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HOMEHEALTH: DELIVERING ACTIVITY-BASED COSTING

“When a paradigm shifts everyone goes back to zero, your past success guarantees you nothing.”

—Joel A. Barker, *Future Edge: Discovering New Paradigms in Success*

FOREWORD

John A. Miller

This case study is instructive in many ways and demonstrates the key principles of an effective activity-based costing (ABC) implementation. It is fair to say that HomeHealth was one of the pioneers in the history of ABC. This project was initiated in the mid-1990s, about the same time as the American Productivity & Quality Center (APQC) and CAM-I jointly launched a best practice study in the then emerging area of ABC.¹ At that time, it was estimated that only about 5,000 organizations had undertaken an ABC initiative. Most were manufacturing companies that were using the ABC cost tracing methods and techniques to determine their product cost more accurately. Only a handful of manufacturing and a few service organizations were going beyond product cost and using activity-based information to help them improve processes and business performance. HomeHealth was one of those service organizations that undertook ABC to help improve their business performance.

The best practice study, published in 1995, captured the combined knowledge and resources of the APQC and CAM-I, sponsorship by more than 60 leading companies, involvement by 6 subject matter authorities (including 2 from academia), 167 organizations willing to complete a detailed survey of ABC, and 15 best practice companies sharing their insights and knowledge. One of the key contributions of this study was the documentation of the ABM Value

Cycle, which specified applications of activity-based information in the areas of improvement initiatives, decision making, and performance measurements. The application at HomeHealth is in the area of improvement initiatives and could be classified as a process improvement application or a cost reduction application.

The main purpose of this section is to identify and document some of the best practices discussed in the survey (which still apply today) for ABC and to use the case study to demonstrate how they were used at HomeHealth. Best practices include:

- **Business reason for doing ABC.** At HomeHealth, the key business and challenges were to reduce cost, maintain quality, and improve access. The ABC model was positioned as a tool to meet these challenges.
- **Pilot test to confirm value and usefulness to the organization.** At HomeHealth, two pilot efforts were undertaken. Immediately after the first pilot, a second pilot was necessary to fully convince HomeHealth management of value, before commencing a full scale, agency-wide ABC system
- **Balanced project resources, timelines, and scope of work.** Any ABC project can be implemented, regardless of scope, provided the due date allows for sufficient time and resources to meet the requirements. What work has to be done and how long it will take is specific to the scope of the work. At HomeHealth, the scope of work (agency wide), timeline (19 months), and resources (5 to 7 cross-functional teams, including any consultants, dedicated 25 to 100% to the project) were balanced to achieve the project completion date.
- **Consistent application of ABC/M methodology.** Best practice companies consistently apply generally accepted activity-based costing/methodology (ABC/M methods), procedures, terms, and techniques and adapt them to their specific requirements. Examples include consistent use of the CAM-I Basic Model, the CAM-I Glossary of ABC/M terms and definitions, tested data collection methods and techniques, generic process classification framework, and general and industry specific activity dictionaries. At

HomeHealth, managers and employees were trained in the basic principles and methods of ABC, and consistently used the CAM-I Cross (basic model) within the organization. It is doubtful that any kind of activity dictionary existed for the healthcare industry at the time of this initiative, and HomeHealth would have had to develop its own from scratch.

- **Management commitment and priority.** Management commitment is defined as level of ABM sponsorship, breadth and scope of training, ABM project implementation resources, level of management involvement, and use of consultants or other outside resources when required. The HomeHealth ABC initiative had a high level of management commitment and priority. Sponsorship included director-level managers who sat on the ABC/M oversight committee, adequate resources in a three- to four-person full-time equivalent (FTE) implementation team, and outside support at project initiation and ongoing as required.
- **Ongoing, cost-efficient, and reliable ABM systems required.** Absent an ongoing system to report ABC information, the project effort is limited to a one-time study, for a specific period in time. Best practice companies place significant emphasis on installing the systems, procedures, and methods necessary to collect and report activity-based information on an ongoing basis. The systems, procedures, and methods that are installed are responsive to the needs of the users, easy to update and maintain, and reliable. Best practice companies have learned that the systems and software aspect of the ABM implementation cannot be ignored; in fact, it must be emphasized. ABM system design considerations include purpose and use, accuracy required, frequency of update, and relevance.

Overall, the HomeHealth ABC implementation would have qualified as a best practice in 1995. In these early days HomeHealth had a business reason for doing ABC, expected to see value, and required pilot tests to demonstrate that value. Management commitment and priority were demonstrated by the assignment of resources to the implementation and the willingness to provide outside support and training to the ongoing ABC system.

INTRODUCTION

Faced with rapidly changing customer requirements, a new governmental reimbursement methodology, and increased competition from national for-profit chains, home healthcare agencies are finding that their traditional methods for fiscal and operational decision making are no longer adequate. Activity-based costing/management (ABC/M) provides a more accurate way for a home healthcare agency to reduce costs while maintaining quality and improving customer access.

What is home healthcare? "Home care" is a generic term that encompasses a variety of health and social services. These services most commonly consist of nursing; physical, occupational, respiratory, and speech therapy; social service; dietitian; phlebotomy; and assistance with personal care and activities of daily living needs. Services are delivered at home to recovering, disabled, and chronically or terminally ill persons. Generally, home care is provided whenever a person prefers to stay at home but needs ongoing care that family and friends alone cannot provide easily or effectively.

ORGANIZATIONAL ISSUES

The HomeHealth (HH) Network is the not-for-profit home care agency of a large Presbyterian-Medical Center located in the Midwest and providing home health services to individuals in a major metropolitan area and five surrounding counties. Founded in 1975, the HomeHealth Network was the first hospital-based home care agency in its area. The network consists of an intermittent home health agency, which is Medicare certified and state licensed; a personal care service agency consisting of home health aides and homemakers; and an older adult program that provides services such as evaluation, community referrals, emergency alert, and programming to support healthy living. In addition, HomeHealth has seamless linkages with providers of infusion therapy pharmacy and supplies, medical equipment, home physicians, and hospice. Since its founding, HomeHealth has grown to the point where, at the time of the ABC project, it was visiting over 141,000 homes per year and taking in over \$17.5 million of gross revenue annually. One dynamic that made evaluating the business unique was that 89% of the payers that HomeHealth dealt with were governmental.

CASE

Initial Efforts

During the 33 years since Medicare began paying for home health services, the business of home healthcare has become highly regulated but remains a “cottage industry.” Although the professional care delivered to patients is consistent from one agency to another, there is wide variation in people and material resources, operational functions, and measurements and performance standards. Knee-jerk responses to regulatory oversight have resulted in the addition of positions, processes, forms, and activities in an attempt to “fix” the deficiency. This quick-fix mentality has led to a situation where structures are hierarchical and complex, processes are overly complicated and expensive, and outcomes are inconsistent and variable, and do not always serve the needs of customers. Today’s challenge for home health agencies is to reduce their costs, maintain quality, and provide services that satisfy the needs and wants of customers. This task is formidable, as most home care agencies have no method for knowing what each process or activity costs and therefore no way to prioritize cost reductions or process improvements. Home care’s traditional costing methods can provide information about cost per visit, aggregated cost (all disciplines), cost per discipline (e.g., cost of a nursing visit), or cost per episode (from admission to discharge). However, home care agencies need intelligence that is more specific to make appropriate operational and strategic decisions that will assure survival in our uncertain future. HomeHealth was presented three key challenges; an ABC/M project was proposed as a method to respond to those challenges.

Challenges

1. Reduce cost.
 - For reimbursement changes.
2. Maintain quality.
 - “Quality” as defined by our customers.
3. Improve access.
 - Provide services that focus on the needs and wants of our customers.

Responding to the Challenges

- Target high-cost processes for improvement.
- Identify what causes cost to vary.

- Eliminate what our customers do not want.
- Monitor and improve performance.
- Price services appropriately.
- Make the right program decisions.
- Provide better customer service.

Pilot Phase

HomeHealth initiated an ABC project, the initial goal of which was to determine if ABC could assist in identifying high-cost activities that would benefit from reengineering or process improvement. In the beginning the idea was to have one pilot project and then roll out ABC/M across the entire company.

Immediately following the first pilot and still needing to be convinced, the care delivery managers asked for an ABC analysis of the admission process. This question was posed: Does the cost of a nursing admission vary by type of service provided? The types of admissions examined were infusion/high-tech admissions, maternal/child health admissions, psychiatric admissions, admissions for physical therapy, and traditional admissions.

The result was two separate pilot projects focusing on two different goals.

Pilot Project 1

The first ABC project was limited to the referral intake process. Two questions were asked: (1) What is the cost of preauthorizing managed care referrals? (2) What is the cost of referral intake from various referral sources?

The staff was telling management that preauthorizing managed care referrals was cumbersome and time consuming. To control costs and assure that only authorized services are provided to enrollees, managed care companies (health maintenance organizations [HMOs] and preferred provider organizations [PPOs]) have required healthcare companies to call a case manager for approval before providing services. Home care agencies must receive approval to do an evaluation visit in the home and then report their findings before additional visits are approved. Without visit authorization, agencies risk denial of payment for services provided.

Using ABC, it was discovered that nearly 20% of all referrals required preauthorization, a statistic that was previously unknown. It also was found that preauthorization added nearly \$36 to the cost of each referral. To place that finding in perspective, managed care companies have negotiated a rate of \$55 to \$60 per visit and approve an average of six to seven visits. It was also discovered that 10% of

the average payment for a managed care case was being used up of the cost of preauthorization.

Management also wanted to know about the variation in referral intake costs by referral source. It was found that costs varied widely. Commercial insurance referrals cost the most because they were required to negotiate rates on every case. The Physician-Hospital Organization (PHO) referral costs were the lowest because they were the only home care provider. Therefore, literally no time was spent in authorization. It was found that the activity of “accepting referrals” varied by source. Physician office referrals were the most expensive because the physician or his or her office staff was unfamiliar with the type of information needed; they required coaching or callbacks to complete the referral. Referrals received from hospital liaisons were the least expensive to accept because the work was being done outside of referral services. However, by looking at the cost of the referral intake “process,” it was found that the total cost of referrals received from hospital liaisons was three times more expensive than the average referral cost. Liaison referrals were twice the total cost of referrals from physician offices. Faxed or phoned referrals from discharge planners cost the least, but the faxed referrals had downstream costs for data entry. Faxed referrals were hard to read and often necessitated a return phone call for clarification. These findings led to an analysis of the cost drivers of liaison activity and resulted in a redesign of liaisons’ jobs and job activities. We also targeted the referral form used by discharge planners and jointly developed a form that would be legible after faxing.

Pilot Project 2

Interviews with nurses identified five common activities: (1) scheduling or planning the care; (2) traveling to the home; (3) making the home visit; (4) documenting the results of the visit; and (5) coordinating care with others involved or community resources. Management was able, for the first time, to identify the cost of each of these activities. It found that documenting the admission visit cost nearly as much as making the visit, something nurses had been telling management for years.

Cost of Direct Nursing Admission Activities

- | | |
|---------------------|--------------------|
| • Plan patient care | \$ 2.37 to \$ 4.02 |
| • Travel | \$8.04 |
| • Make home visit | \$32.23 to \$63.29 |
| • Coordinate care | \$ 8.19 to \$15.92 |
| • Document care | \$12.41 to \$29.29 |

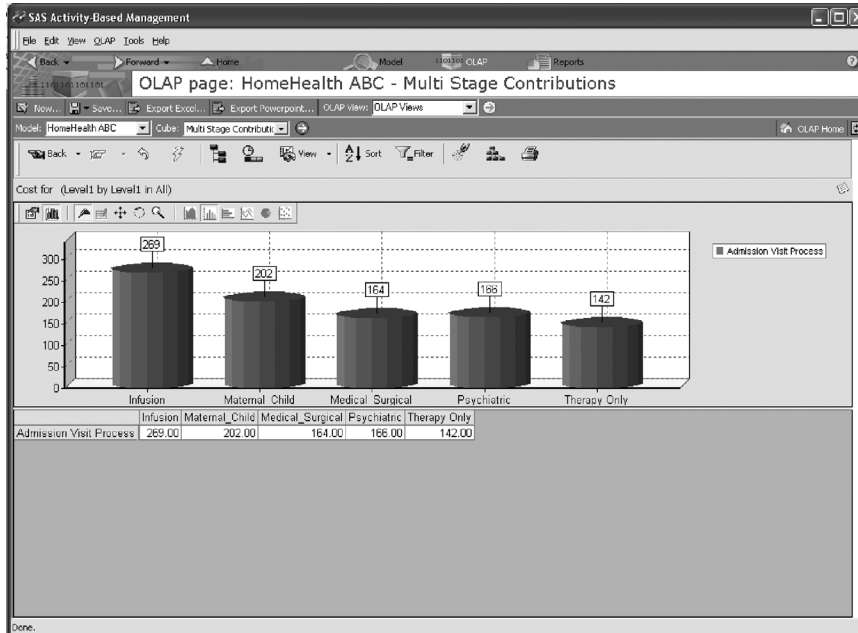


Exhibit 3.1 Example Activity Costs

The infusion/high-tech admission cost (see Exhibit 3.1) was the highest cost, followed by the maternal/child admission, the psychiatric admission, and traditional admission. The least costly was the admission for physical therapy. Further analysis provided information about the activities that added to the cost of each of these admissions. Each is being evaluated for the value it adds to the admission process.

Rollout Phase: Initiating an Agency-wide Activity-Based Costing System

The pilot ABC projects demonstrated the value of ABC over the traditional cost reporting method. Management decided to implement ABC across all aspects of the organization. Representatives from each job class were asked to identify the five to six major activities they perform. Whenever possible, their responses were validated with existing data or verified by their supervisors. By adapting the CAM-I Process Classification Framework (see Exhibit 3.2) to typical home care

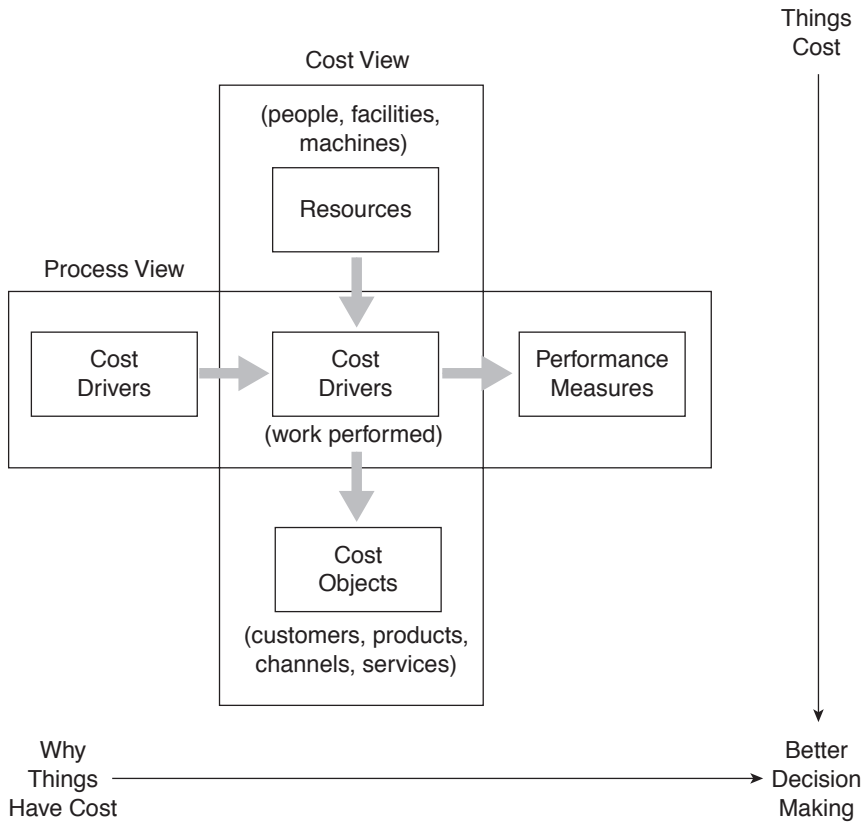


Exhibit 3.2 ABC/M Conceptual Diagram: CAM-I Cross

Source: Derived from the Consortium of Advanced Management-International (CAM-I).

functions, HomeHealth developed a dictionary that identifies and defines 11 processes and 84 activities.

Building the Model

Team and Team-Designed Project Timeline

In building an ABM project, it is common that the cross-functional team will consist of five to seven people dedicating between 25 and 100% of their time. Typically, the team will consist of internal people, external consultants, or both. This was no different at HomeHealth.

Project Team

- ABC/M Oversight Committee
 - Directors
 - Finance and Decision Support manager
 - Process improvement staff
- Model administrator
- Interview team (as needed)
- Consultant support (initiation and as needed)

At HomeHealth the project team had already been determined during the pilot phase. Team members were responsible to prepare an implementation plan, gather data, and input it into the commercial ABM software package that they had chosen just prior to the first pilot. HomeHealth selected the commercial package produced by ABC Technologies called Oros. SAS acquired ABC Technologies in 2002, and the package is now called SAS Activity-Based Management. Oros was chosen for many features but primarily for the ability to have a truly multidimensional cost object and handle any modeling methodology, whether a traditional ABC or a consumption-based approach such as activity-based planning and budgeting, resource capacity planning, or any other time- or event-triggered modeling style. (Exhibit 3.3 presents the project timeline.)

Planning and Design

The resource module serves as the starting point and is structured after the general ledger. Expenses from 12 cost centers in the ledger also serve as centers in the resource module. These centers represent each of the eight clinical specialties, medical supplies, and three administrative cost centers. Five other centers are included

ID	Task Name	Start	Finish	Duration	2000												2001							
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	Orientation	1/3/2000	1/3/2000	0w	◆																			
2	Completed Pilot #1	1/3/2000	3/31/2000	13w	◆																			
3	Completed Pilot #2	4/3/2000	6/30/2000	13w	◆																			
4	Completed All Interviews	6/30/2000	2/28/2001	34.8w	◆																			
5	Completed Activity Dictionary	3/1/2001	5/31/2001	13.2w	◆																			
6	Resource & Activity Modules Complete	6/1/2001	7/31/2001	8.6w	◆																			
7	Begin Regular Module Updates	8/1/2001	8/1/2001	0w	◆																			

Exhibit 3.3 Project Timeline

in the module structure: (1) Wages, Salaries, and Benefits; (2) Hospital Overhead; (3) Clinical Expense Pool; (4) Administrative Expense Pool; and (5) Entered Benefits for employees paid by the visit. Wages, Salaries, and Benefits are listed by position, whether one person or multiple people hold a title. Their respective salaries and wages are then entered in the module. The expense accounts from the general ledger (GL) are entered as accounts under the centers in the resource module. This is done for all the centers that come from the GL. The Other Expenses (expenses other than Wages, Salaries, and Benefits) are assigned to one of the two expense pools. The clinical accounts are assigned to an account within the Clinical Expense Pool; likewise, administrative accounts were assigned to an account within the Administrative Cost Pool. The Hospital Overhead and Entered Benefits centers each contain one account. These amounts are calculated and entered.

The expense pool accounts are either assigned back to the Wages, Salaries, and Benefits or directly assigned to an activity. For example, the GL accounts for rent and electricity are assigned to one of the expense pools (depending on whether the expense is clinical or administrative in nature). The account within the expense pool is Facilities. Facilities are then assigned to the respective positions within the Wages, Salaries, and Benefits center. This is done strictly as a time-saving step when assigning resources to activities.

How did we know what activities were being performed? Interviews were done to determine the resource to activity assignments. During the interview phase, the team decided that it was important to keep it simple and set some ground rules to keep the results consistent.

- Consider time worked to be 100%.
- Consider four to six major activities, as identified by staff.
- Usually disregard activities under 5%.
- Identify purpose of activities, such as “meetings” and “paperwork.”

The activity module is quite simple in structure. Every job title at HomeHealth is listed as a center in the module. Each center (job title) contains five or six accounts or activities attained from the employee interviews. There is one center in the activity module that is not a job title, Unassigned. This center contains hospital overhead and bad debt, which are expenses that could not be logically assigned to activities. See the interview example for the Special Services Supervisor (see Exhibit 3.4).

The next step for the activity module was to build the attribute structure (see Exhibit 3.5). This structure is identical to the activity dictionary. Every activity has

Activity module: HomeHealth ABC

Display Name	Percent
ACTIVITY (PRIMARY PANE)	
Special Services Supervisor	
Coordinate Referrals	25%
Schedule IVs	20%
Educate	20%
Verify IV Orders	10%
Write Verbal Orders	10%
Process Improvement	10%
Competency Testing	5%
Staff Nurse	

Ready Not published

Exhibit 3.4 Activity Module

Attributes page: HomeHealth ABC

Name	Reference
ATTRIBUTES	ATTRIBUTES
Percent	Percent
Process: Deliver Services	Process: Deliver Services
Plan Home Visit	Plan Home Visit
Travel	Travel
Make Home Visit	Make Home Visit
Coordinate Care	Coordinate Care
Document Care	Document Care
Process: Develop & Manage Human Resources	Process: Develop & Manage Human Resources
Create and Manage HR Strategies	Create and Manage HR Strategies
Recruit and Hire Employees	Recruit and Hire Employees
Develop and Train Employees	Develop and Train Employees
Manage Employee Performance	Manage Employee Performance

Ready

Exhibit 3.5 Attribute Structure

a place within the dictionary, and all major processes serve as centers within the structure. Each activity is then assigned to its respective dictionary item. This is very useful, because it is possible to look at the costs of total processes and then break down the process by activity to find the high-cost activities.

HomeHealth decided to use a multidimensional approach in creating the cost object module. The three dimensions chosen were Discipline, Visit Type, and Payer. A fourth dimension, Organizational Sustaining Costs, was added to catch those activities that could not logically be assigned to one of the other three dimensions. These activities are those of support people and administrative functions. The structure of the cost object module was carefully considered. HomeHealth's current billing and data system allows for sorting by a combination of only three fields. Therefore, the three listed dimensions were chosen. Other possible dimensions might be Referral Source, Diagnosis, and Supply Usage. A new billing system would allow HomeHealth to add dimensions as desired. Exhibit 3.6 depicts an example of the structure of a multidimensional cost object module.

Activities were then assigned to the appropriate dimension account. For instance, all physical therapy activities were assigned to the PT account under the discipline dimension. The sales table was created with estimated revenues. HomeHealth does not compile statistics on actual revenue by payer, but instead budgets the amount of reimbursement that each payer group will pay. Once visit volume is determined at the end of the quarter, the budgeted rate or percentage of charges is applied. Data are now available by payer, by visit type, by discipline, by sustaining costs (overhead for the most part), or any combination thereof. It is also possible to exclude a dimension in a view. It is useful to look at the cost per visit with or without the sustaining costs dimension, which is predominately indirect labor expenses and hospital overhead.

Some of the drivers HomeHealth uses may be unique to healthcare and even home care. Some of the drivers used to assign resources to activities are clinical mileage, budgeted clinical pagers and phones, interview ratios, FTEs weighted by interview ratios, square footage, vendor percent of visits, and direct assignment. Direct assignment was used for items such as overhead and other items assigned to the unassigned account in the activity module. Direct assignment was also used to assign accounts to the clinical or administrative expense pools. An effort was made not to use direct assignment for activities, because management wanted those costs to be spread by driver ratio.

Some of the same drivers were used to assign activities to the cost object accounts. Additional drivers are admissions by payer, patients served by payer, and

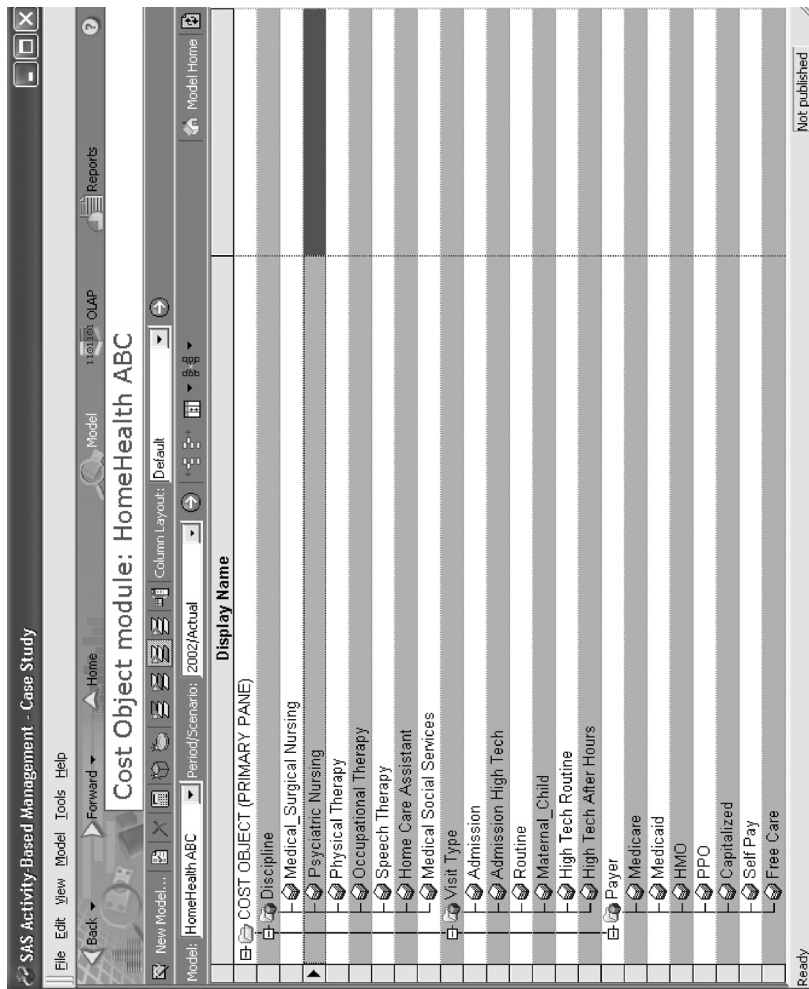


Exhibit 3.6 Multidimensional Cost Object

visits by payer. The driver used is determined by whether the activity is dependent on the volume of admissions, patients, or visits. For example, number of staff trained, used to assign activities associated with training staff on HomeHealth clinical documentation system. The final drivers called “Visits by discipline” and “Visits by type” were used. For additional accuracy, both drivers were used both with and without a weighting factor. The amount of time for each visit was the weighting factor used. The quantities for these drivers, as well as for the resource drivers, are available in our billing/data system, and many must be updated quarterly.

Initial Benefits

ABC reports are being used to review the cost of visit types by discipline by payer during budget review meetings. The more specific information that ABC provides changes the focus from the cost reporting view to an understanding of the true cost of providing services.

An example of the differences in the two views can be found in Exhibit 3.7.

The ABC model has been used to monitor possible changes and scenarios by creating “dummy models” to evaluate possible enhancements to the base model. These dummy models are created from the base model to run a much simpler cost object. This allows us to evaluate the possibility of adding new dimensions in the

Cost per Visit	Health Care Financial Accounting Formats		ABC Cost Object Module	
	Comparison to Limits	DISCIPLINE	Cost per Visit	Unit Profit
\$97.14	\$1.35	Med/Surg. Nursing	\$98.09	(\$3.61)
106.62	10.83	Psych Nursing	98.01	1.69
75.95	(27.64)	Physical Therapy	97.98	0.02
77.28	(26.32)	Occupational Therapy	89.71	7.39
86.06	(17.94)	Speech Therapy	105.41	(14.39)
107.96	(23.78)	Medical Social Worker	117.47	(30.22)
49.26	2.78	Home Care Assistant	74.15	25.78
94.29		OVERALL	95.35	

Exhibit 3.7 Comparison of Traditional Costing to ABC at HomeHealth

future. For example, one of the HomeHealth HMO contracts was renegotiated and resulted in a lower visit rate paid to HomeHealth. By adjusting the model to incorporate that adjustment, it was possible to see the impact the change would have on the profitability of the whole payer group.

Some other examples of how ABC/M will turn financial information into management information:

- Psychiatric nursing visits are three times more costly than medical-surgical visits.
- HMO visits cost 1.5 times more than Medicare visits.
- Admission process costs are \$450 per client.
- Physical therapist travel is two times more expensive than registered nurse travel.
- Documentation costs \$45 per visit.

HomeHealth also investigated the costs associated with providing medical supplies to patients. During the initial project the constraints of the current billing/data system would not allow expansion of the cost object, but once a new system was installed HomeHealth was ready (and did) make the necessary improvements to the base model.

Initial Lessons Learned

In *Activity-Based Cost Management: An Executives Guide*, Gary Cokins describes the organizational shock from ABC/M: “Ninety percent of ABC/M is organizational change management and behavior modifying, and 10 percent is the math . . . This is a huge problem.”²

HomeHealth found this to be true. Sometimes staff members react negatively to the term “activity-based costing.” They fear that identifying the cost of their work may lead to unrealistic changes, added responsibility, or job reductions. They can become defensive and uncooperative with the process. The education of staff begins during the activity interview. In most cases staff members find that the interview process provides a voice for their complaints about rework and their aggravation with things that make their work harder to do. As ABC/M is used and the results are explained, staff concerns disappear, and they soon become believers in the method.

Some findings were that:

- Activity “costing” can illicit fear and defensiveness.
- Activity “management” may be more acceptable.
- Education begins with staff interviews.
- Sharing what makes work hard validates staff members’ long-standing frustrations and involves them in the process.

HomeHealth overcame these “fears” by spending a large amount of time educating staff members about the value of ABC/M and its uses. By focusing on quality improvement, and cost reduction, staff members began to see the value of ABC.

ABC/M was explained to staff members as leading to:

- Increased customer satisfaction:
 - Patient
 - Physician
 - Payer
- Improved clinical outcomes
- Reduced cost per visit/episode
- Better coordination/continuity
- Increased staff satisfaction

Other challenges that had to be addressed should have been planned for up front. In the book *Implementing Activity-Based Management in Daily Operations*, John Miller explains that “implementing a new ABM information system requires a considerable amount of effort and planning . . . overall requirements must be specified up front.”³

Most of the goals for the ABC/M project at HomeHealth concerned how to keep the model updated. Five things that would have been nice to address up front would have been:

1. How often staff needs to be interviewed
2. Frequency of reports
3. When the assignment of resources needs to change
4. Revision of the activity dictionary
5. Model validation included after process improvement initiatives

Initial Next Steps

Integration of ABC/M throughout the organization has been ongoing. Managers are now receiving regular updates, and the cost per visit report is being used in the monthly Budget Work Team meetings along with more traditional operating and financial reports. The executive director serves as the driving force for HomeHealth's ABC/M initiative. Various ABC data, such as attribute reports, reports on quarterly updates, and printouts of the model itself, are used to illustrate how an ABC approach can enhance management decision making, identify areas of high cost, and prioritize process improvement activities.

Going forward, the plan was to fully integrate ABC and ABM into existing processes: management decision making; process improvement; financial reporting; budgeting; strategic planning; job design, measurement, and evaluation; organizational evaluation; and marketing. One example of how ABC is being used to manage process improvement activities is the way projects are now prioritized. HomeHealth ranks processes of interest by total cost, potential for improvement, downstream cost driver, contribution to the organizational mission, interface with external customers, and readiness for change. Improvement projects are assigned priority based on their total score (see Exhibit 3.8). It was found, for instance, that their scheduling process is consuming 3.3% of the total expenditures more than the cost of billing and collecting for its services. HomeHealth has initiated a scheduling redesign project and will be looking at the cost of the process after it has been fully implemented.

Using ABM at HomeHealth to determine performance indicator (PI) priorities was simple but effective:

1. Identify processes for focus.
2. Rank order by decision factors.
 - Total cost
 - Potential for improvement
 - Downstream cost driver
 - Contribution to mission
 - Interface with external customer
 - Readiness for change
3. Prioritize.

Before ABC, the management team would focus on ways to reduce the cost of a visit that had been allocated overhead based on volume. With ABC, costs are

Process	COST	Consistent with Mission	Effect on External Customer	Readiness to Change	Downstream Cost Driver	Potential for Improvement	TOTAL SCORE	PRIORITY
• Referral Intake	3	5	5	4	5	3	25	#3
• Liaison Role	5	5	5	3	5	5	28	#2
• Schedule Patients	5	5	5	4	5	5	29	#1
• Billing	3	3	4	3	4	4	21	#4

1 = Very Low 2 = Low 3 = Moderate 4 = High 5 = Very High

Exhibit 3.8 ABM Process Improvement Decision Tree

now assigned to activities and processes based on resource use. Now management is able to direct its energies to reducing true cost of producing each visit type for each customer. HomeHealth now has better information to manage, to negotiate, and to make decisions for the future.

Current State: Cost of Scheduling

Finding that scheduling was over 3% of the total dollars spent at HomeHealth was significant. As noted, the next step was to begin a scheduling project to reduce the cost of scheduling. Just documenting the scheduling process unveiled a scheduling nightmare (see Exhibit 3.9). More in-depth analysis uncovered that scheduling costs HomeHealth more than billing and collections. This fact became apparent after the scheduling costs were found and traced back to the time spent doing scheduling activities.

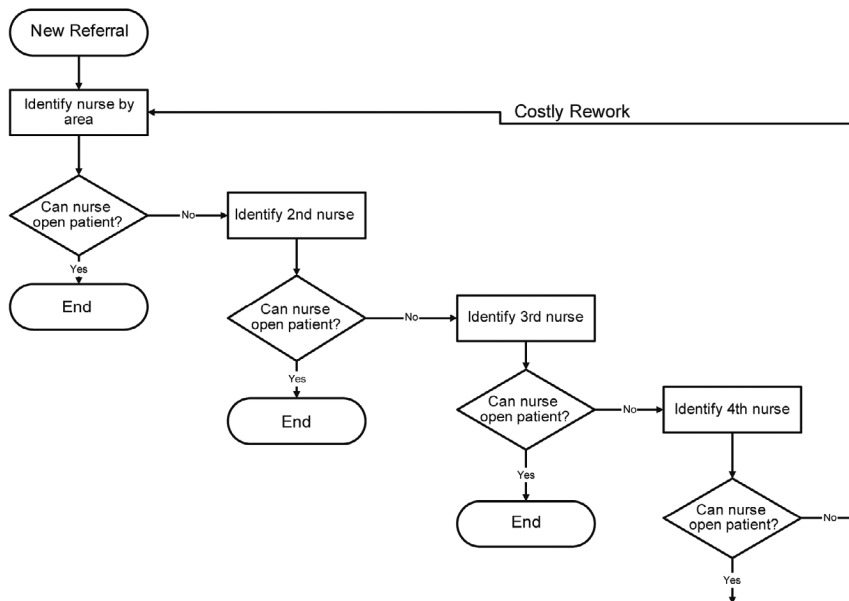


Exhibit 3.9 Scheduling Nightmare

Interview results revealed that times spent scheduling included:

- 39% team assistants with new admittances
- 24% team leaders' involvement
- 17% weekend scheduling
- 9% IV supervisor
- 9% team assistant with routine scheduling
- 2% supervisors

When ABM is applied to scheduling management, HomeHealth has the information to accomplish two very important goals.

1. Analyze and improve the process of scheduling by team assistants. Minimize the cost drivers.
2. Analyze the scheduling activities performed by the IV supervisor and team leader. Identify which activities are value added and which add no value to the customer. Eliminate or minimize non-value-added activities.

It also became apparent that reducing cost of documentation was important. After looking at five quarters of documentation and other activity costs, HomeHealth can:

- Benchmark documentation cost with other ABC/M home care agencies.
- Evaluate the documentation process used by all disciplines.
- Observe (validate) documentation (psychiatric nurses and masters of social work). Use best-known methods.
- Determine cost by computerized versus traditional documentation. Track over time.

Next Steps/Future Plans: Today and Beyond

HomeHealth's short-term goal to understand and reduce the cost of scheduling and documentation is under way. One common misconception about doing an ABM project is that once the model is calculated you will start saving money immediately. This is not realistic; once an ABC/M model is complete, you will

be armed with the information to do “good things,” but the real work is must beginning.

The three areas that are important for HomeHealth in the future are strategic planning, budgeting, and job description and evaluation planning.

Robert S. Kaplan states in *The Strategy Focused Organization* that it is important to align the organization to strategy. By tying compensation into strategic planning and incorporating worker incentives, HomeHealth will “have a powerful lever to gain the attention and commitment to our strategy.”⁴

Budgeting is a key component of a performance management system. In *Performance Management*, Gary Cokins writes that traditional budgeting is an unreliable compass and that there is a better approach.⁵ Now that we at HomeHealth can define our activity levels, our next logical step will be to incorporate it into our budgeting process.

Some examples of how HomeHealth intends to leverage the ABM model for strategic planning, budgeting, and worker compensation follow.

Strategic Planning

- Focus the strategic plan on areas that are most important to customers and/or high cost.
- Obtain organizational commitment to objectives and tactical plans.
- Identify responsible person(s)/team.
- Create an agreed-on timeline.

Budgeting/Job Description and Evaluation

- Define the activity level necessary to support the expected visit, episode, or patient volume.
- Adjust cost of activities inflation and improvement targets.
- Allow modeling based on activities necessary to provide different types of visits or episodes.

At HomeHealth, ABC/M has become an invaluable tool for all process managers. The project leaders say: “We are able to focus on the management of activities and results. We can drive rapid continuous improvements that result in lower costs and improved quality. We can standardize work and develop better measures. Through activity management, we can free up time for additional responsibility. And we can prevent the return to old and ineffective ways of doing things.”

EXPERT WRAP-UP

John A. Miller

By today's standards, 19 months to build an ABC model that consisted of only 11 processes, 84 activities, 12 cost centers, and less than 24 cost objects would not be acceptable. It has been almost 10 years since this project was initiated at HomeHealth. Since then, the knowledge base of ABC application and use has grown by a factor of 10. Activity templates and examples are readily available, ABC software has improved significantly, methods for collecting data are faster, ABC/M best practice studies have been conducted, and the experiences of hundreds of ABC implementations have been documented. Undertaken today, an ABC project similar in size, scope, and resources, would be completed in 6 to 9 months.

Like many organizations in the late 1990s, HomeHealth purchased ABM software packages prior to attempting its first pilot. That is getting the cart before the horse, resulting in disappointing results when the ABM software tool did not deliver to the business expectations. More common today are "paper pilots" and the use of ABC design tools, risk assessments, change readiness assessments, and other ABC tools prior to making the software decision.

The way an organization codes and tracks its expenses (resources) greatly impacts the way the ABC model is built. Ten years ago GL systems often were not ABC friendly in the sense that some expenses were accumulated in a single GL account and department rather than distributing the costs as expense items to individual departments that used the resource. For example, some organizations accumulate all benefit costs in a single department, such as Human Resources. Other examples include utility costs, depreciation, and insurance, which are often captured in central cost departments. Assigning these types of GL expenses back to the correct departments before they go into the model greatly simplifies the tracing of resources to activities. Today this is no longer an issue; ABC software vendors have largely designed solutions to this problem and eliminated the off-models spreadsheets common to many ABC models in the past.

As this case illustrates, the variability in the cost for individual activities can be high. For example, the cost of the Make Home

Visit activity for Nursing Admission ranged from a low of \$32.23 to a high of \$63.29. Presumably these differences reflect differences in the way this activity is performed by individual nurses, or it might reflect differences in the type of home visits. Many ABC systems report the average cost of an activity and do not provide the granularity of information managers often require.

A significant amount of time (eight months) was devoted to the collection and documentation of information. Interviews formed the primary method of gathering activity information. Interviews can be conducted at a high level (e.g., department managers) or at a lower level (e.g., department employees). Other methods of information and data collection include questionnaires, analysis of historical records reports and documents, panels of experts, observation, and group-based techniques. Group-based collection techniques include RapidVision, FastTrack ABM, and Storyboarding; they significantly reduce the time and effort to collect ABC information. In many cases these advanced data collection techniques reduce the collection time from weeks to days.

The debate rages on as to whether ABC is a closed-loop system where all cost must be assigned to activities or cost objects. For HomeHealth, it was the one center in the activity module which included hospital overhead representing expenses that could not logically be assigned to activities. In the cost object module, the Organizational Sustaining Costs could not logically be assigned to cost objects. Today most ABC implementations attempt to include all resources in the cost of activities and objects, such as products and customers. If necessary, it is ok to use simple allocation methods.

It is fair to say that HomeHealth was innovative and far ahead of others in its ability to use an ABC model for what-if scenarios by creating “dummy models” that allowed the company to make changes to actual or budgeted data in order to understand the impact of changes. This capability has been available in most ABC systems only in the last couple of years.

ENDNOTES

1. CAM-I (www.cam-i.org) is an international consortium of manufacturing and service companies, government organizations, consultancies, and academic

and professional bodies that have elected to work cooperatively in a precompetitive environment to solve management problems and critical business issues that are common to the group.

2. Gary Cokins, *Activity-Based Costing: An Executive's Guide* (Hoboken, NJ: John Wiley & Sons, Inc., 2001), 3.
3. John Miller, *Implementing Activity-Based Management in Daily Operations* (New York: John Wiley & Sons, Inc., 1996), 36.
4. Robert S. Kaplan and David P. Norton, *The Strategy-Focused Organization* (Boston: Harvard Business School Press, 2001), 366–367.
5. Gary Cokins, *Performance Management: Finding the Missing Pieces (to Close the Intelligence GAP)* (Hoboken, NJ: John Wiley & Sons, Inc., 2004), 132.