedures:

a. Therapists and Therapy Assistants (PT, OT, SP)
b. Home Health Aides
c. LVN's
d. Per Diem RN's
e. Social Workers and Social Work Assistants
f. Chaplains

PROCEDURE

1. Each PPV employee maintains a base hourly wage rate consistent with their assigned salary grade and is eligible for salary increases as described in Section 2.10, Performance Evaluations.

2. Visit rates are calculated by multiplying the appropriate visit factor times the employee's base hourly rate. Visit factors are subject to change.

The visit rate includes:

a. Actual time spent conducting the visit.
b. All scheduling and pre-visit preparation.
c. Travel time to and from the visit. (Travel time from a visit is usually considered as travel time to the next visit.)
d. All required documentation.
e. Communication with other team members and/or the patient's physician.
f. Follow-up and coordination pertaining to implementation of the patient's plan of care.
g. Delivery of lab specimens obtained during the visit.

3. All visits are to be arranged in advance. Time spent in conjunction with not-at-home or refused visits will be paid at the base hourly rate if the visits were arranged with the patient or patient's caregiver on the day of the visit. If a patient does not have a telephone, arrangements for follow-up visits must be made during each visit and this communication must be reflected in the documentation.

4. Unusual circumstances, i.e. excessively long travel time of greater than 1 hour in each direction, and/or procedures which require unusually long visits of greater than 2 hours, may
warrant payment of the time spent in conjunction with the visit at the base hourly rate instead of the PPV rate. These cases require prior authorization from the Supervisor. Rehab staff and Social Workers may be assigned geographic differentials.

5. Other assigned and authorized activities are paid at the base hourly rate for the actual amount of time spent in these approved activities, including:
   a. Formal patient care conferences up to 2 hours/pay period
   b. Liaison activities
   c. Required staff meetings up to 2 hours/pay period
   d. Inservice education up to 2 hours/month
   e. Orientation (See Section 6 below)
   f. Quality/Performance Improvement activities
   g. Agency committee meetings

6. New hires are paid at their base hourly rate to attend the Agency's initial orientation (including HR orientation) as follows:
   Chaplain                         Up to 8 hours
   Rehab Employees                  Up to 16 hours
   Social Workers                   Up to 16 hours
   RN's/LVN's                       Up to 2 weeks or 80 hours
   HHA's                            Up to 1 week or 40 hours

Any extension of this initial orientation period must be approved by the Branch Manager and the Q/PI Manager. In addition, participation in the Agency-wide orientation program in Riverside, which is required for all employees, is paid on an hourly basis.

7. Employees are required to record the actual hours they work on their Route and Time Sheets. This includes all activities performed which are included in the visit rate as well as time paid at the base hourly rate. All time is recorded in 1/4 hour increments.

8. All patient visits and other work performed are expected to be completed within the employee's regular work day, thus avoiding overtime. Any time worked in excess of the employee's regular work day or work week will be considered overtime. All overtime must be approved by the Supervisor or designee in advance.

9. If the employee's assignment is completed before the end of their agreed-upon shift, they must remain available for additional assignments. If not available by phone, expected response time to a beeper page is fifteen minutes.

10. A differential is paid to nurses for visits made between 10:00 p.m. and 6:00 a.m. (see Section 3.09, On-call Nursing), and on Agency designated holidays (see Section 3.05, Holidays). The differential is paid per visit and is the same regardless of the type of visit made.

11. For benefitted employees, all paid time off (PTO, STI, etc.) hours will be paid at the employee's base hourly rate. Accruals will be made based on actual time worked and paid time off, not to exceed 40 hours per week.
### PAY PER VISIT - VISIT FACTOR TABLE

<table>
<thead>
<tr>
<th></th>
<th>RN/LVN</th>
<th>INTERMITTENT</th>
<th>HOSPICE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admission Visits:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine Admission</td>
<td></td>
<td>2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>One-time Visit Requiring 485</td>
<td></td>
<td>2.0</td>
<td>N/A</td>
</tr>
<tr>
<td>MIC One-time or Admission</td>
<td></td>
<td>2.0</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Specialty Admit Visits:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV (Therapy initiated during admission visit)</td>
<td>2.5</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>ET (Requires skills of RNET)</td>
<td></td>
<td>2.5</td>
<td>N/A</td>
</tr>
<tr>
<td>Psych (Requires Mental Health Nurse)</td>
<td></td>
<td>2.5</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Regular Visits (RN):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-up Visit</td>
<td></td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Eval only/No further care</td>
<td></td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Mutual visits</td>
<td></td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Regular Visits (LVN)</td>
<td></td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>HHA Supervision Visits</td>
<td></td>
<td>.5</td>
<td>.5</td>
</tr>
<tr>
<td><strong>Night/Holiday Differential Visits</strong></td>
<td></td>
<td>$10/visit</td>
<td>$10/visit</td>
</tr>
<tr>
<td><strong>HHA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Visits</td>
<td></td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Night/Holiday Differential Visits</td>
<td></td>
<td>$5/visit</td>
<td>$5/visit</td>
</tr>
<tr>
<td><strong>SW/SWA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Visits</td>
<td></td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Night/Holiday Differential Visits</td>
<td></td>
<td>$10/visit</td>
<td>$10/visit</td>
</tr>
<tr>
<td><strong>CHAPLAIN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Visits</td>
<td></td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Night/Holiday Differential Visits</td>
<td></td>
<td>$10/visit</td>
<td>$10/visit</td>
</tr>
<tr>
<td><strong>REHAB: PT/PTA, OT/OTA, SP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Visits</td>
<td></td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Night/Holiday Differential Visits</td>
<td></td>
<td>$10/visit</td>
<td>$10/visit</td>
</tr>
<tr>
<td><strong>Differential Points:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel (refer to individual differential sheet)</td>
<td>$1/point</td>
<td>$1/point</td>
<td></td>
</tr>
<tr>
<td>PT/OT Supervision of PTA/OTA</td>
<td></td>
<td>$10/visit</td>
<td>$10/visit</td>
</tr>
</tbody>
</table>

*Refer to Personnel Policy Manual Sections 3.05 and 3.09. The Holiday Differential is paid only for visits that the employee is required by the manager to make.*
REFERENCES


