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Centers for Medicare & Medicaid
Services

Special Study

**Identification and Synthesis of
Components Essential to Achieving
"High Performer" Status in Various
Provider Types**

Final Report (Approved)

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Prior to his death on February 18, 2005, Carter L. Marshall, MD, MPH, was the physician lead for the CMS Special Study described in this report, *Identification and Synthesis of Components Essential to Achieving “High Performer” Status in Various Provider Types*. He was instrumental in the design of this study, and his ongoing mentoring and support played a vital role in the project’s success.

Dr. Marshall served Health Services Advisory Group (HSAG) in many capacities after joining the staff in 1990—most recently as the Vice President of Clinical Quality Assessment. During his 15 years of service, Dr. Marshall improved the quality of care provided to Medicare beneficiaries and other patients through his involvement with many HSAG projects. These projects included:

- Improving Diabetes Management in Managed Care.
- Investigating and Improving Coronary Artery Bypass Graft Surgery and Survival.
- Reducing Radical Prostatectomy in Elderly Males.
- CMS Hospital Public Reporting Three-State Pilot.

“Dr. Marshall’s experience and great wealth of knowledge were tremendous assets to HSAG,” said Herb Rigberg, MD, HSAG CEO. “We could always count on him to quickly see to the heart of any problem and to devise practical solutions. Carter was a friend and a colleague whose spirit will always be with us.” This sentiment was echoed by Suzanne Powell, RN, BSN, MBA, HSAG Director of Acute Care Programs, who said, “Dr. Marshall not only gave brilliance and foresight to all the projects he touched at HSAG, he also touched the hearts of all those who knew him. The lives of Medicare beneficiaries and of his friends are better for having known him. He will not be forgotten.”

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A. Overview

The High Performers Special Study (HPSS) was conducted by Health Services Advisory Group, Inc.(HSAG), under contract with the Centers for Medicare & Medicaid Services (CMS). The overall goal of the study was to develop and implement a scientifically sound methodology to define and identify high-performing hospitals and those quality improvement practices, characteristics, and attributes that distinguish high performers (HPs) from non-high performers (NHPs).

A quantitative algorithm (the Medicare High Performers Algorithm-Hospital [MHPA-H]) was developed and applied to a national dataset of CMS quality indicators for the period from July 2003 through June 2004. The algorithm measured each hospital's overall quality of care delivered to patients with acute myocardial infarction (AMI), heart failure (HF), and pneumonia (PN) to categorize hospitals as HPs or NHPs. The top six HPs nationwide were matched at the state level with six NHPs to identify similarities and differences in their QI activities through qualitative research. The Silvey Organizational Momentum Assessment Scale (MAS) was applied to the qualitative data to objectively measure the momentum (level of effort and commitment to clinical quality improvement) demonstrated by the leadership of each hospital. Quality Improvement Organizations (QIOs) and others can use the findings from the HPSS to support health care providers in achieving high performance.

Key Findings

Hospitals have not achieved overall excellence in providing care for AMI, HF, and PN patients. Using the MHPA-H, out of 36 possible points, no hospital exceeded 24 points, and fewer than 1 percent of 3,867 hospitals nationwide scored 16 points or higher.

Five core characteristics related to QI culture, technology, responsibilities, priorities, and targets were identified that, when combined in various ways, suggest four common QI models of HPs.

Individual HPs demonstrated 60 percent to 100 percent of these core characteristics, while only 0 percent to 60 percent of these core characteristics were demonstrated by individual NHPs.

The patterns of core characteristics observed among all HPs strongly suggests that high performance may be driven by either culture or technology, not necessarily both, as long as the QI responsibilities for program implementation and priority setting are clearly delineated at the leadership level.

Twelve basic change ideas were identified that were common to both HPs and NHPs that appear necessary, but not sufficient, for high performance.

Nine high-leverage change ideas were identified that appear to drive high performance and further distinguished between HPs and NHPs.

B. Study Approach

Quantitative: Representatives from CMS, QIOs, and the health care community guided the development of the MHPA-H to ensure widespread acceptance of the methodology. The following guidelines were established and utilized to construct the algorithm:

- Focus on clinical performance only
- Consider more than one clinical condition
- Consider both relative and absolute performance
- Consider sustained high performance over at least two time periods
- Define providers by services provided rather than size or location
- Balance statistical complexity with the need to establish understanding and credibility among those being measured

Qualitative: The framework for data analysis encompassed three designations of QI: quality dimensions (infrastructure elements that supports achieving and sustaining clinical quality improvement), change concepts (general approaches to change under which specific, related change ideas can be grouped), and change ideas (actionable, specific ideas for changing a process or catalyzing an organizational change within the context of an explicit need) (see Table I-1). The hospitals’ momentum scores were determined using the MAS to calculate the level of effort and commitment that leadership, physicians, and staff devoted to each change idea.

Table I-1. HPSS Qualitative Analytic Framework					
HPSS Quality Dimensions	Responsibility, Involvement, and Reward (RIR)	Communication (COM)	Clinical Management Strategy (CLMS)	Quality Management Strategy (QMS)	Monitoring (MON)
HPSS Change Concepts	<ul style="list-style-type: none"> • Responsibility & Authority • Skills Development • Time & Resources • Evaluation & Feedback • Recognition & Reward 	<ul style="list-style-type: none"> • Priorities • Results • Actions 	<ul style="list-style-type: none"> • Tools • Techniques • Technologies 	<ul style="list-style-type: none"> • Models • Guiding Principles • Methods 	<ul style="list-style-type: none"> • Data Collection • Data Analysis • Data Reporting
HPSS Change Ideas	Unique to HPs: Some of these were later identified as <i>high-leverage change ideas</i> (exhibited and widely adopted only by HPs and deemed innovative mechanisms and methods to promote high performance).				
	Unique to NHPs: Some of these may be unnecessary.				
	Common to both HPs and NHPs: Some of these were later identified as <i>basic change ideas</i> (foundations that are necessary but not sufficient for high-performance status and were exhibited at a high level of momentum by both HPs and NHPs).				

Telephone interviews were conducted with 110 key informants, including hospital executives, board members, medical staff leaders, quality management professionals, and physician and nurse clinical quality improvement (QI) champions. Supportive documents were reviewed, as available.

C. Study Results

Analysis of the quality dimension momentum scores provided a high-level understanding regarding the focus and extent of the organizations’ overall levels of effort and commitment toward pursuing quality improvement. Overall, the momentum scores reported by HPs exceeded the scores of NHPs by 27 percent. The greatest differences between HPs and NHPs were in the quality dimensions of Quality Management Strategies (QMS) and Clinical Management Strategies (CLMS). CLMS was also one of the two quality dimensions with the highest total momentum scores among all participating hospitals, along with the quality dimension of Responsibility, Involvement, and Rewards (RIR). Monitoring (MON) showed the least difference and was the only dimension in which the momentum score for NHPs was higher than for HPs (see Figure I-1).

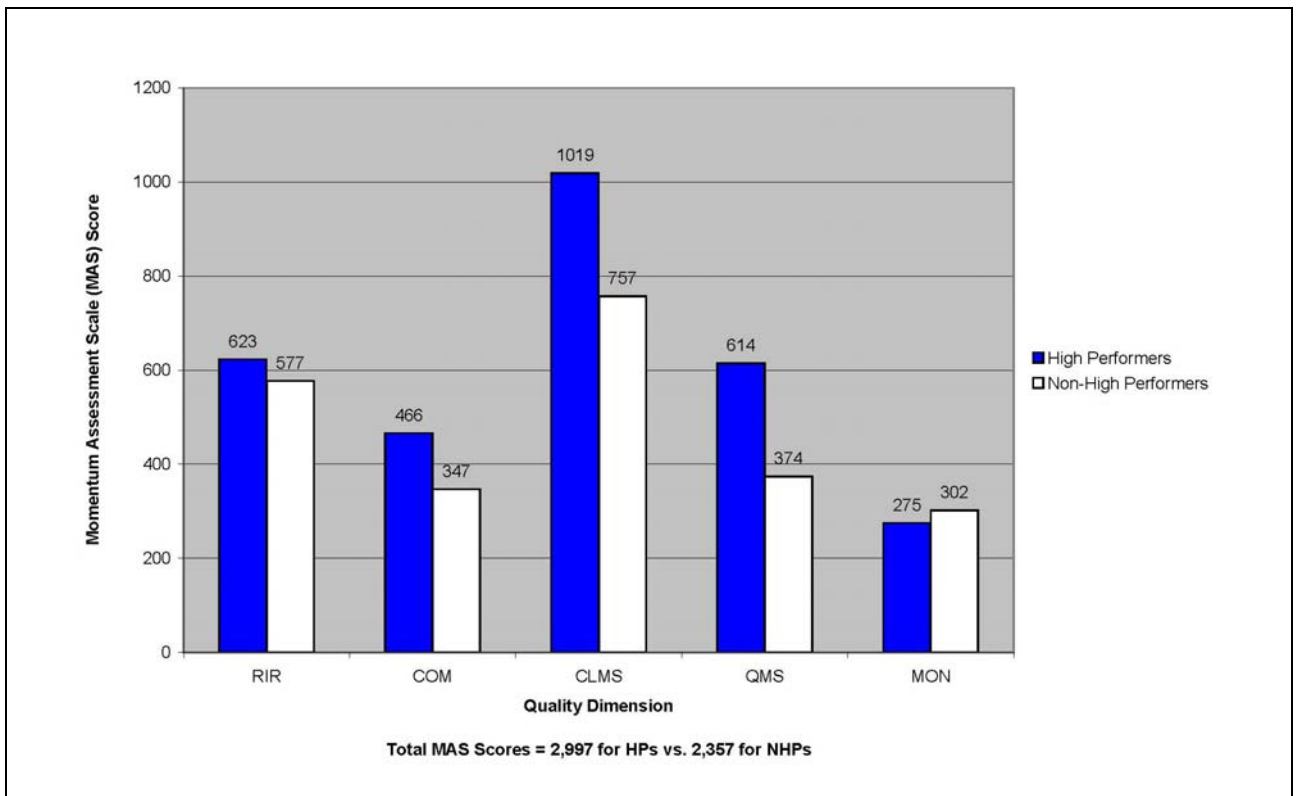


Figure I-1. MAS Scores by Quality Dimension

Closer evaluation at the level of the change concepts facilitated greater insight into the sources of differences among quality dimensions. Analysis at the level of change ideas provided the fine-grained examination necessary to identify best practices and classify change ideas as basic or high-leverage in order to distinguish those that are necessary but not sufficient for high performance from those that drive high performance.

Table I-2. Summary of Basic and High-Leverage Change Ideas

Quality Dimension	Basic	High-Leverage
Responsibility, Involvement, and Reward (RIR)	<ul style="list-style-type: none"> ▪ Provide medical library services ▪ Provide staff education in QI ▪ Allocate time and money for QI education 	<ul style="list-style-type: none"> ▪ Directly engage leadership and executives in QI activities ▪ Delineate QI responsibilities for implementation and priority setting at leadership level
Communication (COM)	<ul style="list-style-type: none"> ▪ Communicate QI results to staff ▪ Communicate QI results to leadership 	<ul style="list-style-type: none"> ▪ Communicate QI results to physicians ▪ Communicate all CMS core measure results to entity responsible for setting QI priorities
Clinical Management Strategies (CLMS)	<ul style="list-style-type: none"> ▪ Implement condition-specific order sets ▪ Implement condition-specific clinical pathways 	<ul style="list-style-type: none"> ▪ Implement automated triggers and reminder systems ▪ Implement rapid response techniques and technologies
Quality Management Strategies (QMS)	<ul style="list-style-type: none"> ▪ Document guiding principles focused on data, goals, and evidence-based medicine ▪ Formally adopt a process redesign model (i.e., PDCA, Six Sigma) ▪ Charter clinical QI teams 	<ul style="list-style-type: none"> ▪ Document and discuss guiding principles reflecting values of clinical excellence ▪ Formally adopt a QI cultural model (i.e., Baldrige, Studer) ▪ Set targets at no less than 90 percent regardless of benchmarks
Monitoring (MON)	<ul style="list-style-type: none"> ▪ Utilize multiple data-reporting formats ▪ Formally review benchmarking data 	(There were no high-leverage change ideas identified for the Monitoring quality dimension.)

Synthesis of the qualitative findings led to the articulation of five core characteristics that, when combined in various ways, suggest four common models of HPs. These core characteristics are:

1. **Culture**—adoption of a QI cultural model.
2. **Technology**—MAS technology score ≥ 45 , indicating high-level technology that facilitates the coordination of care, e.g., automated triggers, reminder systems and techniques.
3. **Responsibility**—executive-level responsibility for implementation of QI programs.
4. **Priorities**—hospital QI priorities aligned with CMS QI priorities; all CMS quality indicators rates for AMI, HF, and PN reported to the hospital entity that sets QI priorities.
5. **Targets**—QI targets set at ≥ 90 percent; absolute goals of excellence as opposed to benchmarking goals.

The patterns of these characteristics observed among the HPs during the study period suggest that high performance may be driven by an organization having in place either a cultural model or clinical support technology in combination with setting excellence-based targets and at least one additional characteristic.

In addition to the five core characteristics, an evolving HP theme that cut across all of the quality dimensions examined in the HPSS was the high level of engagement linking leaders, physicians, and staff directly with hospital quality improvement goals. This engagement is central to the organizational culture of HPs, instilling values of excellence and high performance among all parties, and it appears to be key to the success of QI initiatives.

D. Conclusions and Recommendations

Hospitals have not yet achieved overall excellence in delivering care to AMI, HF, and PN patients. Even the HPs fall short in meeting standards of excellence across the board on a consistent basis. Traditional QI efforts aimed at providing tools for clinical guidelines, monitoring performance rates, and reporting results are not sufficient to achieve and sustain the highest levels of excellence. Transforming the acute care delivery system into one that excels at providing the right care for every patient, every time, requires a more comprehensive and deliberate approach.

The HPSS results inform such an approach. Our results suggest that the path to high performance is not a simple strategy that can be implemented through addressing a single quality dimension. Rather, it is an approach that puts mechanisms, attitudes, and behaviors in place to create and support connections among all of the quality dimensions. Basic processes and tools are necessary to take initial steps toward QI; building momentum for transformational change requires putting in place a set of innovative change ideas along with structural and cultural foundations that coalesce as a positive driving force to move the hospital forward.

By setting a precedent for mapping out strategies to identify, prioritize, and target basic and high-leverage opportunities for improvement, the High Performers Special Study has provided the capability to accelerate quality improvement efforts of CMS, QIOs, and hospitals alike. Comparing an individual hospital's QI core characteristics to the HPs' QI core characteristic models gives us the ability to identify an efficient and effective path to direct NHPs toward transformation.

Preliminary thoughts on maximizing the impact of the HPSS on quality improvement activities include the following:

- Adapt the MHPA-H and the MAS to use in other health care settings.
- Develop an interactive Web-based survey process. Organizations would receive guidance in administering the survey and would receive an MAS score and a current MHPA-H score to help focus performance improvement efforts. Results would be communicated to QIOs, and a large national database would be built for CMS.
- Use the MAS to more clearly define high-leverage change ideas, gauge hospitals' overall progress on implementation of change ideas, and assess sustained momentum over time.
- Further investigation is needed into the roles of culture and structure in organizational performance. Although it is clear that each, individually, has been a substantial factor in achieving high performance, the question remains: Can this level of excellence be sustained without both elements? Additional research is also needed to determine which factor has a greater effect on increasing levels of momentum.