Evaluation of the Program of All-Inclusive Care for the Elderly (PACE) Demonstration

Factors Contributing to Care Management and Decision Making in the PACE Model

FINAL

Yvonne Zimmerman, MS
Debra Pemberton
Laurine Thomas, PhD

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Introduction

As Medicare and Medicaid managed care becomes more widespread, it is becoming even more compelling to understand how our frail elderly population can best be served - not only in a cost effective manner, but also without compromising the quality of care or the quality of life of this population. The Program of All-Inclusive Care for the Elderly (PACE) is an innovative model of care that strives to promote quality, cost-effective care by effectively and efficiently managing the often complex medical, functional, and social needs of the frail elderly. Some of the distinguishing features of the PACE approach through which these needs are met include:

- the provision of comprehensive medical and social services by a group of specialists (physicians, nurses, therapists, and social workers) who work together as an interdisciplinary team;
- the use of an Adult Day Health Center (ADHC) as a social center for participants and an efficient setting for the delivery of medical and social services;
- continued community residence for most participants, with an emphasis on frequent attendance at the adult day center;
- capitation of Medicare and Medicaid reimbursements at a fixed amount per client.

The focus of this study is on the first of these features - interdisciplinary team decision making. This interdisciplinary team approach to care management provides the benefit of focusing the attention of multiple disciplines on the collective care needs of a *whole* individual instead of dealing separately with the specific medical or psychosocial problems of that individual. Furthermore, according to Garner (1994), interdisciplinary teams (as compared to multidisciplinary teams) may also have greater potential to bring about change because these teams not only discuss and recommend care decisions, but also have the ability to actually *make* and *implement* care planning decisions. Particularly relevant to PACE is Williams' et al. (1987) finding that this may be true in interdisciplinary geriatric teams because each team member's input is likely to be observed and criticized by other team members, which may enhance the individual's performance and thus the collective team's performance in managing a larger spectrum of concerns directly relevant to the elderly.

There already exists, in fact, a body of literature that explores the effectiveness of team performance (Alexander et al. 1996; Fried and Rundall 1994; Hennessy and Shen 1986; Holloway et al. 1991). We drew on some of this research in our earlier work on interdisciplinary teamwork (Zimmerman and Mauser, 1996) in which we examined team atmosphere, member interaction, decision making, and focus as indicators of good teamwork. We found that the performance of team members can be strongly influenced by the role of the facilitator and the structure of the team process. That is, the role of the facilitator is more effective if it is in balance with the other team members and that a discipline-oriented team structure should be adopted prior to a team-oriented structure because the former fosters member participation and supports individual team member input.

By taking this current study a step further, we move beyond examining team performance to more directly address the relationship between team care management and actual decision making. We are focusing on this one unique component of the PACE model to examine the extent to which care planning decisions are guided and directed by (what we define as) certain operational and resource factors that are filtered into the decision-making process of these teams. We first identify what factors are most commonly considered in interdisciplinary team decision making and, secondarily, describe the interrelationships of the factors and the ways in which they may influence certain components of care management. Furthermore, we find that some of the factors that were identified in the literature as influencing the cost-effectiveness of care management (Williams, et al., 1987, Clark and Fox, 1993, and Warren, 1996) also have links to decision making as operational and resource factors in our research (e.g., communication, administration, and financial management). It follows then that promoting mechanisms which foster effective management of operational factors and maximize the positive influence of resource factors should also help promote effective (and potentially efficient) care management throughout site development, and particularly during critical periods of program growth. Through this research we are able to provide suggestions for prioritizing or targeting areas of focus for improving care decision making; make recommendations for establishing program features or implementing care management strategies that were observed to facilitate effective decision making at existing sites; and inform policy makers who are responsible for establishing and enforcing regulatory policy.

The remainder of the report is organized in the following format. We first present the methodology for our study, describing the phases and structure of on-site data collection and the process of analysis for our findings. We then present the factors most commonly considered by PACE interdisciplinary teams when making care planning decisions (as identified by the PACE teams themselves and through our research). We devote the remainder of the report to a discussion of how the factors vary and guide the decision-making process and if their relative influence is dependent on the ways in which the factors relate to one another. To conclude this discussion, we provide examples of effective management of operational and resource factors and present recommendations for applying these factors to, in turn, promote effective care management and decision making.

This research was conducted as part of the contract to evaluate the PACE replication sites (Contract 500-91-0027). The original contract was awarded to Abt Associates Inc. by the Health Care Financing Administration (HCFA) in 1991. The evaluation was extended in 1996 with the award of a second 15 month contract (Contract 500-96-0003/TO4).

Methodology

Our study of care management and decision making in the PACE model was conducted in two phases. The initial phase included visits to four PACE sites during the months of July and August 1996 while the second phase continued in March, 1997 through August, 1997 with visits to the remaining seven sites operating under dual waivers. At each of the eleven sites, we focused our attention on the operations of only one center in order to gain a more complete understanding of one team's care management processes. Table 1 lists the eleven sites and each of the centers visited in the initial and second phases of our study.

Initial Phase
Carolina Center of Bienvivir Senior Health Services (BSHS) in El Paso, Texas[1]
Eau Claire Center of Palmetto SeniorCare (PSC) in Columbia, South Carolina
Laurelhurst Center of Providence ElderPlace (PEP) in Portland, Oregon
Prospect Center of Community Care for the Elderly (CCE) in Milwaukee, Wisconsin
Second Phase
Winthrop Center of Elder Service Plan (ESP) in East Boston, Massachusetts
Powell Center of On Lok Senior Health Services in San Francisco, California
Highland Center of Center for Elders Independence (CEI) in Oakland, California
Wallerstein Center of Comprehensive Care Management in Bronx, New York
Avondale Center of Total Longterm Care (TLC) in Denver, Colorado
Franklin Center of Sutter Senior Care (SSC) in Sacramento, California
Hudson Center of Independent Living for Seniors in Rochester, New York

The four sites chosen for the initial round of visits were selected jointly by HCFA and Abt staff based on variations in program characteristics (number of centers, financial experience, sponsorship, and housing), participant demographics, length of time in demonstration, and geographic location. These initial visits were used to identify a set of preliminary factors considered in care planning and to formulate initial hypotheses about their influence on team decision making. The second round of visits to the remaining seven sites allowed us to re-examine the findings from the initial visits and to further explore new factors and the interrelationships they have with one another and the components of care management and decision making.

Structure of the Visits

Site visits to each of the eleven sites were five days in length and were conducted by a team of three evaluation staff members. The structure of the visits was refined between the initial and second round of visits and was ultimately comprised of a three-pronged approach which included:

- Observation of a weekly intake and assessment (I&A) meeting, as well as daily morning meetings of staff who care for PACE participants.
- Interviews with staff representatives from every team discipline that regularly attended I&A meetings during the first four days of the visit.
- Presentation of two hypothetical scenarios during a three hour group interview with the interdisciplinary team on the final day of the visit. For each scenario, the teams were asked to construct an initial care plan for a new enrollee and then to reevaluate the care plan as new information was presented.

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1 Due to the schedule of team meetings at BSHS, both the Carolina and Welch Centers were visited.   The majority of our interviews took place at the Carolina Center, yet the team meeting during which our hypothetical cases were presented was conducted with the Welch team, which shares many staff with the Carolina Center.

During both phases of the site visits, the information gained through team observations and interviews during the first four days on site was used to formulate hypotheses that examined team care plan decision making and, as such, shaped the content of the hypothetical scenarios presented on the final day. However, the data collected in each round of visits was utilized somewhat differently. All data from the first four visits were compiled and analyzed over a series of months to identify a preliminary set of factors that most frequently permeated care management and decision-making processes at each of these sites.[2] For example, issues that were commonly identified in individual discipline interviews, and were also consistently discussed by the collective team in morning, I&A, and hypothetical team meetings, were included in the preliminary set of factors. This set of factors (which was comprised of approximately 70 items) was then condensed into a subset of factors that included only those issues that were recurrent across sites. These factors were then incorporated along with substantive components from the initial hypothetical scenarios into one identical generic scenario that was presented to each of the seven sites in the second phase of visits[3] (see Appendix A). This generic scenario and the processes of team observation and discipline interviews were then utilized in the second phase of site visits to address four primary research questions designed to identify and examine the relative importance of certain factors in care planning and interdisciplinary team decision making:

- What factors appear more or less influential in care management decision making?
- How do the factors influence care management decision making?
- What are the interrelationships of the factors?
- Do some factors more consistently promote the effectiveness of the care management decision-making process?

The following section highlights our findings. It begins with a brief summary of how each of the components of our site visits provided insight into one or a combination of these research questions.

Findings

Determination of Influential Factors

Through *observation of daily morning meetings and weekly team care planning meetings*, we were able to gain an understanding of teamwork dynamics, the protocols for the presentation and exchange of information, and the process by which and inputs through which care planning decisions are made. At virtually every site, we had the benefit of having observed the teams at these specific centers during previous site visits.[4]

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2 We note that all analyses conducted for this research were of a qualitative nature as our sample size of eleven sites was not sufficient to support any statistical analyses.

3 A site-specific scenario was also presented to each team to examine those factors that seemed to be particularly influential at the specific site and to aid in clarifying concepts which remained somewhat ambiguous. The site-specific scenarios were developed at the end of the fourth day to allow for the incorporation of information gained through discipline interviews and team observation.

4 In some cases, we had observed teams at these same centers for five consecutive years prior to this round of site visits. There are two exceptions; the Eau Claire team at PSC and the Hudson team at ILS had not been observed during previous site visits.

- For teamwork dynamics, we drew upon our earlier work on teamwork performance for which we developed a teamwork scale that included ten variables used for observation for this research: functional work atmosphere; member communication and participation; integrated leadership; team cohesion; status; creative and intuitive thinking; goal-orientation and commitment; team consensus; team preparation; root cause.

- For information protocols, we interviewed the center supervisor/manager and IDT facilitator prior to the team meetings to gain an understanding for the process by which members communicate and the documentation that is used to record and disseminate information. During the meetings, we then observed how the teams implemented the protocols and if they appeared to be effective.

- For the process by which care plan decisions are made, we relied upon actual site documentation that is used by teams to create and/or update participant care plans. We noted how the team members utilized this documentation to formulate care plans and the role of the facilitator in moderating and directing this team process. For the identification of key inputs into the decision making process, we listened specifically for the criteria by which care plans decisions were made and the variables that led to the modification of existing care plans. We then tested what we learned from the meetings with two hypothetical scenarios (one of which was site specific to account for sites' unique operational circumstances and the other of which was a generic scenario to observe how inputs into decision-making differed across sites when teams were presented with identical information).

We were also able to gain insight into which factors are more commonly discussed within team meetings and how teams focus on and balance participant care issues with influences of other components of care management.

In-depth interviews with each of the disciplines represented on the teams provided insight into how care plans actually get implemented and what the relative roles and responsibilities of the disciplines are in the team process and when carrying out care plans. We also discussed how disciplines weigh the relative importance of certain factors and their influence on the care planning process.

The *generic hypothetical scenario* allowed us to reconstruct a care planning meeting in order to determine which factors appear to be most strongly associated with the development of an initial care plan and the reassessment of a care plan, and if differences in the relative consideration of factors across sites had an influence on the service packages created. Through this exercise we learned that the teams generally considered the same care issues when discussing the hypothetical scenario and, furthermore, that there was relatively little variance in the array of services targeted at those issues. [5] However, when data from all three methodological approaches were examined (observations, interviews, and the hypothetical scenario), we were able to determine that there were, in fact, certain *operational* and *resource* factors that consistently served as inputs into the overall care management processes across

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5 The care issues that were commonly identified and addressed by teams include: medical complexity; polypharmacy; functional status; quality of life; cognitive status; depression; obesity; alcoholism; pain management; insomnia; family/caregiver stress; and potential for nursing home placement.

sites and, moreover, that those factors are variable and seemingly influence similar components of care management processes at all sites. Operational factors are those that refer to the internal circuitry of program operations. As such, they represent the mechanisms through which information is processed and translated into care management decisions. These factors can directly influence components of care management or they can serve as filters that mitigate the relative influence of other factors in decision making. On the other hand, resource factors are generally tangible resources (either internal or external to operations) that reflect organizational or environmental characteristics of a site. These are factors that are otherwise relatively exogenous to the teams' goals and decision-making processes, but because they do influence site operations and components of care management, teams may either react to these factors out of necessity, or choose to subtly incorporate the factors into their decisions. Table 2 lists these operational and resource factors and the components of care management that they influence.

TABLE 2: VARIABLE COMPONENTS OF CARE MANAGEMENT AND KEY OPERATIONAL AND RESOURCE FACTORS	
Components of Care Management	Relative Focus on Themes Aspects of Problem Solving Service Provision Strategies
Operational Factors	Team Process Communication Family/Caregiver Interaction Administrative Practices
Resource Factors	Staffing Practices Financial Status

The following section presents the ways in which certain components of care management and operational and resource factors varied. While these are not the only variable components of these factors, our discussion addresses only specific factors that we observed to be relatively more influential in the ways in which they guide and direct the care planning decision-making process.[6] The section begins by defining variation in components of care management and making some basic assumptions regarding what seem to be inherently more positive variations. By going on to define variation in operational and resource factors and linking that variation with what we assume to be positive components of care management, we are able to offer ideas as to what constitutes effective management of operational and resource factors.

Defining Variation in Components of Care Management

Variations in care management were observed to be most prominent in the focus of team discussions and in team problem solving and service provision strategies.

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6 We note that there are other inputs into the care management process that we did not observe or examine on-site. Hence, there may be other key factors that we do not address that potentially influence care management decision-making but are beyond the scope of this study.

Relative Focus on Themes: One component of care management which varied across sites was the teams' relative focus on different themes in care planning and discussion. In general these themes either directly addressed participant care issues or revolved around the logistics of care planning and resource coordination.

> <u>Participant care issues</u>: include both participant characteristics such as cognitive status as well as less concrete participant concepts such as participant quality of life and participant behaviors.

> <u>Care planning logistics and resource coordination</u>: points to the team's focus on issues such as strategies for cost containment, staffing concerns in implementing approaches to care, and appropriate care planning terminology.

One of the biggest differences we noted on this front was in the amount of time and energy teams devoted to discussing and addressing participant care versus logistical issues. Of particular interest is our finding that this difference was much less apparent in the hypothetical scenario as compared with normal team processes. This finding is not surprising in that the hypothetical scenario was just that, 'hypothetical', and thus created a sort of ideal arena for team care planning. Within this ideal vacuum of sorts the details of care implementation and realities of potential resource limitations were of no real concern to team members who were thus more readily able to focus their attention instead on the relevant participant care issues at hand.

Within the category of participant care issues we noted substantial variation in the relative focus on certain issues over others. Teams were fairly consistent with respect to their relative focus on issues such as a participant's functional status and physical well being. However, they differed in terms of their focus on issues such as <u>participant quality of life</u>, <u>cognitive status</u>, and <u>participant behaviors</u> and in the degree to which these issues dictated their resulting approaches to care. These differences across sites were evidenced by the prevalence of these themes in team discussion and in their attention paid to specific issues, interventions, and goals within both real and hypothetical care plans. For example, in our hypothetical scenario, all teams identified obesity as a relevant issue; however teams varied in the extent to which their discussion and resulting goals and interventions focused on quality of life issues surrounding the participant's autonomy in making dietary decisions. Furthermore, all of the teams acknowledged that the participant began exhibiting night time behaviors due to insomnia; however, teams again varied with respect to how much discussion and energy they devoted to exploring and addressing this behavioral issue relative to other participant care issues such as the participant's increased breathing problems.

Aspects of Team Problem Solving: Care management across sites also differed with respect to various aspects of team problem solving. Specifically, we noted that the relative depth, creativity, proactivity and flexibility that teams exhibited in their problem solving varied.

> <u>Depth</u> – refers to how exhaustively team member discussion and care plans identified and addressed the relevant participant care issues.

Creativity – reflects the degree to which problem solving techniques were used to explore multiple options, maximize available resources, and draw upon knowledge gained from past experiences.

Proactivity – points to the extent to which teams focused on anticipating and preventing crises while formulating workable, long-term solutions.

Flexibility – refers to the extent to which teams adapted protocols, care approaches, and service options to individual circumstances so as to maximize participant benefit while not jeopardizing the quality of care or the rights of other participants.

Service Provision Strategies: Teams also exhibited disparity regarding their service provision strategies. The aspects of service provision that seemed to vary most include the:

Locale of service provision – refers to the different settings of care delivery. For example, when faced with the need to relieve caregiver stress in our hypothetical scenario some teams chose to provide increased services within the home environment, while others chose to either increase the day center attendance or provide respite by having the participant stay in transitional housing.

Utilization of external resources – refers to variation in the degree to which teams seemed to utilize volunteers, community providers, and family/caregivers. In general, there was not widespread use of volunteers across sites; however, the extent to which community providers and caregivers were incorporated into care planning varied substantially.

Emphasis on psychosocial interventions – while approaches to care across sites varied little with respect to the provision of traditional clinical services, the emphasis on the role of psychosocial services (e.g. activity programming, spirituality services, and counseling and psychiatric services) varied. This concept was illustrated by variation in team approaches to the problem of depression in our hypothetical scenario. While all of the teams explored pharmacological methods, only select teams also emphasized psychosocial interventions (such as rich and individualized recreation programming) in their approach.

Assumptions Regarding Positive Components of Care Management

Our assumptions regarding positive components of care management were that it is inherently more positive for teams to:

Have a relatively strong and broad focus on participant care themes
- Focus more on participant care issues relative to logistical issues pertaining to care planning processes and decision-making processes.

- Focus on a broader spectrum of participant care issues in care planning (this includes focusing on issues such as participant cognitive status and participant and caregiver quality of life in addition to the more typical medical issues).

Exhibit multiple dimensions of problem solving
- • Exhibit greater depth, creativity, proactivity, and flexibility in their problem solving.

Possess ability to utilize a relatively broad spectrum of service provision strategies
- • Utilize more holistic approaches to care as evidenced by the inclusion of psychosocial interventions in addition to more traditionally medical interventions.
- • Be able to utilize external resources such as the family in the provision of care.

We view these aspects of care management as inherently positive because they in essence facilitate if not define the provision of all-inclusive comprehensive care.

Defining Variation in Operational and Resource Factors

Operational Factors

Variations in operational factors that were most closely associated with variations in components of care management revolved around aspects of team process, communication, family/caregiver interaction, and administrative practices.

Team Process: refers to characteristics of team members and the climate surrounding their interaction. Certain components of team process varied more than others across sites. The most variable components included:

Organization of discussion processes – whereas some teams had I&A and morning meeting processes that promoted systematic exploration of care management issues, other teams have adopted less linear practices which resulted in a more free form discussion of the relevant issues. For example, at some sites we observed teams identify a problem and then discuss it to the point of resolution prior to moving on to another problem. At other sites the discussion jumped around more sporadically from problem to problem. Meetings also varied with respect to the amount of open discussion and the amount of feedback exchanged between disciplines regarding specific interventions.

Maturity of team – the length of time that team members had been working together varied (mean months employed ranged from 10 to 54 across sites).

Balance of team member input – we observed variation in the extent to which the team structures and decision-making climate includes and promotes equitable input from all team members and precludes dominance by one or several vocal members. Sites differed with respect to the diversity of disciplines represented in team meetings which influenced the content and comprehensiveness of information presented.[7] In addition, teams varied in terms

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7 Interdisciplinary teams at all sites did have core disciplines represented on their teams (unless they were really short on staff at the time), but the teams did vary with respect to the attendance of some disciplines that have traditionally comprised the "multidisciplinary" team as defined in the PACE protocol (both the original PACE protocol developed in 1990 when demonstration sites first began operating under dual waivers and the more recent protocol revised in 1995). For example, the protocol states that the team be composed of members that include a dietitian and drivers or their representatives. Only 6 sites had dietitians and even fewer had drivers who regularly attended the meetings.

of how much emphasis they placed on eliciting input from all disciplines present at meetings. For example, at several sites we witnessed an imbalance in team input due to discussions that were dominated by the facilitator and/or primary care input.

Nature of role blurring – the extent to which team members reflect the perspective of other disciplines and share responsibilities that are not, by definition or team consensus, to be handled solely by a particular individual or discipline, differed across sites.

Team attitude – this measure reflects the variance that we observed both with respect to the attitude that team members displayed toward one another, as well as their attitudes toward their responsibilities in participant care. Regarding the former, we noted that while some teams displayed member interaction that promoted an open decision-making climate in which the viewpoints of all members were listened to and respected, other teams exhibited some antagonism amongst team members which appeared to stifle open exchange of input.

Communication: refers to the exchange of information among staff. During our visits we discovered that sites have developed divergent models for facilitating communication amongst staff members. The most salient ways in which models varied across sites seemed to revolve around the existence and utilization of:

Explicit protocols – whereas some sites appear to have developed specific systems for information exchange between staff members, other sites appear to have little or no explicit structure or protocols and thus leave each team member to define for him or herself what constitute appropriate lines of communication. Even for sites that appear to have developed protocols surrounding information exchange, there exists some variance with respect to the clarity of protocol definition, accessibility of information sources, and degree to which team members adhere to stipulated guidelines. Specific systems for communication dictated by the protocols also varied. Methods ranged from reliance on voice mail to communication boards and logs to specific forms for information dissemination (see Appendix B).

What appeared to matter more however, was the clarity of protocols and mechanisms for fine tuning rather than the specific mode of communication that sites employed.

Mechanisms for fine tuning communication – relatively few sites appeared to have mechanisms in place to afford staff sufficient time to develop and periodically reassess communication strategies.

Family/Caregiver Interaction: refers to the relationship between the team and the family/caregiver. While most sites deal with family interaction within some realm of care delivery, sites differed considerably with respect to their:

Conceptualization of the role of family – the degree to which teams view family/caregivers as an extension of the participant varied. For example, in our hypothetical scenario teams varied with respect to how much they assumed responsibility for identifying and actively addressing issues more directly related to caregiver needs as opposed to adhering strictly to a narrow focus on

participant needs only. More specifically, teams that seemed to view the family as an extension of the participant, appeared to focus more of the hypothetical meeting discussion on the needs of the caregiver relating to her upcoming surgery irrespective of the direct implications for the participant. Sites also differed with respect to how much they look to the family as a resource in providing care for participants.

Focus on cultivating family partnership – some teams attempted to develop a partnership with families and caregivers by working to elicit family input into care management decisions, maintain ongoing and open dialogue with families, and take into account family concerns and needs in care planning. Other teams appeared to take a more detached approach to family interaction and tended to be more reactive in addressing family concerns and needs.

Administrative Practices: refer not only to the basic structure of site management but also to the policies or activities which dictate the overall role of site management. The role and relative influence of administrative practices mainly varied according to:

Executive Structure – while some sites maintain a single executive director model of program administration, many sites function with a two person director model. Generally, when there are two top level administrators, one individual is focused more externally on fostering community and state relations and growth and expansion efforts. The other individual tends to be more internally focused on issues relating to fine tuning program operations. In the single executive director model the same individual must split his/her time and attention between internal and external concerns.

Nature of relationship between team and administration – both the presence of administration at the team level and teams' relative independence from administrative control in decision making varied across sites. For example, at some sites administrators facilitated team care planning meetings while at others boundaries were set up to limit the presence of administration at the team level. In addition, some teams appeared to have the sufficient autonomy to make most decisions regarding the viability of care options while some other teams seemed to be more focused on bureaucratic processes which seemed to promote closer administrative control over team decision making, but inhibited timely resolution of care planning decisions. According to team member reports, the accessibility and relative administrative attention to staff ideas and concerns also varied. At some sites, administrative staff directly sought out or put into place mechanisms to facilitate staff input into decisions regarding policy, protocol, and staffing. At other sites we noted that administrative decisions appeared to stem from the top down without reflecting team member input and feedback.

Locus of budgetary accountability and awareness – we noted disparity across sites with respect to the degree to which administrative staff maintained responsibility for budgetary accountability and awareness rather than shifting it down to the center or team level.

Resource Factors

Differences in the management and influence of resource factors were most apparent in staffing practices and financial status.

Staffing Practices: refer to the policies, activities, and structural choices which shape the relative distribution of staff at each site. Staffing practices across sites varied most with respect to:

Staff development activities – we noted substantive variations with respect to staff development activities across sites. Differences tended to center around the relative focus on providing orientation and training to new staff members, ongoing staff training and interdisciplinary inservices, mechanisms to promote upward mobility and staff retention, and attention to identifying and addressing staff stress and burnout.

Structure – Staffing structures were quite different from site to site. The clarity and degree of overlap in role definition varied. At some sites, boundaries assigned to individual roles were clearly defined and team members seemed to clearly understand their responsibilities. In addition, some sites created a certain amount of overlap in roles and made sure that more than one individual was qualified to function in each role to minimize the likelihood that intermittent staffing shortages would leave gaps in program staffing. Sites also varied with respect to their relative distribution of labor across disciplines and across individuals within disciplines. At some sites, the distribution of labor appeared to be more balanced than at other sites as no one discipline or individual appeared to be carrying more of the workload relative to others. Overall program management structures also varied across sites with some sites choosing to adopt a center-based management structure over a discipline-based model. Along with this variation in management structures came variations in the number of staff who traveled across centers. For example, we noted that a switch to center-based management often included a decrease in the number of staff traveling across centers. Departmental management, staffing models and oversight mechanisms also differed from site to site. For example, sites varied with respect to the clarity and simplicity of home care oversight and management. In addition, sites varied with respect to primary care staffing with some sites opting for models which relied upon nurse practitioner and physician combinations rather than just physicians. Finally, perhaps the most glaring difference we noted across sites pertained to the relative gaps and shortages in departmental staffing resulting in part from these staffing structures.

Financial Status: refers to a site's relative fiscal standing. Points of substantive variance in financial status across sites revolved around:

Historical financial status – since sites vary with respect to capitation rates, financial performance, and alternative sources of funding and support (e.g. city grants, sponsor resources) the relative historical financial health varied across sites.

Availability of current funds – at any point in time a site's available funds may be focused on different areas of program growth. For example, one of the sites we visited had just experienced a period of rapid growth where available funds were being targeted toward expansion efforts.

Another site we visited was in the process of hiring and training numerous new staff and so was funneling more of its relative funding into hiring and training new staff at the time of our visit.

As the information presented above conveys, components of care management varied considerably across sites, as did variations in operational and resource factors. Table 3 summarizes for the reader the points of variation under each category discussed above. Given that operational and resource factors influence the variation in components of care management, the following section will examine the relationships among these components in order to explore the link between variations in operational and resource factors across sites and positive components of care management.

Factor Relationships and Their Link to Positive Components of Care Management

In structuring the discussion of interrelationships among factors, we examine each operational and resource factor in turn. The discussion of each factor begins by highlighting the closest associations we observed between variations in the factor and variations in components of care management as these associations point to the most direct links between the factor and care management. We then go on to explore ways in which aspects of each factor are associated with aspects of other operational and resource factors to shed light on the ways in which these factors interrelate and can indirectly influence components of care management.

Operational Factors

Variations in operational factors appear to directly vary with components of care management. Moreover, the association between operational and resource factors point to the role of operational factors in filtering the influence of resource factors. These concepts will be illustrated through the specific examples provided in the sections to follow.

Team Process
Overall, it appears that variations in team process factors are the most closely linked to components of care management. By this we mean that specific variations in team process appeared to consistently accompany specific variations in components of care management. For example, we noted that teams whose discussion organization was linear and systematic also consistently exhibited more depth in their problem solving and focused less attention on logistical aspects of the care planning process (e.g. how to go about wording goals and interventions). We also found that more mature teams generally exhibited greater depth, creativity, proactivity, and flexibility in their problem solving and tended to focus much less of their time and energy on logistical issues. This pattern suggests that teams that work together longer begin to interact better as they grow accustomed to team roles and dynamics and internalize care planning procedures.

At sites where we witnessed balanced team member input we also usually observed more team focus on participants' cognitive status and quality of life and on including psychosocial interventions in service provision strategies. While the reasoning behind this finding is not explicitly clear, we hypothesize that it may be due to the strength of the primary care voice relative to that of other disciplines. Since primary care staff naturally tend to focus more on medical issues and interventions it would follow that sites with more equal input from social work staff, for example, might be more likely to reach beyond the medical

Table 3: Major Areas of Variation in Components of Care Management and Operational and Resource Factors

Components of Care Management			Operational Factors				Resource Factors	
Relative Focus on Themes	Aspects of Problem Solving	Service Provision Strategy	Team Process	Communication	Family/Caregiver Interaction	Administrative Practices	Staffing Practices	Financial Status
Relative focus on participant care vs. logistical themes	Depth	Locale	Organization of Discussion	Explicit Protocols	Conceptualization of role of family	Executive Structure	Staff Development	Historical Financial Status
Relative focus on specific participant care themes	Creativity	Utilization of external resources	Maturity	Mechanisms for fine tuning	Focus on cultivating partnership	Relationship between administration and team	Staff Structures	Availability of Current Funds
	Proactivity	Emphasis on psychosocial interventions	Balance of input			Locus of budgetary accountability		
	Flexibility		Nature of blurring					
			Team attitude					

perspective and also focus the team on participants' cognitive status, overall quality of life, and psychosocial approaches to care.

Team member attitudes toward each other and about their respective responsibilities appeared to vary in accordance with aspects of team problem solving. In general, teams whose members exhibited a more positive attitude toward each other and about their respective responsibilities had more depth in problem solving and were far more creative, proactive, and flexible than teams with a more negative overall attitude. The fact that variations in team attitude also tended to go hand in hand with variations in other team process variables such as the nature of role blurring, balance of team member input, and maturity of team members suggests that components of team process are highly associated with each other in addition to being closely linked to components of care management. Also of particular interest are the relationships that aspect of team process appear to have with other aspects of operational and resource factors. This concept will be revisited in further detail in the sections that follow.

Communication

Variations in communication within teams also seemed to be closely associated with variation in components of care management. The most direct link appears to be between variations in the existence and utilization of explicit protocols and fine tuning mechanisms and the degree to which teams expend time and energy on participant care issues versus logistical issues. That is, teams that appeared to utilize more explicit protocols for communication and had built-in mechanisms for fine tuning communication spent considerably less time and energy during meetings focusing on the logistics of care planning. It would seem that this effect is based on the fact that sites that defined and used protocols for communication had fewer instances of communication breakdown that needed to be dealt with in meetings. Thus, they needed to spend less meeting time clarifying who was responsible for reporting what types of information within team forums and how the information discussed should be disseminated beyond the team. Moreover, teams that had specific mechanisms devoted to developing and reassessing communication protocols (e.g. at one site, subsets of the team would meet specifically to discuss ways of improving communication among departments) spent less of their time trying to revamp faulty systems within I&A and morning meeting forums and thus were free to focus more on issues directly relevant to participant care during these meetings.

While this overall link between communication processes and focus on participant care issues relative to logistical issues tended to be relatively consistent across sites, this pattern did seem to be more or less prevalent depending on the nature of blurring and team attitude. More specifically, we noted that at centers where there was substantive blurring in team member roles and overall positive team attitude, the focus on participant care issues over logistics was greater whether or not there were explicit communication protocols and fine tuning mechanisms in place. In most cases this variance was not an issue as centers with communication protocols also tended to exhibit blurring in discipline roles and a positive team attitude. In fact, it would seem that all aspects of team process tend to go hand in hand with communication. In some cases factors such as balanced team member input and clarity in the organization of discussions set the stage for the development of explicit communication practices. In other cases it appeared that by facilitating communication amongst staff, explicit communication protocols actually promoted more balanced team member input and more positive team member interactions and attitudes.

Family/Caregiver Interaction

In discussing the role of family interaction in care management, it is important to first acknowledge that the degree to which teams focused energy on cultivating a partnership with family/caregivers varied in accordance with the way in which teams conceptualized the family/caregiver role. Teams that tended to view the caregiver as a true extension of the participant and as a valuable resource in caring for participants also seemed more inclined to focus on eliciting family caregiver input, maintaining ongoing dialogue, and attending to family needs and concerns. Furthermore, such teams were more likely to also focus on participant care issues such as quality of life, cognitive status, and behaviors and tended to utilize family caregivers more in their service provision strategies. This apparent connection to quality of life makes sense in that participant quality of life is one realm in which families can have an impact.

Moreover, it follows that teams that view the family/caregiver as an extension of the participant are more likely to view addressing issues relating to family needs as part of their role in providing care. Since family needs often revolve around the impact of caring for participants on their own respective quality of life it would make sense that teams focusing more on family needs would place more emphasis on quality of life issues in their care planning and service delivery. The fact that team members indicated to us that decreases in participants' cognitive status and participant behaviors are often particularly difficult issues for families/caregivers to deal with may help to explain why these issues were more often the focus of team discussion at sites where the focus on family was also greater. The tendency of teams to elicit family caregiver input and maintain ongoing dialogue seemed to go along with their utilization of explicit protocols for communication amongst staff. This connection suggests that some of the same mechanisms which appear to facilitate communication among staff may find application in fostering family/caregiver communication.

Administrative Practices

The main role of administrative staff in influencing care management appears to lie in their power to stipulate practices which influence other aspects of operational and resource factors. For example, at sites where administrative staff had decided to shift the awareness and accountability for budgetary concerns down to the center or team level (e.g. by requiring teams to fax weekly budgets to administrative staff), we observed far more emphasis on explicit discussion of cost containment issues in team discussions and less flexibility with respect to problem solving. This finding is particularly interesting in that PACE's capitated funding arrangement has the potential to afford teams greater flexibility with respect to service options. However, the observation that team problem solving was less flexible at sites where budgetary accountability was shifted to the team, suggests that making teams overly concerned with cost containment issues can stifle the potential for increased flexibility. We observed variance in the extent to which a shift in budgetary awareness to the team was accompanied by education on the benefits of preventive measures in promoting cost containment without compromising quality. Teams without this added focus on the benefits of prevention often chose to eschew proactive approaches for cost containment in the long-term (e.g., providing proactive caregiver respite as a means for avoiding nursing home placement) opting instead for "quick-fix" methods for controlling costs (e.g. instead of providing respite or failing to respond to signs of caregiver burnout as a method for controlling labor costs in the short-term).

Administrative practices also appear to indirectly influence care management through their association with aspects of team process and communication. For example, sites which employed a two-person

executive structure were likely to also have explicit protocols for communication and fine tuning mechanisms in place resulting in fewer gaps in communication. This may be due to the fact that in a two-person model one individual generally focuses the majority of his/her attention on developing and improving internal operations whereas in a one-person model that person must try to attend to both internal and external concerns. We noted a potential breakdown in this association at sites that were operating in periods of rapid growth during our visit. At these sites, the benefits of the two-person model were not apparent because mechanisms for fine tuning communication systems had failed to adapt old protocols sufficiently to effectively address the new demands presented by changes which necessarily accompany program growth.

In addition, at sites where the relationship between administrative staff and the team was such that the presence of administration's control over team processes was minimal and team members appeared to have substantive input into administrative decisions, the team tended to be more mature, have a more positive attitude, and exhibit more balanced and comprehensive team member input.

Resource Factors

While not as closely linked to variations in care management as variations in operational factors, variations in resource factors do appear to play a direct role in influencing certain components of care management decision making. In addition, through their association with variation in operational factors, resource factors appear to mainly influence care management through more indirect pathways. Perhaps the most interesting finding, to be discussed below, is that the relative positive or negative input of resource factors into care management decision making may be limited by the filtering effects of variations in operational factors.

<u>Staffing and Finances</u>
In discussing components of resource factors, it is difficult to separate staffing from finances because the two tend to be closely intertwined. In some cases, historical financial health and the acute focus of funding influence a site's ability to hire the requisite numbers of staff for a particular department(s). In other cases, staffing decisions such as changes in management structure of the entire program or a particular department can promote cost containment or impact the relative distribution of available program funds. For example, choosing to follow a discipline-based versus a center-based management structure or employ a primary care model which pairs nurse practitioners with physicians may in turn impact site finances. Whether it be specifically related to people or funds however, both factors reflect decisions and issues which pertain to the relative availability and coordination of programmatic resources. While, as noted above, the relative influence of resource factors appears to be largely filtered through aspects of operational factors, there do appear to be certain components of care management that seem more explicitly linked to aspects of resource factors. For example, the locale of service provision appears to vary in accordance with variation in resource factors. More specifically, sites that put increased emphasis on staffing structures which support home care staffing appeared to be much more likely to provide services in the home relative to other sites that were experiencing shortages in home care staffing and/or gaps in home care oversight mechanisms. The relative availability of staffing and financial resources also seems to be connected with the utilization of external resources such as family, volunteers, and community services. This pattern suggests that sites may look to these external resources as a creative way of supplementing existing program resources, thereby containing costs and hopefully

doing so without compromising quality. Additionally, it specifically points to the potential cost containment benefits associated with mechanisms which seek to preserve and promote caregiver utility in service provision.

Usually, decisions about finances and staffing are made at the administrative or executive management level. As such, the influence of these resource factors on variations in components of care management appear to be largely determined by administrative practices regarding staffing structures and financial policies. As noted above, these practices are in turn associated with variations in family interaction, communication and team process. Thus, staffing and finances are filtered through the influence of administrative practices to influence team process and communication and indirectly influence components of care management. For example, we noted that at sites where administration decided to focus funding on the provision of relatively rich staff development activities (such as ongoing training or team-building exercises), teams were generally more mature. Since, as indicated above, variations in team maturity seemed to be associated with aspects of team problem solving, it would appear that finances and staffing are indirectly related to aspects of problem solving in care management.

While it seems intuitive that choices regarding staffing and finances can have an influence on aspects of operational factors (and, as such, indirectly influence care management), what may be more interesting to note is the observation that variations in operational factors seem to, in turn, minimize or maximize the relative input of resource factors into components of care management. For example, at sites where financial and staffing resources appeared limited at the time of our visit, teams generally focused more on logistical issues of care planning and resource coordination relative to teams at other sites. However, the relative degree of team focus on logistical issues tended to be less at those sites that, even in the midst of limited resources, had explicit protocols for communication and less overt team awareness of budgetary concerns. Conversely, it appeared that even if a site seemed to have sufficient resources in place, if the team had problems with communication due to cumbersome or non-existent protocols or overt budgetary awareness, the level of team focus on logistical issues was still greater. This relationship suggests that aspects of operational factors can influence the relative input of resource factors into care management in both a positive and negative manner.

Another example of the role of operational factors is conveyed at sites where apparent staffing shortages resulted from staff turnover or where staffing gaps resulted from changes or weaknesses in staffing structures. At these sites, teams generally had a stronger relative focus on logistical issues over participant care issues and demonstrated less depth, proactivity, and flexibility in their problem solving. However, if sites plagued by staffing gaps also exhibited more balanced team member input, blurring of discipline roles, and a positive team attitude that reflected a willingness to go "above and beyond the call of duty" if necessary, this connection between staffing gaps and aspects of care management appeared to be minimized.

Finally, the filtering effect of variations in administrative practices may also help to explain why external resource factors such as the existence and influence of a sponsor organization, and the relative support of the state and the local community, do not appear to have a relatively strong overall influence on operational factors or thereby on components of care management. While administrators cannot ultimately control the state and local climate or the sponsor, they may be able to maximize the potential positive impacts or minimize the negative impacts of these relationships. For example, administration

could promote the utilization of sponsor resources (staff, housing), work within the state to increase support (administratively, financially, and politically), and work within the community to exploit available resources by forging partnerships (for example, by bringing in medical students from local universities, working with volunteer programs, and forming alliances with other community care providers). All of these administrative strategies may work to supplement program resources and thus limit the potential negative effects of less than optimal resource factors.

Effective Management of Operational and Resource Factors

Based on our observations of the relationship between variations in operational and resource factors and components of care management, we revisit our assumptions regarding components of care management. Namely, that it is inherently more positive for team to:

- Focus more on participant care issues relative to logistical issues pertaining to care planning processes and decision-making processes.
- Focus on a broader spectrum of participant care issues in care planning (this includes focusing on issues such as participant cognitive status and participant and caregiver quality of life in addition to the more typical medical issues).
- Exhibit greater depth, creativity, proactivity, and flexibility in their problem solving.
- Utilize more holistic approaches to care as evidenced by the inclusion of psychosocial interventions in addition to more traditionally medical interventions.
- Be able to utilize external resources such as the family in the provision of care

Table 4 below presents what appear to be positive aspects of operational and resource factors based on these assumptions and summarizes the factors' primary influences on positive components of care management.

It is interesting to note that teams with specific staffing or financial concerns may be more likely to chose one service locale versus another. However, since one service locale is not necessarily better than another this component of care management does not readily lend itself to an assumption regarding what is inherently positive. Thus variations in locale of service provision are excluded from this section of the discussion.   In order to provide the reader with an illustration of how sites faired with respect to effective aspects of operational and resource factors we reexamined on-site data gathered for each team to determine which sites generally exhibited more of what we suggest are effective aspects than not. This allowed us to group the sites into two categories for each operational and resource factor, namely: those sites exhibiting primarily effective aspects versus those sites exhibiting primarily not effective aspects. Table 5 below provides a count of the number of sites out of the eleven visited that fit the criteria of having primarily effective aspects and offers site specific examples to further illustrate how aspects of operational and resource factors presented on-site.

Factors	Effective Aspects	Primary Influence
Team Process	Maturity, blurred discipline roles, balanced and comprehensive team member input, systematic organization of discussion, and overall positive team attitude.	Promotes increased depth, creativity, proactivity in problem solving; focus on participant care issues relative to logistical issues; focus on a broader spectrum of participant care issues; emphasis on more holistic approaches to care. May also indirectly influence components of care management through its association with other operational factors and potential to filter the relative influence of resource factors.
Communication	Clearly defined protocols that facilitate timely, accurate, and comprehensive exchange of information. Clearly stipulated mechanisms for developing and fine tuning communication protocols throughout site development which minimize the potential for gaps in communication.	Promotes increased focus on participant care issues relative to logistical issues. More effective when accompanied by substantive blurring in team member roles and an overall positive team attitude. Its influence is enhanced by its association with all aspects of effective team process and its potential to also filter the relative influence of resource factors.
Family/Caregiver Interaction	Conceptualization of the family as both an extension of the participant and a valuable resource in caring for participants. Focus on working to cultivate a partnership with families that focuses on eliciting family input into care management decisions, fostering open and timely dialogue, and identifying and addressing family/caregiver needs and preferences.	Aspects of effective interaction likely to go hand in hand and promote increased focus on participant care issues relative to logistical issues and focus on a broader spectrum of participant care issues, including in particular those issues pertaining more to caregiver quality of life. Teams with effective family/caregiver interaction were also more likely to have effective communication and to be able to utilize family/caregivers in their service provision strategies. This benefit appears to minimize the impact of staffing and resource constraints.
Administrative Practices	Executive structure which allows one individual to focus solely on developing and fine tuning internal operations and another to focus on forging community alliances as a method for supplementing program resources. The relationship between administration and the team should maximize team input into administrative decisions and team autonomy in care planning, and minimize administrative presence and awareness of budgetary concerns at the team level.	Main association with effective care management is through the power to make decisions, which influence other components of operational factors and to some extent determine effective staffing management practices and financial policies. Effective administrative practices promote fine tuning of internal operations and maximization of resources, which in turn further promotes effective team process and communication.
Staffing Practices	Creation of staffing structures which maximize resources and minimize the potential for staffing gaps. Hire adequate numbers and promote appropriate distribution, training, and diversity of staff. Focus on ongoing staff training, staff development, mechanisms for decreasing staff stress, and promoting staff retention.	Promotes more effective communication and team process which, in turn, allows the team to focus more on participant care issues; focus on a broader spectrum of issues; exhibit greater depth, creativity, proactivity, and flexibility in problem solving and utilize more holistic approaches to care. Effective staffing practices also maximize limited funds, which, in turn, further promotes effective care management.
Finance Practices	Fiscal policies and service provision strategies which maximize available funds and resources without compromising team focus on participant care provision. Administrative attention focused on reassessing the acute focus of funds to ensure that adequate resources are redirected into bolstering internal operations. This appears to be particularly critical during growth periods when operations are particularly vulnerable.	Maximize limited financial resources which should strengthen the potential for sound staffing structures and effective management of operational factors. Relative role of effective financial practices in promoting effective care management appears to be strongly associated with the relative strength of operational factors due to the apparent mitigating effect of these factors.

TABLE 5: OPERATIONAL AND RESOURCE FACTORS: PRIMARILY EFFECTIVE AND NOT EFFECTIVE SITE EXAMPLES

Factors (# of Sites Exhibiting Primarily Effective Aspects)	Primarily Effective Example	Primarily Not Effective Example
Team Process (6 of 11)	The fifth most mature team had comprehensive discipline representation in meetings (transportation, nursing techs, medical records, and janitorial staff actively included). Team discussion was not dominated by one discipline or the facilitator. Many members provided information that reflected an understanding of and concern for issues typically associated with other disciplines. Members exhibited mutual respect as evidenced by supportive commentary and full attention to each person's input. Moreover, most team members expressed and exhibited a willingness to do whatever necessary to provide support to other staff and caregivers in caring for participants. The team discussed each issue until some form of resolution was determined.	While the least mature team had many individuals present in morning and I&A meetings, input from the majority involved was minimal. Care planning meetings were dominated by the facilitator who had to repeatedly prompt team members to provide input and feedback. Antagonism among team members was apparent in discussions as many disciplines seemed protective of what they considered to be their respective realm and reacted defensively toward commentary from other members. Issues pertaining to staff stress were a common topic of discussion and team members seemed reluctant to take on any additional burden in caring for participants. Discussion was scattered and resolution of issues was often unclear.
Communication (6 of 11)	At one site visited, all staff interviewed were clearly aware of existing protocols regarding information exchange. For example, when asked about communication protocols surrounding changes in the service plan, staff referred us to an interdisciplinary communication form which is filled out and circulated among service staff for review. Protocols for communication appeared to be comprehensive yet concise. Utilization of a Primary RN model facilitated efficient communication of information to and from sources beyond the day center environment. Team members voiced that they were comfortable with guidelines for information exchange and felt that they had input into creating and adjusting protocols as necessary. Staff in meetings appeared knowledgeable regarding details of each case.	As demonstrated by behavior in meetings and information gleaned from discipline interviews, one of the teams we visited operated without consensus as to protocols for information exchange. When asked about how information is communicated, discipline member responses ranged from contradictory to an admittance of ignorance as to appropriate mechanisms. In meetings, gaps in communication were apparent as staff made statements indicating lack of knowledge about case details. Communication of information from outside the day center was sparse and reactive in nature. Responsibility for follow-up and accountability seemed to rest wholly on the center supervisor. Overall, operating without protocols seemed to force this team to recreate the wheel at every turn.
Family/ Caregiver Interaction (7 of 11)	One of the teams we visited not only vocalized viewing the family as an extension of the participant and as a resource to be maximized, but also seemed to consistently adhere to this idealogy in their approach to family/caregiver interaction. Team members were comprehensive in educating families upon enrollment and continued a focus on caregiver education on an ongoing basis. To facilitate communication with caregivers, the team worked to identify a family member as primary spokesperson. We noted that when this individual changed, the team made a point of starting from ground zero in developing an open dialogue with the new contact. Team discussion conveyed that most team members seemed knowledgeable about family dynamics and shared the responsibility for fielding caregiver questions and alerting family to changes in the service plan. Service provision strategies placed considerable emphasis on attending to the needs of the family through the provision of proactive respite, regular family conferences, home care, and flexibility in scheduling services to accommodate changing caregiver schedules.	At another of the sites we visited, the team took a very reactive and crisis-oriented approach to family caregiver interaction. Staff at this center seemed to view family/caregivers as more of a burden than a valuable resource. Relatively little orientation was provided upon enrollment and less effort was put forth to promote regular ongoing family education as part of the service plan. Family issues only seemed to dominate discussion of cases when the family had become a problematic element in the provision of care or the family had requested or denied specific services. Mechanisms for gaining input from the family were irregular and generally relied on phone contact only - reportedly due to staffing shortages. The home care department, at the time of our visit, was reportedly particularly short handed which led to a delay in responding to home care service provision deemed necessary by the team. The overall theme with respect to family interaction at this site seemed to be that the squeaky wheel would get the grease, placing the burden on family/caregivers to actively advocate for their needs.

Factors (# of Sites Exhibiting Primarily Effective Aspects)	Primarily Effective Example	Primarily Not Effective Example
Administrative Practices *(4 of 11)*	One of the sites that was primarily effective with respect to administrative practices had a two- person administrative structure with one individual focusing more on internal processes and the other focusing more on external expansion issues. Administrative staff at this site had forged strong alliances with community resources which afforded the site certain benefits, including augmenting options for recreation programming within the community. Team member responses in interviews and actions in meetings indicated that the team had autonomy in decision making and was not overwhelmed with administrative budgetary pressure. While an administrative staff person did facilitate some of the care planning discussions, this individual did not dominate the discussion and consistently prompted the team to come up with creative solutions without regard for cost containment. In addition, administration promoted staff development through the provision of ongoing staff training and establishment of mechanisms for staff feedback into procedural decision making.	This site also had a two person administrative structure; however, both individuals seemed to be splitting their focus between internal and external concerns and one of the individuals had recently been hired. In addition to these two individuals a secondary tier of administrative staff had been recently added. This structure seemed to present problems with duplication in some aspects of staff roles and gaps in others. Many team members expressed concern over the fact that policies and procedures tended to be handed down from administration without taking into account team member input. Administrative staff exerted close budgetary control over team members and reportedly asked them to provide budgetary information on a weekly basis. This team faced limited autonomy in decision making, particularly with respect to request for high cost items (e.g. participant lifts). We also noted that administrative staff who attended some of the team meetings were not always supportive of team member input and creativity.
Staffing Practices *(5 of 11)*	At one of the centers, staffing practices were set up such that none of the disciplines reported staffing shortages and individuals seemed comfortable with their caseloads. Direct staff had time to come to meetings and contract staff who were closely monitored, were encouraged to attend or provide input for meetings. The team staffing structure emphasized the role of the home care RN which seemed to allow for increased continuity between the home sphere and the day center. Staff orientation and training appeared to be comprehensive in nature. At the time of our visit, new staff were shadowing seasoned staff in preparation for a new center opening. Administrative staff planned to send a mix of new and seasoned staff to operate the new center. Ongoing staff inservices were standard and a staff member was added to the roster to focus specifically on ongoing staff education.	At one of the sites we visited, staffing problems were a major theme. Staff reported coverage issues relating to under staffing in various departments (home care in particular). A number of staff reported that they were no longer able to attend meetings daily because they were too busy. Staff asked to spread their time between multiple centers reported stress related to their increased workload and time spent in transit between centers. Staff also reported uncertainty as to discipline and individual responsibilities. The center manager played a pivotal role in trying to maintain balance and ensure accountability and follow-through; however, there was no one else who seemed prepared to fill in for this person as necessary. Staffing issues were commonly sighted in meetings as the premise for choosing one service option over another and often seemed to be at the root of delays in service provision.
Finance Practices (5 of 11)	One of the sites we visited had experienced a fairly solid financial history. At the time of our visit the focus of funding appeared to be relatively balanced (e.g. no clear focus on expansion versus staffing). This team emphasized long term preventive measures in care provision (e.g. respite, education, frequent day center attendance) in an attempt to provide quality care and avoid or delay the need for costly services such as nursing home placement. An emphasis on assessing the benefits of proposed services was also present in decision making at this center. This site included a pharmacist on the team who, by searching for ways to minimize numbers of medications and use lower cost alternatives (such as generic brands), functioned as a built-in cost containment mechanism. Furthermore, they were exploring the impacts of varying the reassessment period for participants, which could serve as a plausible way of containing costs.	Another of the sites we visited had been plagued by a relatively poor financial history with funds focused, at the time of our visit, predominantly on opening a new center and operationalizing their new management reorganization. Center-based budgets had recently been enacted at this site as a method for cost containment and some of the disciplines reported stress due to staffing shortages and an inability to directly impact the appropriation of funds. Issues relating to cost containment were broached frequently in team discussion, indicating an acute awareness of budgetary concerns at the team level. Team members often seemed to opt for short-term cost containment strategies and were not generally as willing to bolster a service package to accommodate family requests. Recreation service provision at this site was less rich than at some of the other sites, particularly with respect to activities addressing differences in cognitive status among participants.

Summary of Findings

The findings of our study of care management and decision making within the PACE model clearly demonstrate the importance of promoting effective management of operational factors and maximizing the positive influence of resource factors. While both categories of factors play a role in influencing variations in effective care management, we found that those teams that seemed best able to focus on and effectively address components of care management tended to demonstrate effective management of operational factors as well. Upon further examination of this relationship, we learned that operational factors generally are more directly linked to components of care management than are resource factors; first, because the influences of resource factors seem to be filtered through operational factors and second, because certain aspects of operational factors are strongly linked with each other and may then further enhance the influences of resource factors (whether positive or negative). These findings are encouraging because they suggest that while influenced by resource factors, program operations and components of care management are not completely dependent upon available resources and external influences which may or may not be at optimal levels. The findings also suggest that strategies for promoting effective components of care management and decision making may require a two-tiered approach:

- Determine mechanisms which directly foster positive aspects of operational factors thereby promoting effective overall management of these factors. Due to the filtering nature of operational factors, positive growth in this area should also in turn minimize negative and maximize positive influences of resource factors. Thus, encouraging sites to put into place mechanisms which strengthen the team process, foster effective communication, and promote strategies to maximize internal and external resources seem to be instrumental in promoting effective care management processes during all phases of site development.

- Since resource factors seem to influence operational factors, determine mechanisms which directly enhance the positive influence of resource factors to further promote effective management of operational factors (which again in turn should further mitigate the negative and enhance the positive influences of resource factors). Examples of this include maximizing the effectiveness of staffing structures, maximizing the utility of families/caregivers, and enhancing the positive role of administration in bridging the internal and external resources.

Our research also indicates that there may be certain time frames better suited for focusing on specific areas of program development. For example, it seems imperative for sites to develop internal operations before shifting their focus to external resources. Thus developing strong team process, effective channels of communication, and solid staffing structures and practices should be the target of focus during the initial start-up period. After these internal mechanisms have been established, the site can more readily shift its focus to fostering bridges to external resources, which serve to augment existing program resources and prepare the site to cope with site expansion (and a participant population that is aging in place). In addition, there may be certain critical periods during which sites must refunnel their energy and resources into reassessment and fine tuning internal operations. These critical periods seem to follow rapid growth and transition, such as: expansion to two or more centers; the addition of housing; significant amounts of turnover or turnover in key positions (both at the administrative and team levels);

drastic shifts in chosen program focus (e.g. changes in management structure, redirection of themes in programmatic policies, or volatile shifts in the relative focus on external versus internal operations); and extended periods of financial constraint.

Recommendations

The following section translates and condenses our findings into a series of recommendations designed to assist policy makers, program administrators, and interdisciplinary teams in defining, implementing, and improving program policies and procedures that promote effective decision making and care management. While some recommendations seem intuitive, we noted vast differences in the extent to which sites actually incorporate these concepts into developing and implementing care management processes. For this reason, recommendations may include specific examples of how a site *could* choose to operationalize the concept. In other cases, examples are drawn directly from actual strategies that have already been implemented and seemed to work well at sites.

Operational Factors

Team Process

Team process, as was discussed earlier, appears to be the factor most closely tied to all aspects of care management. It refers to the way in which individual team members relate and interact, which influences the ability of the collective team to have more depth in discussion and be creative, proactive, and flexible. Because we observed that these characteristics enhance the effectiveness of a team and, in some way, also influence all other factors, our recommendations are aimed at reinforcing these attributes through balanced team member input, positive blurring of disciplines, and an overall positive attitude. The relative influence of these attributes suggests that positive team process should be fostered throughout all phases of program development, but perhaps particularly during critical periods, such as at program start-up or during periods of rapid growth when the vulnerability of team process may be heightened. Mechanisms which promote team process include:

- Promoting a team structure and decision-making climate which includes and promotes equitable input from all team members and precludes dominance by one or several vocal members. At several sites we witnessed a blatant lack of balanced input due to particularly dominant or passive disciplines or personalities. For example, the relative strength of the facilitator can be particularly influential on team process.

- Creating an environment in which staff feel comfortable vocalizing all ideas, concerns, and information regarding participant care. It may be necessary to pay particular attention to encouraging input from support staff such as personal care workers (PCWs), who may feel intimidated and hesitant about speaking up in front of their teammates (e.g. one site uses a reporting form during morning meetings that has assigned space for input from each discipline to maximize the quantity and quality of information made available to the team as a whole).

- Promoting efficient use of meeting time (e.g. some of the teams we visited spent a great deal of time discussing the semantics of care plan terminology which seemed to detract from their focus on participant care issues).

- Providing thorough orientation to new staff covering all facets of program operation (e.g. assign new staff to work with more experienced staff members for a period of days or weeks before the new staff are permitted to work independently).

- Promoting continuity through team-building training (e.g., bring in individuals from outside the program to coordinate team-building trainings on an ongoing basis).

- Holding regular cross-training and inservices to promote discipline blurring and the transfer of knowledge among team members (e.g., physicians at one site have held inservices for the entire team on behavioral side effects of drugs commonly used in geriatric practice). Ongoing inservices may be particularly helpful for staff who come to the table with less formal education and training as a mechanism for enhancing overall team member comprehension of the relevant medical and psychosocial aspects of care provision.

- Striving to achieve a balance between granting teams autonomy to make care planning decisions and clearly stipulating limits and constraints within which they must operate.

- Teaching teams to design and implement preventive measures as a method for minimizing costs without compromising the integrity of care provision. (It appears that distinct awareness of the finances at the team level seems to negatively impact team dynamics and shift team focus away from participant care toward financial concerns. Thus instilling in team members an appreciation for the benefits of preventive care may be the optimal way of promoting cost containment without compromising care).

Communication

Communication encompasses the ability of staff members to exchange information in an accurate, timely, and comprehensive manner. Because the focus of strategies for enhancing effective communication can vary depending on the influence of team process and internal protocols, recommendations that promote effective communication suggest that sites should address communication proactively and establish processes to facilitate the flow of information. In addition, sites should be encouraged to:

- Develop effective protocols for information exchange during the program start-up phase and allow for reassessment and adjustment of protocols in the wake of programmatic change and growth. Developing these protocols initially should provide sites with a basic framework in which to operate as the site develops. We found that sites that appeared to have limited or weak protocols for communication in place encountered difficulties as the program developed. Informal and undefined guidelines that may have sufficed when the program was small became inefficient and ineffective within the context of an increasingly complex programmatic environment.

- Maintain easily accessible centralized records and notes so that staff know where to find information in a timely, efficient manner.

- Clearly define responsibilities for all staff such that they support overlap in discipline roles and thereby, minimize potential gaps in channels of communication, follow-up and resolution.

- Require comprehensive discipline representation, including that of support staff such as transportation workers and PCWs to ensure that all information relevant to participant care issues is communicated.

- Encourage meeting attendance by contract staff as a means of facilitating information exchange between contract staff and the team.

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- Require meeting attendance by staff who have directly provided care to the participants being discussed rather than relying on second hand reports during meetings.

- Place value on input from participants and create mechanisms for obtaining their input (e.g. while sites seem to utilize participant councils and satisfaction surveys, the explicit inclusion of participant goals in care planning seemed more effective for insuring inclusion of participant input in care planning decisions).

Family/Caregiver Interaction

Teams that had the most effective family/caregiver interaction were those that view families/caregivers as an extension of the participant and strive to establish a partnership with them for example, through the promotion of caregiver input into care planning decisions and caregiver access to information and staff. As such, initially teams should:

- Invite families/caregivers to accompany prospective participants during part or all of their initial visit to the center.

- Clearly review the enrollment criteria, program mission, and team expectations of participants and families/caregivers with the involved parties prior to participant enrollment.

- Gain an understanding of caregiver expectations about the program prior to participant enrollment and periodically review these expectations with caregivers.

- Provide family/caregiver with an honest assessment of the services that the team can realistically offer to the participant in question.

- Reach a consensus with families/caregivers regarding their responsibilities and those of the team vis a vis participant care.

As the site grows it becomes increasingly important for teams to establish clearly defined lines of communication which afford comprehensive exchange of participant information between team members and families/caregivers and to reinforce a partnership which maximizes the utility of these individuals as resources in care provision. As such, staff should:

- Proactively solicit family/caregiver input into care planning and other service delivery decisions (e.g., one site has redesigned its assessment forms to include a section devoted to family input).

- Ensure that families are kept informed of changes in participant care and in site/team operations that could impact participant care (e.g., make it policy to send out letters and follow-up with a phone call anytime a medication changes).

- Be accessible to family members and schedule regular meetings with them instead of waiting until family concerns escalate to crisis level.

- Ensure that families have an assigned contact person(s) on the team instead of permitting this role to be assumed by default (e.g., at several sites, social workers are designated as principal family liaison).

- Encourage all team members, beyond those specifically assigned as family contacts, to keep abreast of topics of concern to the family and listen for changes in the family dynamic which may impact participant care.

- Develop service plans that maximize the utility of family/caregiver strengths (e.g., several teams have trained interested family members to perform routine procedures and encourage families to aid participants in following through with rehabilitation regimens within the home environment).

- Focus on the impact that families/caregivers can have on participant quality of life.

- Recognize and respond in a timely manner to early warning signs of family/caregiver stress and burnout (e.g., train staff to identify the signs of problems within the home, offer respite instead of waiting for families to request it, establish family support groups or counseling, and maintain flexibility in staffing and care approaches to allow for a timely shift in the amount or locale of services in response to changes in family schedules and needs).

Administrative Practices

Administration sets the pace for program operations and serves as one of the primary bridges between the program and the environment in which it develops. Hence sites should put considerable energy into devising strategies for optimizing administration's role in promoting effective management of operational factors and maximizing positive aspects of resource factors. Strategies to this end may include:

- Structuring site leadership such that there are two administrative roles, one that focuses on fostering external growth and expansion and another that focuses primarily on developing and fine tuning internal program operations as the site develops. This may be crucial to ensuring that sites continually maintain an equilibrium between internal and external focus and are equipped to redirect their energy and resources more toward one or the other at appropriate times. Furthermore, sites that have adopted this administrative structure also seemed to have stronger team dynamics and more effective communication mechanisms in place.

- Having externally focused administrative staff concentrate on spearheading the formation of alliances and partnerships with community agencies and providers to augment in-house services and resources, (e.g., the recreation departments at several sites collaborated with local organizations to sponsor inter-generational programs and cultural events which benefitted not only the participants but members of the community at large).

- Limiting the role of administrators and facilitators at team meetings or other decision-making forums as a means of promoting open discussion and building problem solving skills.

- Maintaining budgetary awareness and accountability at the administrative level as a method for increasing team's focus on participant care issues relative to their focus on resource limitations.

While focusing on growth and expansion is an important component of program development for any PACE site, sites must not forget to reinforce and readjust the mechanisms highlighted above which promote strong team dynamics, effective communication, staff retention and minimize the negative impact of staffing gaps throughout all phases of program development. Since issues relevant to internal site management become increasingly complex as sites grow and tend to focus more attention on external issues, technical assistance pertaining to reinforcing effective management of operational factors and maximizing positive aspects of resource factors throughout growth should be provided to site. Suggested topics include:

- Effectively readjusting staffing and management structures as the site expands to multiple centers. (For example, we noted that minimizing travel time between centers for direct care staff seemed to be a key component in promoting a smooth transition from only two centers to two or more centers. Moreover, sending a mix of new and seasoned staff to open operations at a new center appeared to facilitate the transition).

- Assisting administrators and team members in reassessing lines of responsibility for reformulation and implementation of program policies targeted toward facilitating adjustment to growth.

- Directing teams on how to operationalize changes in administrative policies and procedures in a manner that does not compromise participant care or erode team dynamics.

Staffing and Finances

Overall, teams that had worked together longer seemed to be stronger with respect to team process. Thus, administrators should encourage maturation of staff members focusing on promoting staff retention, longevity, and upward mobility and on mechanisms for decreasing staff stress and burnout. For example:

- Enact a policy which stipulates a three month trial period for new staff to ensure that the individual and the program fit well together.

- Foster staff morale through staff retreats, staff support groups, or access to counseling services.

- Review day center attendance as well as the level of care required by participants to ensure that the number and types of available staffing match daily attendance requirements.

- Monitor discipline caseloads and allow for flexibility in scheduling (e.g., the home care coordinator at one site makes frequent supervisory visits to ensure that the home care workers are not over tasked in their assignments).

- Promote from within and thereby facilitate upward mobility (e.g., at several sites former team members have been promoted to administrative positions such as center supervisor or center manager).

- Allow team members to provide input into staffing choices such as team facilitator, center supervisor, and center manager positions.

- Support supervisory staff by limiting their responsibility for direct service provision to allow them sufficient time to concentrate on oversight and interdisciplinary care coordination (some sites seem to have encountered problems with staff burnout by adding supervisory responsibility to direct care positions without significantly decreasing the direct care component of their role or augmenting the department with additional direct care staff).

Moreover, since staffing problems appear to have an impact on the effectiveness of communication and the relative strength of team process, sites need to initiate mechanisms which safeguard against and compensate for intermittent staffing gaps. One approach would be to utilize staff development techniques which foster positive blurring of discipline responsibilities. For instance:

- Provide cross-training of staff so that staff can help fill in for each other when necessary, such as in cases where finances or other constraints prevent the hiring of adequate numbers of staff.   This training should implicitly ensure that more than just one individual has the expertise to conduct each program task. This can be reinforced with operational protocols which dictate the expectation that all staff contribute and help wherever necessary. While the benefits of cross-training apply to both professional and para-professional staff, it is probably not feasible, or even necessary, to have every discipline participate in such an

exercise. However, there are certain circumstances under which and certain staff for whom this could be most beneficial. For example:

Other staff should be trained to perform the duties of the team facilitator and center supervisor/manager. For the former, providing some training to all IDT members is likely to benefit the entire team process; however, there should be one or two specific individuals assigned to assume the position if necessary. The training needed to perform the duties of the center supervisor/manager will likely also require that only one or two specific individuals be prepared to fill that role.

More than one specific staff member should be assigned as a primary family contact such that information from the home setting is always brought to the team and so the family is always assured of having a contact.

Staff should participate in on-going periodic center "exchanges" (possibly on a monthly) during which certain disciplines spend one or two days at another center to maintain some familiarity with the operations and participants at that center – should the need to "fill in" for staff at that center arise.

- Highlight the importance of allocating funding to cover staff time that is devoted to reinforcing team building, developing problem solving and decision-making skills, and reflecting on other operational issues such as the impact of program growth on communication systems.

A second approach hinges on administrative staff taking a proactive role in promoting effective staffing models, overall staff productivity, and efficient resource utilization. For example, administrative staff should:

- Consider adopting a primary care staffing model which includes nurse practitioners (NPs). This model should help to maximize funding allocated to primary care staffing and may also provide the added benefit of promoting balance among team member input. Since the primary care voice is often strong, the potential exists for the team focus to become overly medicalized. NPs bring to the table unique training which focuses more heavily on psychosocial components of care than typical physician programs. This additional focus on psychosocial issues may help to strike a balance between medical and psychosocial themes in team discussion.

- Strive to identify problem areas in program staffing and service provision, (e.g. coordination of transportation and home care service provision) and work on developing more efficient methods for inter and intra-departmental coordination.

- Hire staff who bring substantive training and/or experience to the team. We noted that teams with licensed recreational therapists seemed to offer a more comprehensive approach to recreation and more effective utilization of recreation resources.

- Promote effective oversight of contracted providers by developing specific protocols and encouraging team members to follow participants and maintain PACE staff involvement throughout the entire continuum of care.

- Conduct task analyses to ensure that each discipline is staffed as fully as finances and the labor supply allow. For example, the task of providing personal care service to participants should be broken down into its separate components (i.e. how many staff persons are needed to toilet, bathe, dress, feed and perform other duties that comprise personal care service) and the number of individuals in need of such service on any given day should be tracked. In this way, supervisory staff should be better equipped to estimate and hopefully assign the requisite number of staff needed to handle personal care efficiently without having to pull staff from other disciplines or other tasks.

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