STREAMLINING THE MEDICAL MATERIEL ACQUISITION PROCESS: ORGANIZING FOR SUCCESS

VOLUME 3
Briefing Book AR806B1

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August 1990

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PREFACE

This briefing book is Volume 3 of a three-volume report on the medical acquisition process. In it we address characteristics—proven qualities—and relationships—roles and responsibilities—that mark a successful acquisition management structure, and recommend an organizational alignment that establishes the relationships necessary to complete the streamlining actions.

In Volume 1, we report the results of our analysis and recommendations on requirements identification methodologies and acquisition process management. Volume 2 describes the life-cycle system activities leading to the critical acquisition strategy decision, and presents our recommendations on that decision to proceed to new development for an item or to use an off-the-shelf, or nondevelopmental item. For a thorough understanding of the materiel acquisition process and the changes needed to streamline it, we suggest reading Volumes 1 and 2 as well as this volume.

On 30 May 1990, a script based largely on the material in this briefing book was presented to the Army Surgeon General, Deputy Surgeon General, Assistant Surgeon General for Research and Development, and Director of Health Care Operations.
Streamlining the Medical Materiel Acquisition Process: Organizing for Success

Executive Summary
Streamlining the Medical Materiel Acquisition Process: Organizing for Success

Successful Acquisition Project Characteristics

- Small, well-trained, experienced staffs
- Communicating effectively
- Executing a stable program
- Reporting value-adding information
- Improving system development efforts
- Short, clear command channels
The Army Medical Department (AMEDD) can improve acquisition management by effectively integrating the efforts of the organizations participating in the process. One step in that direction is to establish a Deputy Surgeon General for Acquisition (DSG(A)) to provide the central direction, control, and decision authority. That step would be the first, the current AMEDD organizational structure must also be changed.

Successful acquisition projects display certain characteristics. Correctly aligning roles and responsibilities and restructuring relationships can produce organizations that demonstrate those characteristics. Such organizations have small, well-trained, experienced staffs that perform only the most essential functions. They execute a stable program marked by consensus and reliability planning, funding, and system configuration. Such organizations only report information that adds value to management tasks and effective equipment fielding, and they focus on improving system development efforts through more R&D involvement in early identification, evaluation, and prototyping nondevelopmental items. In short, successful acquisition organizations have clear command channels that fix responsibility and accountability for acquisition action.
Streamlining the Medical Materiel Acquisition Process: Organizing for Success

Change Objectives

- Establish an acquisition management organization that:
  - Provides an assignment pattern to increase staff quality
  - Aligns and assigns responsibilities appropriately
  - Focuses on users' top priority needs
  - Defines and maintains resource and performance baselines
  - Manages by exception
  - Validates a preference for nondevelopmental item acquisition strategies
  - Clarifies channels of authority

- Implement the new organization with minimum disruption of existing command lines
CHANGE OBJECTIVES

The characteristics of success can be embedded in a new acquisition management process if changes:

- Focus organization design on achieving particular objectives
- Clarify relationships between acquisition process participants.

First, the new organizational structure should focus design as follows:

- Provide a personnel assignments pattern that fosters continuing development of acquisition management experience and capability
- Align and assign responsibilities and functions to management levels based on criticality to the end goal
- Permit continuous scanning of the dual health care mission and focus the acquisition effort on the users' highest priority needs
- Support defining cost, schedule, and performance baselines early in the materiel requirement life cycle
- Maintain a balance in those baselines until completion of materiel fielding
- Tailor the life-cycle system activities and direct attention to those events needing top-level decisions
- Accomplish early evaluation, test, certification, and integration of nondevelopmental items
- Establish and enforce compliance with resource decisions.

Ideally, the new acquisition structure will be established with minimal disruption of existing command lines.

Second, the changes should clarify and improve relationships between acquisition process participants – the DSG(A), user, combat developer, materiel developer, and logistician. Our analysis of relationships reveals a role for the medical research community and we include that role in the acquisition process. We acknowledge its participation by modifying our initial recommendation for a DSG(A) to a recommendation that the AMEDD establish a Deputy Surgeon General for Research and Acquisition (DSG(R&A)).
Recommended Responsibilities and Relationships

DSG(R&A): Oversight, requirements validation, decision authority

User/Combat Developer: Requirements identification, potential solutions, clinical research and evaluation

Researcher: Technology surveillance, potential technology base solutions, clinical research and evaluation

Materiel Developer: Market investigation and analysis; product information repository and product technical test and evaluation; product modification prototype, test, and evaluation; development and test funding program management

Logistician: Sustaining support system plans, test, and evaluation; procurement, revolving, and operations funds program management; contracting and fielding support.

Organizing for Success
RECOMMENDED RESPONSIBILITIES AND RELATIONSHIPS

To establish a successful acquisition organization, we recommend a structure headed by a DSG(R&A) to provide oversight, validate requirements, and exercise decision authority. Additionally, we recommend the DSG(R&A) align responsibilities and relationships as follows:

- The user and combat developer provide materiel requirements, nominate potential materiel solutions, and perform user testing and evaluation.

- The researcher surveys technology for potential technology base solutions to requirements and performs clinical research and evaluation.

- The materiel developer conducts market investigation and maintains a repository for product information, performs technical testing and evaluation, develops product modification prototypes, and manages the development and test funding program.

- The logistician plans, tests, and evaluates the sustaining system; manages procurement, revolving, and operations fund programs; and provides contracting and field support.

CONCLUSION

The organization for medical acquisition management that we recommend is one that can be successful. It is an organization with strong central direction, capable of providing better requirements, showing a preference for nondevelopmental items, and structured to emulate the characteristics of success. Most of all, it places the Army Medical Department fully in control of its own acquisition destiny.
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The Organization for Medical Materiel Acquisition Management
The Organization for Medical Materiel Acquisition Management

Introduction
INTRODUCTION

The current broad division of responsibilities among various DoD organizations (OSD, the Joint Chiefs of Staff (JCS), Unified and Specified Commands, Military Departments, and the Defense Agencies) provides a generally sound structure within which to implement the fundamental management principles necessary to support decision making and improve acquisition management. The essential challenge is one of integrating the respective efforts of those organizations more effectively. These thoughts paraphrase the Secretary of Defense's comments in the Defense Management Report to the President of July 1989. They suggest that, beyond those changes associated with the establishment of the Under Secretary of Defense (Acquisition) and the DoD Executive Committee, no further reorganization is necessary to achieve improved acquisition management in DoD.

In the Army Medical Department (AMEDD), the essential challenge of effectively integrating organizational efforts to achieve improved acquisition management is the same but on a much smaller and less-complex scale. Like DoD, an AMEDD organization structure that establishes a Deputy Surgeon General for Acquisition (DSG(A)) and increases the centralized direction and control of medical acquisition programs is needed. Unlike DoD, however, establishing a DSG(A) will require changes in the existing AMEDD organization structure. This briefing book outlines our recommendations to improve medical acquisition management and responsiveness and discusses the organizational changes necessary to do so.
The Organization for Medical Materiel Acquisition Management

Briefing Outline

- Organization structure and acquisition process
- Comparison of AMEDD acquisition characteristics with those of successful acquisition projects
- Proposed AMEDD organization for acquisition management
BRIEFING OUTLINE

This briefing book is organized as follows:

- First, we discuss how the medical organization structure and life-cycle acquisition management process are related.

- Next, we examine the characteristics of successful acquisition organizations and acquisition projects and assess the extent to which the AMEDD incorporates them.

- Finally, we propose and discuss an AMEDD organization that incorporates the principles of sound acquisition management practice and enhances medical acquisition responsiveness.
The Organization for Medical Materiel Acquisition Management

...there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success than to take the lead in the introduction of a new order of things. Because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new. This coolness arises partly from fear of the opponents, who have the laws on their side, and partly from the incredulity of men, who do not readily believe in new things until they have had long experience of them. Thus, it happens that whenever those who are hostile have the opportunity to attack they do it like partisans, whilst the others defend lukewarmly...

Machiavelli,
The Prince, 1513
GUIDANCE

Our guidance has been to propose an ideal — yet feasible — acquisition organization, a zero-based, objective acquisition organization. We believe we have done that. We feel that our proposal generates no issues that will prevent implementation in the near to mid term. Change, however, particularly organizational change, is always a difficult management challenge requiring perseverance and hard work. We have not found a magical way to effect the cultural evolution necessary for continuous improvement in acquisition performance. Reorganization alone is not sufficient to achieve meaningful and lasting results.

The successful introduction of new doctrine, organizations, and equipment into the force requires the synchronization of multiple levels of command and diverse management structures and systems. If the new doctrine, organizations, or materiel, and the management structures and systems that field them are to be effectively integrated and smoothly introduced in a timely manner, they must be clearly understood. Leaders in the AMEDD, especially those in key acquisition positions, must have this broad understanding to effectively synchronize and coordinate (manage) acquisition operations.
STRUCTURE

Tools used to gain an understanding of interrelated management structures and systems include organization charts and input/output analytical models. The organization chart shown here depicts the AMEDD materiel acquisition organization. It can be used to explain hierarchical relationships and authorities, who is in charge, who sets policy, who implements policy, and who works for whom. It also depicts the kind of information flows associated with the answers to questions about hierarchy, approval and disapproval authority, and responsibility. However, the organization chart does not do a good job of depicting acquisition process relationships and information flows that cross organizational boundaries. For example, the relationship or interface between the Defense Medical Standardization Board (DMSB) or the Training and Doctrine Command (TRADOC) and the combat developer is not readily apparent in the diagram, nor is the relationship between the Defense Personnel Support Center (DPSC) and the U.S. Medical Materiel Development Activity (USAMMDA). A systems approach is more appropriate in showing how, for instance, requirements documents are generated, coordinated, and approved.
Basic Systems Model

Input

Resources

Money

Manpower

Material

User needs

Activity

Processes that organize, man, equip, train, and maintain the Army

Goods and services

Output

Readiness or effectiveness in sustained combat

Medical capability

Medical acquisition

The Organization for Medical Materiel Acquisition Management
BASIC SYSTEMS MODEL

A simple input/output model explains the systems approach and how it helps to provide an understanding of acquisition process relationships and information flows. The model can reflect how inputs, dollars, man-hours, and equipment are transformed into the goods and services necessary to accomplish a mission. It can also be used to explain how identified operational deficiencies in the medical force can be corrected through improved or new doctrine, training, organizations, or materiel. For materiel solutions, the model can be used to show how essential performance characteristics are transformed into effective procurement instruments that ensure timely production and delivery. The transformation process describes the actions that must be performed on the inputs and how those actions can help achieve the desired results. The simple model shown here does not explain in detail the specific actions that need to be taken nor who is responsible for them. We must expand the simple model to "zoom-in" on the details of the process.
The Organization for Medical Materiel Acquisition Management

U.S. Army Nonmajor System Acquisition Process
U.S. ARMY NONMAJOR SYSTEM ACQUISITION PROCESS

The Life Cycle Systems Management Model (LCSMM) shown here was developed by "zooming-in" on the tasks to be performed by the various responsible acquisition organizations. The LCSMM is simply an expansion of a simple input/output systems model, an enumeration of necessary transformation tasks. It reflects all the possible steps (transformation activities) necessary to successfully field a specific item and the order in which they should be taken. It shows functional organizations in the left most columns and process phases, management control points, and milestones across the top. Building the LCSMM from such humble and simple input/output beginnings explains why it is difficult to quarrel with the process. It is a model of a fundamentally simple process. Snowballing management stipulations and cumulative encumbrances make it complex and difficult to understand, especially when the reasons for the stipulations and encumbrances are not known or understood. The model shown here is merely one version of the process. Depending on the acquisition task at hand, the phases and blocks in the model will vary in significance and importance.

The complexity of the process and the difficulty in understanding and managing acquisition projects depend to a great degree on the number of organizations involved and the frequency of their involvement; they also depend on the number, sequencing, and duration of acquisition process activities. The complexity presented by numerous organizations and actions is compounded by the relentless pace of technological progress. This combination of many organizations, many activities, and a great deal of management and technological change is the essence of the challenge facing the acquisition program manager. One method used to deal with the high degree of complexity is to divide programs into different types or categories. The division of acquisition programs into major and nonmajor categories attempts to reduce complexity and simplify management. Thus, it is essential that we consider the differences between major and nonmajor acquisition projects.
The Organization for Medical Materiel Acquisition Management

Army Materiel Acquisition Program Categories and Decision Authorities

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<th>Program decision authority</th>
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<td>PEO/PM</td>
<td>DAB</td>
<td>SECDEF (DAE Agent)</td>
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<td>PEO/PM</td>
<td>ASARC</td>
<td>SECARMY (AAE Agent)</td>
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<tr>
<td>Component (Army level)</td>
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<tr>
<td>Adap</td>
<td>PEO/PM</td>
<td>ASARC</td>
<td>AAE</td>
</tr>
<tr>
<td>Nonmajor Level I</td>
<td>PEO/PM (AAE designated)</td>
<td>In-process review</td>
<td>PEO</td>
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<tr>
<td>Nonmajor Level II</td>
<td>Project officers or equivalent [designated by materiel developer (MATDEV)]</td>
<td>In-process review</td>
<td>MATDEV Commander</td>
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<tr>
<td>Nonmajor Level III</td>
<td>Systems manager, commodity manager, or equivalent (assigned by MATDEV/RDE center)</td>
<td>In-process review</td>
<td>MATDEV Commander</td>
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Note: All levels are governed by the principles of AR 70-1; however, the MATDEV may tailor the disciplined management review forums for Levels II and III providing that full accountability for systems is maintained. AAE = Army Acquisition Executive; RDE = Research, Development, and Engineering; ASARC = Army System Acquisition Review Council; DAE = Defense Acquisition Executive.
ARMY MATERIEL ACQUISITION PROGRAM CATEGORIES AND DECISION AUTHORITIES

The facing tabulation reflecting acquisition program categories and decision authorities is taken from Army Regulation (AR) 70-1, Systems Acquisition Policy and Procedures. Of the three types of major programs shown in the table, the first two – Defense Acquisition Board (DAB)-level programs and component-level programs – are categorized as Major Defense Acquisition Programs (MDAP). The third type of major program is categorized as Army Designated Acquisition Programs (ADAP). The table also shows three levels of nonmajor programs. The differences between these categories of programs is in the intensity of program management. Management intensity is reflected in the rank, expertise, and experience of the project manager (PM), the level and degree of the PM's supervision, and the type of appointment and level of charter and, therefore, the extent of the PM's authority.

Different milestone review forums and different program decision authorities are also used to apply different management intensities. All of these different management arrangements are incorporated into the decision processes inherent in life-cycle systems management models as well as in acquisition management regulations. The different management arrangements increase the complexity of the model, the regulations, and the process; perhaps for no valid management purpose. (They may even have a management effect quite the opposite of that intended.) The purpose of higher levels of management review is to increase the chance for successful acquisition by reducing risks and making hard decisions at appropriate levels.
Criteria for Determining Acquisition Program Categories

- Major Defense Acquisition Programs (MDAP)
  - Development risk
  - Urgency of need
  - Congressional interest
  - Joint Service involvement
  - Resource requirement (FY80 $)
    - $200 million RDTE or
    - $1 billion procurement

- Army Designated Acquisition Programs (ADAP)
  - Importance
  - Complexity
  - Resource requirements

- Nonmajor programs
  - If not MDAP or ADAP
CRITERIA FOR DETERMINING ACQUISITION PROGRAM CATEGORIES

Here, we show the considerations that go into designating a program as MDAP or ADAP. Presumably, the higher the designation of the program, the more difficult it is to manage and, therefore, the greater the need for more senior and experienced management. Presumably, the more senior and experienced management will lower development risk and field the system sooner, make funding more certain and tighten financial control, and broaden the joint application. Presumably, as the level of management is increased, so is the organizational commitment to successful fielding.

It is also probable that the higher the level of program management, the greater the complexity of the project management network reflected by the life-cycle system management model. The purpose of such numbing complexity is to anticipate and obtain answers to all possible questions and foreclose all possible sources of failure. It is a virtual certainty that complexity will increase paperwork.*

The AMEDD desires to avoid added management review when it recommends its systems be designated and managed as nonmajor systems. Avoidance of such complexity (the desire to streamline) is a worthwhile goal, but avoidance of complexity must not be mistaken for a lesser need for management intensity and control.

Even with an avoidance of complexity, the importance of broad organization and management commitment remains. Indeed, designation of medical acquisition programs as nonmajor programs places the burden of sound management squarely on the AMEDD rather than on some amorphous "system." The AMEDD must reduce development risk, justify and hold programs to fielding schedules, set priorities and support programs with essential resources, assure thorough coordination with the other Services, and steward available funding so that it stretches as far as possible. To do this it is incumbent upon the AMEDD to ensure that it understands the acquisition process.

We believe that the AMEDD has sufficient authority to discharge the duties associated with its nonmajor acquisition program management. We believe better understanding of the acquisition process, performing acquisition tasks correctly the first time, and improved teamwork are essential. The critical first step, as we have recommended earlier, is accepting the obligations of nonmajor acquisition program management. Those obligations can be accepted with the establishment of a DSG(A) and the use of more centralized and responsive AMEDD control.

The DSG(A)'s management challenge is to devise strategies and plans that best assure the integration of effort (teamwork) that leads to successful introduction of new doctrine, organizations, and equipment into the medical force. Such strategies and plans are required for individual projects and for the acquisition system overall. Successful programs have been examined by many researchers. From the literature of this research, the characteristics of successful acquisition programs and organizations have been distilled. It is important to review and understand these characteristics to assess the extent to which the AMEDD possesses and demonstrates them. The characteristics apply equally to major and nonmajor programs.

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*By managing its programs as nonmajor programs, the AMEDD chooses relative management simplicity and assumes responsibility for its acquisition programs. Neither the Assistant Secretary of Defense (Health Affairs) (ASD(HA)) nor the DMSB, TRADOC, and DPSC are responsible. The AMEDD is responsible. It should also expect to be held accountable for those programs. This view was affirmed by BG Edward Hirsch, USA, (Ret.), Chairman, Center for Acquisition Management Policy, Defense Systems Management College, when we explored the management of nonmajor programs with him.
Characteristics of Successful Acquisition Projects

- Small, high-quality staffs

- Effective communications
  - User needs
  - Balanced tradeoffs

- Program stability
  - Baseline cost, schedule, performance

- Limited reporting requirements
  - Management by exception

- Better system development
  - R&D involved in prototyping
  - Nondevelopmental Items (NDI)
  - Systems

- Clear command channels
CHARACTERISTICS OF SUCCESSFUL ACQUISITION PROJECTS

Successful acquisition projects demonstrate the characteristics shown here. If these characteristics look familiar, it is because they are drawn from the 1986 Report of the President’s Blue Ribbon Commission on Defense Management, more commonly known as the Packard Commission, and the Secretary of Defense’s Defense Management Report (DMR). They can also be found in acquisition management books by noted acquisition authority Jacques S. Gansler. We gain an appreciation for why these characteristics are important for successful AMEDD acquisition by examining them in the context of the AMEDD nonmajor systems acquisition model. In the next six charts, we discuss each of these characteristics in more detail.
The Organization for Medical Materiel Acquisition Management

Characteristics of Successful Acquisition Projects

- Small, high-quality staffs
- Effective communications
  - User needs
  - Balanced tradeoffs
- Program stability
  - Baseline cost, schedule, performance
- Limited reporting requirements
  - Management by exception
- Better system development
  - R&D involved in prototyping
  - Nondevelopmental Items (NDI)
  - Systems
- Clear command channels
CHARACTERISTICS OF SUCCESSFUL ACQUISITION PROJECTS: SMALL, HIGH-QUALITY STAFFS

The Packard Commission report indicates that successful acquisition projects are characterized by small, high-quality staffs. Unfortunately, the word "streamlining" has been misused as a euphemism for reducing personnel authorizations to create small acquisition staffs. The underlying assumption, it seems, is that small staffs are more flexible than large ones, more responsive, more likely to perform only the most essential functions, and devoid of "single-interest advocates" who add little of value to the acquisition process but delay it repeatedly. That assumption holds that small acquisition staffs reduce the number of blocks or nodes in the management model and, therefore, reduce the complexity of the acquisition process.

Small acquisition staffs, however, do not necessarily mean effective ones, nor do they assure avoidance of every conceivable risk. The AMEDD should define and support its acquisition staffs on the basis of its acquisition needs and the efficient use of its resources. In our report on medical NDI, we indicate that certain acquisition functions—market analysis and product testing, for example—appear to be understaffed and ineffective, while other functions appear to be collectively overstaffed. The AMEDD should realign responsibilities and resources to best support the acquisition mission before it considers staff size. It is more important to identify and coordinate valid staff requirements in each functional acquisition element (HISC, MRDC, OTSG, USAMMA) and then apply constraints when and where necessary. Both staff size and alignment are related to acquisition performance—so is staff quality.

The quality of an acquisition staff depends upon the extent of its acquisition training; the scope of its operational experience (field duty with troops) and acquisition experience (combat developments, materiel developments, and logistics, including wholesale level logistics and contracting); and the level of its motivation. We believe the AMEDD is excellently motivated. Unfortunately, because of deficiencies in acquisition training and experience, that motivation is largely misdirected. An example of the misdirection created by a lack of training and appropriate experience is the inability of those in key acquisition positions (both very junior and very senior in rank) to make effective acquisition trade-off decisions. This ineffectiveness has resulted in unreasonable requirements, false starts, nonproductive efforts, and wasted resources.

The AMEDD acquisition staff is unable to make effective trade-off decisions because its personnel management does not sufficiently understand acquisition management. It stresses field duty, often at the expense of the continuity of acquisition experience.

A great deal of purposeful care should go into the selection of acquisition staff members and into their training, promotion, and assignments. No other factor, not the position of the DSG(A) nor the organization of the AMEDD for acquisition, is more important for successful acquisition performance than is the quality of acquisition personnel. It is so important that it may be necessary to increase the extent of senior civilian continuity on the AMEDD acquisition staff and to do so at the expense of military positions. The AMEDD acquisition organization needs to be able to assure the quality of its staff.

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Characteristics of Successful Acquisition Projects

- Small, high-quality staffs

- Effective communications
  - User needs
  - Balanced tradeoffs

- Program stability
  - Baseline cost, schedule, performance

- Limited reporting requirements
  - Management by exception

- Better system development
  - R&D involved in prototyping
  - Nondevelopmental Items (NDI)
  - Systems

- Clear command channels
CHARACTERISTICS OF SUCCESSFUL ACQUISITION PROJECTS:
EFFECTIVE COMMUNICATIONS

Successful acquisition organizations communicate effectively, especially with those who need and will use the products being developed. Management literature today is exploding with the value of "being close to the customer." Peters and Waterman discuss it in their book,* and the Total Quality Management (TQM) theory discusses it. The customer is the reason for the existence of suppliers, and being competitive depends on being close to the customer. Likewise, successful acquisition projects deliver products that meet user needs, and products that meet user needs are the ones that are purchased and used.

In our previous report, we indicated a general failure of the medical acquisition system to effectively communicate with its users.† We suggested that this communication breakdown occurred because acquisition personnel did not fully understand the dual nature of the AMEDD mission and misinterpreted AMEDD needs to perform the dual mission. As a consequence, we found the requirements were insufficiently defined for responsive acquisition support. Some were not specific enough for timely procurement; some, without adequate justification, specified higher performance than the chosen acquisition strategy could deliver; and others failed to achieve consensus regarding tradeoffs. In many cases, if the users had been communicated with directly, more timely tradeoff decisions could have been made. To address these problems, we recommended simplifying and consolidating the requirements identification system; early testing and evaluation of NDI; and selecting an NDI acquisition strategy in all but the rarest of cases. (NDIs represent a set of "prepackaged" tradeoff decisions that reflect state-of-the-art medical practice and broad, if not militarily hardened, use.) In essence, we believe that streamlining by showing an acquisition preference for NDI depends on the commercial marketplace as a starting point and stays with the commercial marketplace through an evolutionary systems acquisition strategy. Developmental products should be sought only when absolutely essential or when a significant, technologically valuable opportunity is presented.

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The Organization for Medical Materiel Acquisition Management

Characteristics of Successful Acquisition Projects

- Small, high-quality staffs

- Effective communications
  - User needs
  - Balanced tradeoffs

- Program stability
  - Baseline cost, schedule, performance

- Limited reporting requirements
  - Management by exception

- Better system development
  - R&D involved in prototyping
  - Nondevelopmental Items (NDI)
  - Systems

- Clear command channels
CHARACTERISTICS OF SUCCESSFUL ACQUISITION PROJECTS: PROGRAM STABILITY

Program stability occurs when a fairly high degree of consensus and commitment exists for requirements, and when planning, funding, system configuration, and management continuity are fairly reliable. If radical and frequent changes occur, acquisition success becomes increasingly doubtful. It is important that members of the acquisition team, under the leadership of the DSG(A), agree "up front" about the need and ability to maintain cost, fielding schedule, and equipment performance baselines. Without commitment to these baselines, frequent change is likely to result in frantic and wasteful effort. While each acquisition program can and should withstand a certain degree of turbulence, excessive dissonance is counterproductive and destructive. The acquisition team must be able to differentiate tolerable change from destructive change. If it cannot, the program is likely to be unstable and, therefore, unsuccessful.

Acquisition program stability is not readily in evidence within the AMEDD. In our first report, we noted that the AMEDD had several different types and configurations of field hospitals. Medical care support equipment (MEDCASE) and deployable medical systems (DEPMEDS) financial programs have been accelerated, deferred, and cut. Doctrinal concepts such as Health Service Support to the AirLand Battle (HSSALB) and Medical Force 2000 (MF2K) have led to modified plans and programs. Materiel acquisition cost, schedule, and performance baselines have not always been established and used to manage change. We indicated that the AMEDD can achieve greater stability and more closely control projects by intense and disciplined use of basic project management techniques, by a more integrated financial programming and execution effort including the approximation of affordability, and by more closely linking fielding dates to the time set for resolution of identified deficiencies. We stated that AMEDD needs, the acquisition process that defines and plans to satisfy those needs, and the marketplace for medical equipment production are indivisibly linked. Changes in one of these elements necessitate adjustments in the others. Stability is smooth, coordinated, and effective adjustment; it is not the wrenching changes in deficiencies, needs (qualitative, quantitative, and time-phased), acquisition strategies, funding, and contracting that have occurred in the AMEDD since the late 1970s.
Characteristics of Successful Acquisition Projects

- Small, high-quality staffs
- Effective communications
  - User needs
  - Balanced tradeoffs
- Program stability
  - Baseline cost, schedule, performance
- Limited reporting requirements
  - Management by exception
- Better system development
  - R&D involved in prototyping
  - Nondevelopmental Items (NDI)
  - Systems
- Clear command channels
CHARACTERISTICS OF SUCCESSFUL ACQUISITION PROJECTS:
LIMITED REPORTING REQUIREMENTS

The next important characteristic to consider is limited reporting requirements. The idea is to spend limited time performing tasks that either do not add value to effective equipment fielding or only do so indirectly. Constant reporting of activity and progress is, in the main, indirect activity. A certain amount of reporting though is necessary to ensure effective management control and the continuous synchronization and coordination across the many organizations involved in an acquisition project. The key is to recognize the difference between productive and nonproductive reporting.

We believe that a strength of the AMEDD acquisition process is a relatively low level of management reporting compared with major acquisition programs. The clear cause for the relative absence of reporting is that AMEDD programs are nonmajor programs, and the AMEDD can effectively control the amount of reporting it requires of itself. Unfortunately, the AMEDD only requires reporting for narrow and limited purposes, and it is insufficient for effective management. Typically, the AMEDD requires the reports necessary to “feed the system” and meet suspense dates. Examples of such reports include Basis of Issue Plans (BOIP), Qualitative and Quantitative Personnel Requirement Information Feeder Data (QQPRIFD), and a virtual host of other documents. These reports are meant to ensure error-free acquisition and thoroughly integrated fielding, but because of the work they generate, acquisition staffs are neither small — able to understand their roles in the “big picture” — nor capable of effectively communicating with users. The AMEDD must develop the ability to recognize when these reports serve valid and useful purposes and when they do not. When they serve a useful purpose, the full force of the motivated AMEDD acquisition staff should be turned loose on them. When they do not serve a useful purpose, they should be perfunctorily completed only if they cannot be totally ignored.

The AMEDD does not currently require of itself the strategic planning and management information reports necessary to make affordability determinations and timely trade-off decisions. We believe that the AMEDD must improve its market analysis and product testing capabilities precisely to provide that type of information. Additionally, the AMEDD must ensure that high levels of management are quickly made aware of instances in which the acquisition process is stymied by what seems to be a non-value-adding paperwork requirement. If the source of the requirement is beyond AMEDD control, dialog to clarify its purpose and a course of resolution can begin. If the problem cannot be resolved at a low level, dialog to assure that the requirement makes "good business sense" should occur at the level at which the AMEDD takes its "best shot," escalating the problem further if necessary. Follow through and recording of time saving challenges and precedents is also important. They will assist the AMEDD acquisition team in understanding the process and in expediting future acquisitions.
Characteristics of Successful Acquisition Projects

- Small, high-quality staffs
- Effective communications
  - User needs
  - Balanced tradeoffs
- Program stability
  - Baseline cost, schedule, performance
- Limited reporting requirements
  - Management by exception

- Better system development
  - R&D involved in prototyping
  - Nondevelopmental Items (NDI)
  - Systems
- Clear command channels
CHARACTERISTICS OF SUCCESSFUL ACQUISITION PROJECTS: BETTER SYSTEM DEVELOPMENT

In the Defense Management Report (DMR) of July 1989, "better system" development, covered two subtopics: research and development (R&D) and procurement policy. One theme of the R&D subtopic was that technology base R&D efforts should not be duplicated, at least not within DoD, and where avoidable, they should not be duplicated anywhere. We make a similar point in our report on NDI," not only should duplication be avoided in technology base programs, it should also be avoided in developmental programs. Every effort should be made to take advantage of developmental work already accomplished.

Another theme of the R&D subtopic was that, when developing new systems, R&D should be used to support early prototypes of systems and critical subsystems because decisions made early in a developmental effort have a disproportionately large influence on the cost of the final product. A poor start is hard to overcome. Sound decisions in the earliest stages of development are considered critical and should be supported by information gained from aggressive prototyping and testing. In our report on NDI, we recommended that NDI products be tested to assist the AMEDD in developing requirements and support strategies and in determining how best to make modifications when they are essential. Aggressive R&D medical equipment technology surveillance; product test and evaluation; and prototyping of equipment modifications and sets, kits, and outfits (SKO) would provide AMEDD nonmajor programs with what the Secretary of Defense believes can be provided to DoD major weapon system programs. It will also permit the expertise of medical R&D personnel to be brought to bear more heavily and earlier in the acquisition process.

The second subtopic, procurement policy, discussed reliance on commercially available products and "best value" contracting in a commercial contracting sense. In the DMR, the Secretary addressed legislation to simplify competitive contracting procedures. We considered the new commercial purchasing proposals in our report on NDI. While we generally endorse them, we feel that their politically controversial nature and the legislation required to adopt them makes their future somewhat questionable.

In addition to the two DMR subtopics, we believe AMEDD must consider one other system development issue in its acquisition efforts: the degree of integration of medical sets, kits, and outfits. The level of integration revolves around a series of questions: Is a medical equipment set merely a collection of NDIs representing a capability? Is it a highly integrated and engineered set of components — a system? Is a system the collection of many sets that provide the capability to accomplish a particular medical function? Is the laboratory set a system? Or are the laboratory, X-ray, and pharmacy sets collectively a "professional support services system"? Is the operating room a system? Or are the emergency medical treatment set, the pre- and post-operative ward sets, the operating room set, the intensive care ward set, and some part of the CMS set actually a "surgical care system"? The answers to these questions have far reaching implications. They affect the entire concept of how field medical systems are designed, evaluated, and integrated. They affect the cost of sets, their medical capability, their mobility (both strategic and tactical), and the acquisition strategy best suited to their fielding and sustainment. In order for medical acquisition to be successful, the AMEDD needs to take a fresh look at what it defines as a field medical "system," establish overall system design criteria, and define what it wants to get out of system integration. Acquisition programs that have been successful have relied on sound systems development.

*LMI Report AR806R2, op. cit.
The Organization for Medical Materiel Acquisition Management

Characteristics of Successful Acquisition Projects

- Small, high-quality staffs
- Effective communications
  - User needs
  - Balanced tradeoffs
- Program stability
  - Baseline cost, schedule, performance
- Limited reporting requirements
  - Management by exception
- Better system development
  - R&D involved in prototyping
  - Nondevelopmental Items (NDI)
  - Systems
- Clear command channels
CHARACTERISTICS OF SUCCESSFUL ACQUISITION PROJECTS:
CLEAR COMMAND CHANNELS

Clear command channels are important for successful acquisitions because they establish organizational and managerial responsibility for acquisition action and only with that responsibility can a manager be held accountable for results. Successful acquisition organizations avoid bureaucratic dilution of acquisition responsibility, authority, and accountability by preserving short, clear command channels.

We found that in AMEDD neither the command-and-control channels nor the acquisition channels are short or clear. By regulation The Surgeon General is the materiel developer, but the Commander of Health Services Command (HSC) is the combat developer. Neither take a hands-on management approach to these functions. Both discharge their responsibilities through subordinate organizational elements, and as lines of authority begin to lengthen, clarity and teamwork begin to erode. Responsibilities for materiel development and the selection of acquisition strategies, particularly NDI acquisition strategies, become cloudy. The role played by the ASD(HA) in combat and materiel developments and Joint Service standardization can further blur fundamental AMEDD relationships if that role is not completely understood and held to the limits for which originally set. Short, clear channels of authority are needed in AMEDD acquisition management.

To synthesize short, clear channels and the other characteristics of successful acquisition organizations, the AMEDD should look at the arrangement of organizational elements and responsibilities that will best allow it to demonstrate the characteristics of successful acquisition organizations.
The Organization for Medical Materiel Acquisition Management

Change Objectives

❖ To establish an acquisition management organization that:
  • Provides assignments that increase quality of AMEDD acquisition staff
  • Appropriately assigns and aligns acquisition responsibilities and functions
  • Focuses on high-priority user needs across the spectrum of health care missions
  • Defines and maintains project cost, schedule, and performance baselines
  • Tailors projects, manages by exception
  • Improves system development through earlier evaluation, testing, and integration of NDI
  • Clarifies channels of acquisition authority

❖ To implement the acquisition management organization using the principle of minimum disruption of existing command lines
CHANGE OBJECTIVES

In our first report, we found that the AMEDD designates or recognizes managers for all the parts of the acquisition process, but aside from the formulaic designation of The Surgeon General, it does not have a central acquisition manager. We concluded that the management pressure needed to meet objectives, resolve requirements questions, and hold to scheduled milestones was not applied. Acquisition performance suffered accordingly. We recommended that, as the first step in streamlining the acquisition process, The Surgeon General establish and assign a Deputy Surgeon General to manage the acquisition of medical materiel and that this responsibility not be further delegated. Discussions with AMEDD General Officers and our independent research strongly indicate that change is needed and is acceptable. Since AMEDD organizational status quo is not tolerable, the first issue then becomes the change objectives and the management organization that has a good chance of achieving those objectives. We believe the objectives shown in the facing chart should be adopted by AMEDD.

*LMI Report AR806R1, op. cit.*
The Organization for Medical Materiel Acquisition Management

Deputy Surgeon General for Acquisition [DSG(A)] Relationships With:

- Users
- Combat developer
- Materiel developer
- Programmer
- Logistician
DSG(A) RELATIONSHIPS LISTED

The second issue to consider is the amount of change necessary to define or improve the DSG(A)'s relationships with the personnel and organizations shown in the facing chart. The AMEDD needs to have these relationships demonstrate more of the characteristics of successful acquisition programs. We consider the relationship between the DSG(A) and users first.
The Organization for Medical Materiel Acquisition Management

The DSG(A)/User Relationship

- Secretary of the Army
  - Chief of Staff of the Army
    - The Surgeon General
      - DSG(A)
        - Medical R&D Command
        - Other Agencies
          - U.S. Army Japan
          - U.S. Army Pacific
            - Korea
            - Pacific
              - Army National Guard
                - State Military Units
        - U.S. Army Europe
          - Europe, Near East & North Africa
        - Eighth U.S. Army
          - Korea
- Forces Command
  - U.S. Army Health Services Command
    - U.S. Possessions & Territories
  - Active Army Field Units in U.S.
  - Reserve Units in U.S.
THE DSG(A)/USER RELATIONSHIP

The user is the acquisition system's customer, and without users, the AMEDD would not need an acquisition process. It is important for the AMEDD to recognize and understand its users. They are diverse, ranging from the infantryman who applies a bandage or uses a skin decontaminating kit — to the combat lifesaver, aid man, or medic who starts an intravenous injection — to the radiologist who reads a CT Scan — to the laboratory officer who examines a blood sample — to the surgeon who inserts a chest tube or performs a colostomy — and to the CINC who commands these individuals in a theater of operations.

The DSG(A) by virtue of training and experience, shares a clinical bond with most medical users. Both see most clinical performance requirements in the same way. Other requirements features such as field hardening are related to the clinical requirements in technically complex ways. It is important in these cases that the DSG(A) recognize trade-off relationships so that good decisions can be made. But most important is the user/supplier transaction. Users should be able to identify who is responsible for their acquisition support. If they don't recognize that, they are unlikely to relate well to the process.

Users are pictured in this organization chart in the Army major commands (MACOMs). They are in the fixed facilities and TDA hospitals of the HSC and the Table of Organization and Equipment (TOE) medical units of other major commands such as Forces Command (FORSCOM), 7th Army, 8th Army, and the Reserve Components. Improving the relationship with these different users means being more responsive to their needs (both new technology modernization and replacement of worn out equipment) and educating them about the strengths and weaknesses of the acquisition system that supports them. Efforts to improve communications are essential. Providing them with widely known and consistent points of contact to send their ideas and complaints to is the first place to start. Meaningful feedback is the second place. The feedback should reflect an awareness of the state-of-the-medical-equipment art to assure credibility. Such awareness depends on a thorough understanding of the medical marketplace and emerging medical research. Another area needing improved communications is explaining the trade-offs made during development and fielding of medical equipment so users can fully appreciate the capabilities and limitations of their equipment.
The Organization for Medical Materiel Acquisition Management

The DSG(A)/Combat Developer Relationship

- TRADOC
- HSC
  - Special Staff
  - AHS (Office of the Commandant)
    - Directorate of Force Integration and Propensity Coordination
      - Directorates of Support
      - Academy Brigade
      - Directorates of Evaluation & Standardization (DOES)
      - U.S. Army Medical Equipment & Optical School (USAMEOS)
        - U.S. Army Medical Department Board
      - Medical Field Service School (MFSS)
      - Directorate of Training & Doctrine (DOTD)
        - Resource Management Division
      - Aviation School
THE DSG(A)/COMBAT DEVELOPER RELATIONSHIP

The Commanding General, U.S. Army Health Services Command (CG, HSC) is the combat, doctrine, and training developer for the AMEDD. By Army regulation, the CG, HSC has delegated to the Commandant, AHS, the authority to carry out the responsibilities of combat developer, trainer, and operational or user tester for field medical materiel. The AHS, in turn, must perform these activities within guidelines set by the CG, TRADOC and Army health standards established by The Surgeon General (TSG).

To carry out the responsibilities we envision, the DSG(A) has to monitor and provide technical oversight, support, review, and approval of HSC’s and AHS’s combat development and their user testing, particularly as that development and testing relate to the acquisition of materiel requirements. The internal organization of the AHS indicates that the DSG(A) is vitally interested in its combat development activities. Training, organization, and doctrine are alternative solutions to the Concepts Based Requirements System (CBRS) and mission area analysis (MAA)-identified deficiencies. They have precedence over materiel solutions. How materiel requirements are formulated by the Director of Combat Developments (DCD) and how testing is done by the AMEDD Board are critical steps in the LCSMM. The equipment repository function of the AMEDD Board has an even more specific though no less critical role to play in market analysis. It is very important for the DSG(A) to be aware, understand, manage, and control these activities if he/she is to be held accountable for assuring that requirements are sound and shepherded through the force integration and fielding processes in a responsive manner. It is important that he/she understand both the hierarchical structure and acquisition process relationships if responsive support to the user is to be achieved.

The DSG(A) should manage combat development activities by using the method now used by OTSG to review and approve or disapprove materiel requirements (including any doctrinal, training, leader development, or organizational alternatives) but with a modification in the timing of events. This management opportunity occurs at or just prior to a Milestone Zero decision. In our report on NDI, we indicate that this point of OTSG control had proven insufficient because it failed to reveal weaknesses in requirements early enough. We explained that, at this point in the process, insufficient consideration was paid to acquisition risks, NDI alternatives, and coordinated financial programming. Because of these weaknesses, we recommended that coordinated Operational and Organizational (O&O) plans, market analysis, and proposed detailed acquisition strategies (supported by product evaluations when necessary) receive approval by the DSG(A) at Milestone Zero. The Milestone Zero decision should be a “go” or “no go” decision rather than the present passive approval based on the absence of any objections. In a “go” or “no go” situation, defense of the requirement would necessarily be more rigorous. As the acquisition process currently operates, market analysis, acquisition strategy decisions, and requirements documents are not, at the very beginning of the LCSMM, coherently integrated. As the relationship now stands, the combat developer is not, to users, the readily identifiable source of acquisition support that the DSG(A) would be. The combat developer simply provides the requirement piece of the acquisition process and mediates acquisition matters with TRADOC.

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The Organization for Medical Materiel Acquisition Management

The DSG(A)/Materiel Developer Relationship

[Diagram showing the organizational structure with various departments and agencies connected through hierarchical relationships.]

- Army Materiel Command
- Training and Doctrine Command
- Health Services Command
- Medical R&D Command
- Defense Medical Standardization Board
- Defense Logistics Agency
- Defense Personnel Support Center
- Medical Directorate

- U.S. Army Medical Materiel Agency
- U.S. Army Medical Research Acquisition Activity
- U.S. Army Medical Material Development Activity

- Academy of Health Sciences
- Director of Combat Development
- Army Medical Department Board

- Materiel development responsibilities

- Under Secretary of Defense (Acquisition)
- Assistant Secretary of Defense (Health Affairs)
- Department of Defense
- DA
- The Surgeon General

- Program Executive Officers
- Program Managers

- [Box]
THE DSG(A)/MATERIEL DEVELOPER RELATIONSHIP

The Surgeon General is responsible for development, policy direction, organization, and overall management of an integrated Army-wide health services system. To discharge the responsibilities inherent in the materiel development part of his job, TSG delegates the authority for carrying out specific events within the materiel acquisition process to specific agencies. The extent to which specific responsibilities have been delegated is not exactly clear nor is the formality of their designation.

To whom materiel development authority has been delegated depends on the item of materiel at issue. OTSG reviews and approves requirements documents from the combat developer (AHS) and mission assignee agency (USAMMA) for NDI and medical equipment sets. (The presumption being that medical equipment sets are a collection of NDI, a presumption with which we do not necessarily agree.) OTSG also reviews requirements documents from the combat developer (AHS) and the materiel developer (USAMRDC) for all other items, mainly developmental items where, often, the requirement has been identified by a researcher.

While it is easy to identify an item as a medical equipment set, it is frequently difficult for the combat developer to know when an item should be developmental or when it should be NDI. In fact, the NDI decision, including the need to modify a commercial product, is probably the single most technical, difficult, and significant acquisition decision in the life cycle of any medical equipment item. Because the current review and approval procedure separates developmental and NDI requirements early in the process, the important developmental, NDI, NDI modification decision cannot receive the level of attention it deserves. We believe that many acquisition problems, delays, and "surprises" are the manifestation of this procedural weakness.

Determining the way to process a requirements document should not force a premature acquisition strategy decision. Instead, review and approval of the requirement should depend, in major part, on a thoroughly coordinated, proposed acquisition strategy. At present, the acquisition strategy is developed prematurely and incompletely in order to begin processing the requirement for approval. As a consequence, the approval of any requirement is based upon incomplete and poorly coordinated planning. This inappropriate "shortcut," meant to save acquisition time, turns out frequently to be the source of delay, hinders teamwork, and causes most acquisition "turf" issues.

We believe that the acquisition strategy is an integral and critical part of the requirement approval. Because of the criticality of the acquisition strategy, the procedural weakness we have just described should be corrected. We believe the DSG(A), representing and exercising a consolidation of previously vague delegations of authority, should require, prior to Milestone Zero, a thorough evaluation of alternative acquisition strategies. This will necessitate that the DSG(A) rather than the combat developer make the acquisition strategy decision. It will also necessitate a
valid comparison between strategies. This will require involvement of all players (AHS, USAMMA, and MRDC/USAMMDA) on all requirements. The splitting of responsibilities between the materiel developer and mission assignee according to a prematurely selected acquisition strategy should be eliminated. The DSG(A) must assure that USAMMDA is not allowed to take an exorbitant amount of time with a requirement. Further, the DSG(A) should not permit USAMMA to take excessive ND1 acquisition risks when it receives a requirement for procurement. If necessary, direct product evaluations and testing can clarify and resolve differences.

In anticipation of new technologies and to prepare an acquisition strategy decision, the DSG(A) can require market surveillance of selected technologies under development in the medical marketplace. That surveillance can anticipate tough acquisition strategy decisions and begin the accumulation of information that will be needed. More coordinated relationships between the RDTE and procurement programs will result. In this way, data for meaningful decisions about whether to skip or not to skip certain acquisition process tasks will become more apparent. The relationship between the DSG(A) and the materiel developer (and all other players for that matter) will be clarified.
THE DSG(A)/PROGRAMMER RELATIONSHIP

Programming, like the acquisition strategy decision, does not receive the attention or coordination it deserves even though the types of funding that result are critical to the successful fielding of a materiel requirement. When devising an acquisition strategy or planning materiel fielding, a prime consideration is to ensure enough of the right types of dollar resources are programmed. The purpose of such programming is to earmark or allocate, from "pools" of scarce funds, the various types of dollar resources needed to meet planned materiel funding goals and objectives. The RDTE, procurement, operations and maintenance (O&M), and military construction (MILCON) appropriations are examples of resource "pools."

When planning to field a developmental item, it may be necessary to program or earmark RDTE, procurement, and O&M funds in varying amounts. In extremely large programs, it could even be necessary to program for increased personnel, both military and civilian, and MILCON. The amount of funds available in each resource "pool" is the funding "top line." "Top line" funding changes when Congress, DoD, or DA change the allocation of funds. Changes in one appropriation may affect requirements in other appropriations. In such situations, funding coordination within programs may be "broken" placing fielding objectives in jeopardy. It is, in part, to this phenomenon that the Secretary of Defense refers when he discusses funding stability. The DSG(A)'s vision and direction are absolutely essential in the allocation, reallocation, and coordination of programmed funding among various appropriations, programs, program elements, and projects. The DSG(A) should be heavily involved in the "what if" programming and budget exercises that occur within the staff and the DA. These exercises require "financial contingency planning." Otherwise, dollar resource adjustments are made from a limited perspective and that may not best support AMEDD materiel fielding objectives and priorities.

In addition to his involvement in the allocation and coordination of scarce resources of varying types, the DSG(A) also needs to be involved in setting AMEDD programming policy. The degree of centralized OTSG programming that occurs is an important issue. For example, the DSG(A) should be familiar with the AMEDD equipment unit price threshold and its acquisition implications. This threshold, currently $15,000, is used to determine when medical equipment is eligible for OTSG centrally programmed procurement appropriation funding or when the equipment must be purchased at the MEDDAC or MEDCEN level using command operating funds. For field medical equipment, centralized programming has numerous implications for readiness that require extensive coordination. In the case of developmental items and increasingly in the case of NDI undergoing testing, policies involving such issues as dollar thresholds and the criteria for centralized programming play critical roles in forming detailed acquisition strategies.

We believe programming aspects of the acquisition strategies require coordination across the entire range of appropriations and program elements. Technology base funds may be necessary for technology surveillance and market analysis and market analysis. Exploratory development and advanced development funding
might, through testing and prototyping, provide essential information necessary for sound acquisition strategy decisions. Where developmental strategies are chosen, the necessary P6.3B and P6.4 funding must be available. Procurement funding is necessary to support equipment production and purchase through either developmental or nondevelopmental strategies. Its availability must be timed to dovetail with the completion of developmental programs or the delivery lead times required for NDI strategies. O&M funding must be made available to provide the training, operating supplies, and maintenance support for newly fielded equipment. Funding for operational testing must be sufficient to provide timely support.

Should centralized programming and decentralized program execution be desired, it could be necessary to "fence" funding for funds or use those received from OTSG through financial channels, specified purposes. When users are expected to provide their own funds or use those received from OTSG through financial channels, they should be given appropriate program and budget guidance. The same applies when users are expected to maintain products they are to receive. These issues are associated with acquisition strategies. The DSG(A) would ensure these programs were coordinated and AMEDD programming and budget policy both supported and controlled the acquisition program. In these ways, the DSG(A) would be in an ideal position to weigh in on affordability and financial program stability issues and exercise effective financial control and shepherding of scarce health care resources. The appropriations under the stewardship of the DSG(A) could be more effectively coordinated with those O&M resources programmed and budgeted for operating health care facilities (P8M). We believe that the AMEDD would realize greater purchasing power for a given level of funding with DSG(A) coordinated programs.
The Organization for Medical Materiel Acquisition Management

The DSG(A)/Logistician Relationship

Department of Defense
- Under Secretary of Defense (Acquisition)
  - Assistant Secretary of Defense (Health Affairs)
    - DA
      - The Surgeon General
      - DSG(A)
        - Defense Medical Standardization Board
          - Defense Logistics Agency
            - Defense Personnel Support Center
              - Medical Directorate

Army Acquisition Executive
- Army Materiel Command
  - Program Executive Officers
    - Program Managers
  - Training and Doctrine Command
  - Health Services Command
    - Academy of Health Sciences
      - Director of Combat Development
        - Army Medical Department Board
  - Medical R&D Command
    - U.S. Army Medical Materiel Development Activity
      - U.S. Army Biomedical R&D Laboratory
        - U.S. Army Medical Research Acquisition Activity

☐ Logistical responsibilities
THE DSG(A)/LOGISTICIAN RELATIONSHIP

We envision a DSG(A) logistician relationship different than the present day TSG and USAMMA relationship. In the envisioned relationship, USAMMA would execute sustaining system support planning, procurement sourcing, requisitioning, and fielding programs. Both developmental and NDI acquisition programs would be transferred to USAMMA for procurement and fielding. USAMMA would receive [on fund authorization documents (FADs)], commit, obligate, control, and disperse the OPA, O&M, Army (OMA), and stock funds associated with those programs. The DSG(A)'s overall management of the AMEDD acquisition program should assure more effectively planned requirements and more properly aligned financial resourcing. USAMMA logistics support analyses and integrated logistics support functions would continue to be required as would materiel fielding planning. However, those functions would be supported by more comprehensive policy guidance from the DSG(A)/OTSG staff. USAMMA's sustaining system support requirements are essential for extensive and earlier product evaluation and testing.
Deputy Surgeon General for Research & Acquisition [DSG(R&A)]

Acquisition process oversight

Requirements
- Institutes of Research
- Clinical Investigation Services

Research

Program & Budget
- MRDC
- DASG-HCL
- Others

Development
- USAMMDA/USABRDL

Test & Evaluation
- DCD, AHS
  (User evaluation criteria)
- AMEDD BD
  (User test)
- USABRDL
  (Product testing/essential product improvement design)
- USAMMA
  (Support system capability)

Fielding & Sustaining
- USAMMA
  DPSC

DCD, AHS
CBRS requirements identification from how-to-fight/how-to-support analysis; tasks research or development for (time-phased) materiel solutions

User
Performance-based requirements identification from experience with medical treatment capability during peacetime, wartime, training operations; consultants, field users, experts; tasks DCD for (time-phased) materiel solutions/improvements
DSG(R&A)

In the facing chart, we combine hierarchical and acquisition process relationships as a means of summarizing the relationships we have been discussing in the previous four charts.

In this chart, we modify the recommendation in our earlier report that TSG establish and assign a DSG(A) to manage the acquisition of medical materiel.* We continue to believe the assignment of this responsibility to a single individual is critical to successful medical acquisition. However, in our report on establishing a preference for nondevelopmental items, we identify a significant role for the AMEDD's R&D activities and we consider the DSG(A) might be more appropriately titled the Deputy Surgeon General for Research and Acquisition [DSG(R&A)].† We now believe that the new position should be established as the DSG(R&A) rather than DSG(A). That title and concomitant responsibilities will help set and maintain the relationships we believe are necessary for successful acquisition and will minimize organizational turbulence during implementation. Consistent with this revised designation, we also believe that the currently designated position of Assistant Surgeon General for Research and Development [ASG(R&D)] should be converted to Deputy Surgeon General for Research and Acquisition. In the facing chart, we reflect the revised recommended title and the major functions and process responsibilities the DSG(R&A) should be expected to assume. We believe that the new DSG(R&A) would eventually no longer function as the Commander of the Medical Research and Development Command.

Briefly, the newly established DSG(R&A) would be given oversight of the complete range of medical research and acquisition responsibilities, including a requirements identification process that balances medical state-of-the-art and standardization, ensures an opportunity for responsible input from experienced field and clinical personnel, and provides for a continual flow of equipment modernization ideas. Those responsibilities also include a broadened research horizon that encompasses clinical investigation and the technology base coordination; integrated and coordinated programming and budgeting; consolidated materiel development having a strong preference for NDI yet capable of responsive NDI modification and NDI risk abatement; test and evaluation activities meant to supply the processes they support both information for decision making and assurance of conformance to standards and specifications; and, finally, a responsive fielding and sustaining support structure. Assignment of responsibilities in this way clarifies acquisition channel authorities and supports better system development while facilitating other successful acquisition behaviors. It permits, under one responsible official, oversight (not necessarily command control) of the entire acquisition process in its broadest possible sense. The “mission” of the DSG(R&A) can be viewed in other ways; we briefly examine three of them on the following pages.

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*LMJ Report AR806R1, op.cit.
†LMJ Report AR806R2, op.cit.
The Organization for Medical Materiel Acquisition Management

A Management View

DSG(R&A)

<table>
<thead>
<tr>
<th>Research</th>
<th>Acquisition</th>
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<td>Research institutes</td>
<td>Combat developer</td>
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<td>Clinical investigation services</td>
<td>AMEDD Board</td>
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<td>DASG-HCL</td>
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A MANAGEMENT VIEW: DSG(R&A)

The management view suggests two interdependent DSG(R&A) missions: research and acquisition. It aligns organizations according to their primary acquisition missions. The research side of the organization attempts to anticipate needs and identify responsive and practical solutions. Often those solutions might include clinically acceptable technologies becoming or already available. The research side has an opportunistic and long-term perspective. It identifies the ideal.

The acquisition side identifies solutions using a shorter term approach. Its goal is to solve problems quickly in a way that overcomes deficiencies but that does not necessarily always provide a significant expansion in patient care capability. For the total organization to be most effective, ideas must be shared, activities must be coordinated, and communications must flow freely. Isolation of either side from the other for any significant time wastes synergisms that should be exploited. The central role of the DSG(R&A) is to ensure effective communications and coordinated performance.
An Organization Function View

DSG(R&A): Commander, Medical R&D Command

Combat developer: DCD and Health Care Studies, AHS, HSC

User: Medical units in the field; MEDDAC and MEDCEN staffs; and consultants, Services, operations and logistics experts

Researcher: Research Institutes; Clinical Investigation Services

Materiel developer: USAMMDA, USABRDL (-), and AMEDD Board (-)

Logistician: DASG-HCL, USAMMA, DPSC, and USAMRAA
AN ORGANIZATION FUNCTION VIEW

The organization function view divides duties into those familiar to the Army acquisition community: the combat developer, the user, the researcher, the materiel developer, and the logistician. The various AMEDD acquisition organizations lineup according to their classical acquisition functional roles. The DSG(R&A) plays a central coordinating role without necessarily commanding, supervising, or rating all of the key players.
A Responsibilities View

DSG(R&A): Oversight, requirements validation, and decision authority

Combat developer/user: Requirements and potential materiel solutions; user testing and evaluation

Researcher: Potential technology base solutions to the requirements, technology surveillance, and clinical research and evaluation

Materiel developer: Market investigation and analysis; product technical test and evaluation; product information repository; product modification prototype, test, and evaluation; and RDTE PPBES

Logistician: Sustaining support system planning, testing, and evaluation; PA, SF, and OMA PPBES; contracting and fielding
A RESPONSIBILITIES VIEW

This view aligns the classic acquisition functions with their associated mission responsibilities. The key role for the DSG(R&A) from this perspective is to ensure the lines separating responsibilities have extremely fine "seams." Combat developers, professors, and users must communicate smoothly and with purpose. Engineering, contracting, and distribution duties must be discharged in a coordinated way. No matter which view is preferred, the following recommendations, together with those we have previously made, should serve to provide the AMEDD with an acquisition organization that is more responsive, effective, and efficient — one that is all that it can be.
The Organization for Medical Materiel Acquisition Management

Recommendations

The AMEDD should assign the DSG(R&A) responsibility for establishing relationships with the following entities:

- The user. This relationship should pinpoint where information is available to enhance and understand DSG(R&A) capability.
- The combat developer (CG, HSC/CMDT, AHS). This relationship should do the following:
  - Improve direct communication with DCD and AMEDD BD on acquisition matters
  - Increase objectivity and balance in the combat development input to Milestone Zero decisions in the following ways:
    - Increased use of models
    - Increased recognition of affordability and tradeoffs
    - Better IOC/acquisition process linkage
    - Improved consideration of NDI
    - Liberal tasking for product evaluation, test, and modification
RECOMMENDATIONS

We recommend that the AMEDD establish the DSG(R&A) and assign that office the responsibility for AMEDD acquisition performance. To fulfill this responsibility, the DSG(R&A) should establish the relationships we describe in this briefing and our other reports.

The relationship with users should enhance communications, increase understanding of dual missions and acquisition processes, and encourage the free flow of ideas. To do this, the DSG(R&A) will need more direct access to the combat developer and will need to increase objectivity and balance in AMEDD materiel requirements so that the likelihood of successful delivery is increased. The combat developer needs analytical models to support the materiel requirements. Those models and integrated financial management should provide much needed input to affordability and trade-off decisions. Better linkage between the acquisition process and the initial operating capability (IOC) target will permit greater stability in programs from their onset. Effective developmental item/NDI acquisition strategy decisions will save acquisition lead time. Greater consideration of NDI solutions can be made using information obtained through good market analysis supported by good product evaluations, good testing, and good design of modifications.
The Organization for Medical Materiel Acquisition Management

Recommendations (continued)

- The DSG(R&A) should establish relationships with the following entities:
  - Materiel developer. This relationship should do the following:
    - Eliminate designation of mission assignee for SKO, NDI
    - Improve materiel development input to Milestone Zero decision in the following ways:
      - More effective coordination of project management plans
      - Increased use of prototype test data
      - Improved technology surveillance
      - Improved input from experienced personnel
  - Programmers. This relationship should do the following:
    - Improve coordination among financial programs
    - Clarify programming responsibilities and policies
  - Logisticians. This relationship should enhance support system planning and execution.

- AMEDD should implement DSG (R&A) relationships in AR 40-60, AR 40-61, AR 70-1, and the Medical Materiel Acquisition Management Handbook.
RECOMMENDATIONS (Continued)

We believe sound Milestone Zero decisions are absolutely dependent on the elimination of the organizational and procedural distinction caused by the mission assignee being an ad hoc materiel developer for SKO and NDI. One materiel developer, conducting a full range of pre-Milestone Zero analyses, will give the DSG(R&A) much better information for the developmental item/NDI decision.

We believe that an effective relationship with financial programmers will improve coordination among their programs and extract greater value from the dollars spent in the acquisition process. We also believe that the DSG(R&A) will find that setting clear AMEDD policies for programming and budgeting responsibilities will provide him management information essential to timely and effective execution of AMEDD acquisition program. The DSG(R&A)'s relationship with the logistician has a direct bearing on the effectiveness of supply and maintenance system planning and execution.

To ensure the relationships are formally established and visible to the whole AMEDD community, we recommend they be included in the publications listed.
The Organization for Medical Materiel Acquisition Management

Change Objectives

To establish an acquisition management organization that:
- Provides assignments that increase quality of AMEDD acquisition staff
- Appropriately assigns and aligns acquisition responsibilities and functions
- Focuses on high-priority user needs across the spectrum of health care missions
- Defines and maintains project cost, schedule, and performance baselines
- Tailors projects, manages by exception
- Improves system development through earlier evaluation, testing, and integration of NDI
- Clarifies channels of acquisition authority

To implement the acquisition management organization using the principle of minimum disruption of existing command lines
CHANGE OBJECTIVES

By way of review, we repeat the change objectives we presented earlier. We begin by indicating that change is necessary.

Change starts with consolidating AMEDD acquisition responsibility and authority in a single individual, a single focal point – the DSG(R&A). The DSG(R&A) will have a very large job but will have direct access to all resources currently used in the acquisition process. Whether to increase, decrease, or orchestrate these resources poses the same problem it does today except the problem is more visible.

We believe the AMEDD needs to build an acquisition management organization that achieves the change objectives shown in the facing chart. The following pages present a review of the change objectives to gauge the extent to which they have been met.

Provides assignments that increase quality of AMEDD acquisition staff

We feel the acquisition management organization has assignment billets that provide training, responsibility, and experience levels for each of the major acquisition functions: combat development, materiel development, and wholesale level logistics. We have not proposed increases in staff size to do this. As experience is gained with DSG(R&A) management, qualitative staff needs will become more evident. With this information, the DSG(R&A) staff will be able to develop balanced “career tracks” essential to achieve staff quality. Current DA implementation of the acquisition corps may serve as a valuable reference. Civilians can provide continuity where it is most critical.

Appropriately assigns and aligns acquisition responsibilities and functions

We recommend several changes that are responsive to this objective. We recommend that the present position of ASG(R&D) be revised to the DSG(R&A) and that overall acquisition management responsibility be assigned to the DSG(R&A) and not delegated. We further recommend the following:

- Direct communication between the DSG(R&A) and DCD be authorized
- Designation of mission assignee for SKO and NDI be eliminated
- The repository of medical equipment product information be transferred from the AMEDD Board to USAMMDA
- Technical and user testing capabilities in the AMEDD Board and the USABRD be used in support of go/no-go Milestone Zero decisions.

In addition to these significant recommendations, we believe that other adjustments in policies, procedures, and practices will follow as opportunities to avoid non-value-adding acquisition steps are recognized in specific cases.
CHANGE OBJECTIVES (Continued)

Focuses on high-priority user needs across the spectrum of health care missions

The relationships between the DSG(R&A) and users (including MEDDAC and MEDCEN users), programmers, and those responsible for market surveillance and analysis (researchers, USAMMDA, and the combat developer) enhance the ability to "see" requirements more clearly across the dual AMEDD health care missions. Establishing a DSG(R&A) creates an opportunity for strategic planning that acknowledges user needs and establishes priorities for those needs. DSG(R&A)'s control of the acquisition process can enhance its responsiveness and flexibility and ensure due consideration is given to balancing modernization and technology advancement.

Defines and maintains project cost, schedule, and performance baselines

We believe the search for cost, schedule, and performance baselines (standards) is at the heart of the AMEDD's pursuit of ways to streamline the acquisition process. When baselines are not firmly established, the organizational commitment to results is lost. Fixing acquisition responsibility on the DSG(R&A) will bring organizational commitment. The DSG(R&A)'s role at the critical Milestone Zero decision (go/no-go) will motivate the combat developer, materiel developer, and logistician to work closer together to establish solid, achievable baselines. Difficult trade-offs will surface more quickly for resolution. Project cost, schedule, and performance baselines and a tight management network to keep them current will become aids to management rather than bureaucratic obstacles.

Tailors projects, manages by exception

The acquisition team, under the DSG(R&A)'s direction, will find ways to meet or exceed project baselines by more conscious tailoring of LCSMM and quicker resolution of exceptions. Results, not processes, will become more important. The primary focus on project tasks is how they will contribute to meeting realistic goals and not on who requires they be done. Top management intervenes only in those cases where it is most effective and important.

Improves system development through earlier evaluation, testing, and integration of NDI

The cumulative effect of the changes we recommend is to focus on the commercial marketplace as the first source of materiel solutions to medical equipment capability deficiencies. Only when all other alternatives to materiel solutions are exhausted and only when the risks of NDI or NDI modification clearly exceed tolerable levels should in-house development be considered. We believe the alignment of functions and responsibilities provides for a fully informed acquisition strategy decision, with the inputs to that decision coming from early testing and evaluation results. The changes also offer a much better opportunity to use the research base capabilities to aid in system integration and development.
CHANGE OBJECTIVES (Continued)

Clarifies channels of acquisition authority

The relationships we recommend clarify acquisition authorities and responsibilities. They do so instantly with the establishment of the DSG(R&A). They also clarify responsibility by consolidating official and ad hoc materiel development actions into one organization. The users have a recognizable and authoritative acquisition manager to communicate with. Communications among acquisition team participants are improved by “elevating” the combat developer to an organizational level equivalent to that of the materiel developer and logistician counterparts. The relationships permit more effective financial coordination and foster consistent programming responsibilities and policies.

The relationships to be attained by adopting our recommendations can be achieved with minimal disruption of current operations.
Streamlining Summary

Primary action
Central direction: DSG oversight, decision authority, resource allocation influence

CBRS + Consultant + Technology Push + User

Better requirements: DSG challenges, integrates, and balances new technology, modernization, and affordability

NDI preference: Technology surveillance, product testing and evaluation, modification, and planned improvement; limit equipage strategy; and pre-Milestone Zero CEP and testing

Organize for success: Emulate success characteristics

Secondary action
Eliminate nonaccountable, disruptive behavior: Responsible input to acquisition process and avoid development via production contract

Flexibility for the future: Anticipates consolidations and command realignments; AMEDD controls its acquisition destiny
STREAMLINING SUMMARY

From the outset, we were aware of the complexity of this study of the acquisition process. We were convinced that the medical materiel acquisition process could operate more efficiently if streamlined by removing frictions and gaps and if enough pressure were kept on the process to force trade-off decisions and overcome delays. The LCSMM craves information and sets rigid milestones to control progress, and most complexity is due to satisfying those needs. If, however, acquisition team members have a level of trust, confidence, and common purpose among themselves, the process can work. We believe that the process will not only work but will work in a streamlined fashion when the following conditions are met:

- Central direction and top-level oversight, decision making, resource balancing, and allocation are provided.
- Good requirements are defined, challenged, and integrated with modernization and new technology initiatives and evaluated early for affordability.

- NDI becomes the preferred acquisition strategy, and the full power of the AMEDD's technical capability is used to survey the industry, test and evaluate products in various patient care environments, and provide the input for the critical Milestone Zero go/no-go decision.

- An organization is established with the characteristics of success we have described.

We also believe there are secondary actions that can contribute to the streamlining effort. The well intentioned but often disruptive and nonaccountable behavior of experts and consultants can be turned into committed and accountable participation. The quasi-materiel development request for proposals (RFPs) and generic production contracts that invariably cause delay and formal protests can be minimized if not totally eliminated. Additionally, the organizational relationships position the AMEDD for the future and let it control its own acquisition destiny.
The Organization for Medical Materiel Acquisition Management

Command and Control Structure

- TSG
- DSG(R&A)
  - Plans, Programs & Budget Office
    - Medical R&D Command
    - Directorate of Combat Dev.
    - U.S. Army Medical Materiel Agency
    - AMEDD BD
  - Directorate of Logistics
  - Directorate of Personnel & Training
- DSG(P,T&O)
  - Directorate of Health Services
  - AEHA
  - ASG Dental
    - Office of CH, MC
      - VC
      - ANC
      - AMSC
      - MSC

- Health Service Region
- Health Service Region
- Health Service Region
- Health Service Region
COMMAND AND CONTROL STRUCTURE

The AMEDD needs to be concerned about the future of its acquisition process. The acquisition management organization we have recommended can get lost in the reorganization struggles that are currently underway and the sometimes-short-sighted turf battles that are due to be fought. The DMR consolidations, the Consolidation of Forces in Europe (CFE) Treaty, the LAB 21 Initiative, and the Army Strategic Logistics Plan are driving reorganization decisions. The 1987 AMEDD command and control study will have an influence on any AMEDD reorganization. We do not believe that study reflects the need for a centrally directed, well-coordinated acquisition management process.

The 1987 AMEDD command and control study identified seven weaknesses in the AMEDD's command and control structure:

1. TSG's authority is not commensurate with its responsibility.
2. Unclear lines of authority exist.
3. Functions are duplicated.
4. Span of control is too broad.
5. Strategic planning is inadequate.
6. Programming for resources is inadequate.
7. The Academy of Health Sciences (AHS) and the Environmental Hygiene Agency under HSC are maligned.

The reorganization that the 1987 study recommended (but which was never approved for implementation) featured TSG as the commander of the CONUS health service system, responsible and accountable for it. While that study extensively addressed command and control and very little acquisition management, if it had been implemented, it would have facilitated the establishment of the DSG(R&A) by moving the acquisition lines of authority to the AHS and to some users (those currently in HSC's MEDDACs and MEDCENs) closer to those of the command lines. Such lines would then be more direct, congruent, and presumably, more easily understood.

The organization we present here includes features of the AMEDD command and control study and results in TSG control of three major elements: a DSG for Personnel, Training and Operations; the existing CONUS health-care establishment in a regional configuration; and the DSG for Research and Acquisition. Although we show a rather complete management structure, we are primarily concerned with the DSG(R&A) part. It brings together the organization, management, and roles and responsibilities views we described earlier and places them all under the direct supervision of the DSG(R&A). Between them, the DSGs oversee the organizations that make up the realigned OTSG and its associated Field Operating Agencies (FOAs). We have not attempted a quantitative analysis of this organization structure. AMEDD command and control study recommendations were based on subjective factors. We do the same; but our subjectivity is hardened by recent acquisition management experience – both those of the AMEDD and those of the larger, DoD acquisition system. The PM, PEO, SAE, USD(A) chain of authority was not readily acknowledged when first recommended, but it is prevailing as the channel of authority for major acquisitions. We recognize some might disagree with the DSG(R&A)'s chain of authority. However, we believe those disagreements will center around turf and cultural issues and that they can be overcome. To do so, the AMEDD leaders must commit to strong, central direction and planning and have a willingness to set the AMEDD on a course of continuous improvement.
**Report Title:** Streamlining the Medical Materiel Acquisition Process: Organizing for Success

**Personal Author(s):** George L. Slyman, Gilbert L. Goldman

**Type of Report:** Final

**Date of Report:** August 1990

**Page Count:** 71

**Abstract:**

The Army Medical Department (AMEDD) can improve acquisition management by effectively integrating the efforts of the organizations participating in the process. One step in that direction is to establish a Deputy Surgeon General for Acquisition (DSG(A)) to provide the central direction, control, and decision authority. That step is only the first; the current AMEDD organizational structure must also be changed. The changes should clarify and improve relationships between acquisition process participants - the DSG(A), user, combat developer, materiel developer, and logistician.

Our analysis of relationships reveals a role for the medical research community, and we include that role in the acquisition process. We acknowledge its participation by modifying our initial recommendation for a DSG(A) to a recommendation that the AMEDD establish a Deputy Surgeon General for Research and Acquisition (DSG(R&A)).

Successful acquisition projects display certain characteristics. Correctly realigning roles and responsibilities and restructuring relationships can produce organizations that demonstrate those characteristics. Such organizations have small, well-trained, and experienced staffs that communicate effectively; execute a stable program committed to the requirements; report value adding information; operate in short, clear command channels; and focus on improving system development efforts through more R&D involvement in nondevelopmental item acquisition strategies.
19. Abstract (continued)

The characteristics of success can be embedded in a new acquisition management process if changes: (1) focus organization design on achieving particular objectives and, (2) clarify responsibilities of acquisition process participants.

The new organizational structure should focus design to:
- Provide assignment patterns to increase staff quality
- Align and assign responsibilities appropriately
- Focus on the user's highest priority needs
- Define and maintain resource and performance baselines
- Manage by exception
- Validate a preference for nondevelopmental item acquisition strategies
- Clarify channels of authority.

To establish a successful acquisition organization, we recommend a structure headed by the DSG(R&A) to provide oversight, validate requirements, and exercise decision authority. Additionally, we recommend the DSG(R&A) align responsibilities and relationships as follows:
- The user and combat developer provide materiel requirements, nominate potential materiel solutions, and perform user testing and evaluation.
- The researcher surveys technology for potential technology base solutions to requirements and performs clinical research and evaluation.
- The materiel developer conducts market investigations and maintains a repository for product information, performs technical testing and evaluation, develops product modification prototypes, and manages the development and test funding program.
- The logistician plans, tests, and evaluates the sustaining system; manages procurement, revolving, and operations fund programs; and provides contracting and fielding support.

The organization for medical acquisition management that we recommend is one that can be successful. It is an organization with strong central direction, capable of providing better requirements, showing a preference for nondevelopmental items, and structured to emulate the characteristics of success. Most of all, it places the Army Medical Department fully in control of its own acquisition destiny.