

DELIVERING HEALTHCARE THAT WORKS





MHMD MISSION

Our mission is to lead the transformation of medical practice in collaboration with patients, payors and caregivers, through the use of evidence-based medicine. We establish a culture of physician accountability and create and deploy new models of healthcare that will improve the quality, safety and cost efficiency of the care we provide for the populations we manage.

MHMD PHYSICIAN COMPACT

PHYSICIANS AGREE TO:

- Practice evidence-based medicine
- Uphold regulatory, quality and safety goals
- Report quality data
- Meet Clinical Integration criteria
- Attend meetings and feedback sessions
- Receive MHMD information
- Accept decisions of physician committees
- Be flexible and professional
- Collaborate with colleagues and hospitals
- Share ideas

MHMD AGREES TO:

- Be loyal to physicians
- Negotiate well to align incentives
- Include physicians in work decisions
- Provide clear and timely information
- Offer vital services and education
- Seek feedback from physicians
- Maintain confidentiality
- Communicate with physicians
- Host informative meetings
- Create leadership training



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MHMD Leadership (left to right) Keith Fernandez, M.D., President & Physician-in-Chief; Becky Cook, CFO; Shawn Griffin, M.D., Chief Quality & Informatics Officer; Rachel Taylor, System Executive, Physician Network Development; Christopher Lloyd, CEO; Emmett McDonald, M.D., MHMD Board Chair.

A photograph of three individuals in professional attire standing in a modern office with large windows overlooking a city. The man on the left is wearing a dark suit and a red patterned tie. The woman in the center is wearing a black suit. The man on the right is sitting in a chair, wearing a dark suit and a blue tie. The background shows a cityscape with greenery and buildings under a cloudy sky.

EXECUTIVE SUMMARY ADVANCING THE HEALTH OF POPULATIONS



In collaboration with the Memorial Hermann Health System, MHMD, the Memorial Hermann Physician Network, is transforming the practice of medicine in Houston for the better for patients, payors and physicians. With 3,900 physician members, MHMD is the largest independent physician organization of its kind in Texas. Our Clinical Integration (CI) program, with more than 2,000 physicians, is one of the most advanced CI programs in the country, ranking among the top 50 nationally based on the number of physicians participating and the quality of results delivered. More than 500 primary care physicians participate, many of whom are in the Advanced Primary Care Practices patient-centered medical home initiative. In addition, MHMD's CI network includes over 1,700 physician specialists, the largest network of specialists in the Greater Houston area.

A unique advantage of MHMD is our relationship with the Memorial Hermann Health System, one of the largest not-for-profit health systems in the nation. An integrated health system and Accountable Care Organization (ACO), Memorial Hermann is known for world-class clinical expertise, patient-centered care, leading-edge technology, and innovation. The system, with its exceptional medical staff and more than 21,000 employees, serves Southeast Texas and the Greater Houston community.

Memorial Hermann was recognized by ThomsonReuters, a leading provider of information and solutions to improve the cost and quality of healthcare, as one of the top five large health systems in the nation in its 15 Top Health Systems study in 2012, according to clinical outcomes, patient safety, patient satisfaction and operational efficiency.

MHMD and Memorial Hermann have committed to leading the transformation of healthcare in Houston and the nation, both in the hospital setting and in the management of populations of people, including those with chronic illnesses and those who are well. MHMD's clinically integrated doctors collaborate with Memorial Hermann, payors and patients to practice evidence-based medicine and hold each other accountable for the care they deliver. The CI program aligns quality, safety and cost-efficiency between independent and employed physician practices and Memorial Hermann hospitals. Physicians from each Memorial Hermann campus participate in more than 40 subspecialty and specialty committees and task-oriented work groups dedicated to improving clinical outcomes.

MHMD physicians are integrated with each other through the use of the most advanced healthcare information technology that allows immediate access to information on patients and expands knowledge of the health of the populations they treat. MHMD physicians utilize the latest information technology and tools for managing and monitoring the care they provide.

MHMD physicians helped create Crimson, the leading physician quality and efficiency profiling tool in healthcare, now in use by over 300 hospitals and 25,000 physicians throughout the country. We have developed more than 600 evidence-based order sets for use manually and electronically with Memorial Hermann's eOrdering, computerized physician order entry system at its hospitals. The Memorial Hermann Information Exchange provides tools that give patients improved connectivity to physicians and healthcare services while providing physicians immediate access to the most current clinical data on their patients from a wide variety of settings, enabling them to better manage and oversee patient populations.

MHMD believes physicians are best positioned to make the changes that will positively impact the quality and cost efficiency of healthcare. Our network has proven itself with reduced costs of care and demonstrably better quality. We are committed to a promise to provide the highest quality care, driven by compassionate providers, with collaborative and innovative solutions to all of our customers: patients, payors, and physicians. We are pleased to share with you our Annual Report that presents our successes in delivering on our promise.



A handwritten signature in black ink that reads "Chris Lloyd".

Christopher Lloyd
MHMD CEO



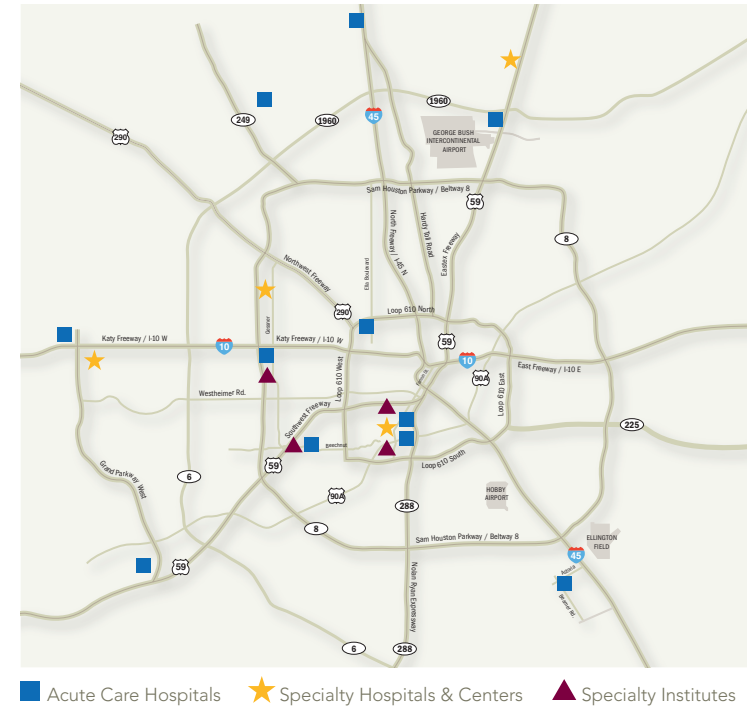
A handwritten signature in black ink that reads "Dr. Keith Fernandez M.D.".

Keith Fernandez, M.D.
MHMD President and Physician-in-Chief

MEMORIAL HERMANN HEALTH SYSTEM

MHMD, Memorial Hermann Physician Network, has 3,900 members in the Greater Houston metropolitan area. It is the largest independent physician organization of its kind in Texas and the primary physician network for Memorial Hermann Health System.

One of the largest not-for-profit health systems in the nation, Memorial Hermann is an integrated system with an exceptional medical staff and more than 21,000 employees. The system serves Southeast Texas and the Greater Houston community with 12 hospitals, including three in the Texas Medical Center, a level I trauma center, a hospital for children, one of the top three rehabilitation hospitals in the United States, and eight suburban hospitals. The system also operates three Heart & Vascular Institute locations, the Mischer Neuroscience Institute, the Ironman Sports Medicine Institute, Women's Memorial Hermann, the largest and busiest air ambulance service in the United States, the Ironman Sports Institute, the Prevention and Recovery Center, an award-winning chemical dependency treatment center, and a comprehensive array of home health services, rehabilitation centers, outpatient imaging and laboratory services. Patients enjoy unique access to the expertise of multiple sub-specialties and clinical research trials through MHMD's community physicians and The University of Texas Health Science Center at Houston (UTHealth) Medical School.



AWARDS AND RECOGNITION



Memorial Hermann President and CEO Dan Wolterman, and Emmett McDonald, M.D., MHMD Board Chair.

- '08 National Patient Safety Leadership Award from the VHA Foundation and National Business Group on Health
- '09 National Quality Healthcare Award from the National Quality Forum
- '10 McKesson Quest for Quality Award Finalist from the American Hospital Association
- '11 Bill Aston Award for Quality from the Texas Hospital Association

- '12 Gold Quality Awards (four hospitals) and Silver Quality Awards (five hospitals) from the Texas Medical Foundation
- '12 Top 5 Large Health System recognition by Thomson Reuters 15 Top Health Systems Study
- Franklin Award for Care Management
- Crimson Founder's Awards
- HealthGrades 50 Best Hospitals List

Donald Molony, M.D., MHMD CPC Hospital
Medicine Committee chair, discusses a new
quality safety program with two medical residents.

IMPROVING THE QUALITY OF CARE



CLINICAL INTEGRATION PROGRAM

MHMD offers one of the nation’s leading Clinical Integration (CI) programs. At Memorial Hermann, clinical integration is a commitment from MHMD physicians to practice evidence-based medicine, collaborate with each other and with other healthcare providers, and to be accountable for the highest quality, safest and most cost-efficient care possible.

Our CI program aligns physician practices with inpatient and outpatient quality improvement programs and permits the close coordination of care among private practice, employed and academically affiliated physicians.

Now in its eighth year, MHMD’s CI program is recognized among the leading programs in the nation, based on both the number of physicians participating and the quality results it has delivered. When compared to other physicians in the Houston market, CI physicians

consistently achieve reductions in cost of care, length of stay and number of readmissions, while earning higher quality scores.

The CI program has also provided a foundation for other innovative programs such as the Clinical Programs Committee (CPC), the Advanced Primary Care Practices initiative and the Memorial Hermann Accountable Care Organization.

MHMD physicians are frequently asked to host visits and speak to other organizations on clinical integration, physician alignment, inpatient and outpatient quality and safety, and accountable care. MHMD physicians have spoken to the American Medical Association and hosted meetings for the National Quality Forum regarding collection of office-based physician quality metrics and physician education for inpatient quality.

COMMUNITY HOSPITALS FROM JANUARY 2012 - JUNE 2012

MEASUREMENT	MHMD CI PHYSICIANS	CRIMSON – ALL HOSPITALS
Length of Stay	4.52	4.74
Hospital-Acquired Infections	0.68%	7.56%
General Complications	1.24%	2.82%
30-Day Readmissions	5.92%	10.38%
Mortality	1.95%	2.52%

Clinically integrated physicians produce better patient outcomes at a more cost-effective level of care than non-clinically integrated physicians.

THE CLINICAL PROGRAMS COMMITTEE

The CPC of MHMD is the primary source of evidence-based practices, both inpatient and outpatient quality metrics, pharmacy and supply vendor decisions for Memorial Hermann.

The CPC aligns the quality and safety programs of the hospital system and MHMD. Each CPC subcommittee chairman is tasked with producing a strategic plan and tactical solutions to support improvement in the quality and safety in our hospitals and clinics. Two-way exchanges are facilitated between the CPC and campus medical staff subcommittees by the membership of each committee, which includes members from each hospital in the system. A review and comment period allows the Medical Executive Committee time to thoughtfully consider and have input into recommendations coming from the CPC. The addition of nurses, care managers, pharmacists, technicians, practice managers and other members of the patient care team to the CPC makes the subcommittees reflective of the makeup of Memorial Hermann and improves the chances for success in implementation of quality and safety measures. MHMD CPC specialty-specific subcommittees and Joint Operating Councils have over 400 participating physicians.

The development of task-oriented Joint Operating Councils has led to a number of major initiatives involving patient safety and quality. These councils are comprised of multiple specialists from CPC membership and have specific areas of quality and safety to address. As an example, through the innovative Inpatient Quality and Safety initiative (IPQS), the task forces are leading efforts to reduce or eliminate serious safety events, pulmonary emboli and venous thromboses, hospital-acquired infections and occurrences of iatrogenic pneumothorax.

The Hospital Medicine Committee

developed a strategic and tactical plan to eliminate preventable DVT/PE in our hospitals, with ongoing outcomes research. They also launched a Hospital Medicine Scorecard with quality and operational metrics for our inpatient attending physicians that will demand minimum standards of performance for Hospital Medicine physicians to participate in caring for patients contracted through MHMD.

The Perioperative Services Committee is developing a surgical home initiative to be piloted at several Memorial Hermann sites. The surgical

home concept places the patient at the center of the care continuum which includes quality, safety and satisfaction. The committee also successfully produced a document establishing credentialing and privileging criteria for performance of moderate and deep sedation by non-anesthesiologists throughout the system.

The Orthopedic Surgery CPC collaborated closely with care management to produce joint replacement clinical and regulatory checklists that led to a reduction in denials and more successful appeals of denied surgeries.

A Surgery Vendor Task Force is working closely with Memorial Hermann leadership to standardize the approach to vendor selection throughout the system, resulting in millions of dollars in savings over the last year.

The General Surgery, Cardiology, Emergency Services, Allergy and Otolaryngology CPCs have developed strategic plans that should come to completion in 2013. Many of the recommendations of the CPC (the oversight committee for all the individual subcommittees) are advanced to Memorial Hermann's System Quality Committee and disseminated to



MHMD physicians Charlotte Alexander, M.D., and Gary Shepard, M.D., discuss a new quality and safety initiative.

MHMD clinically integrated doctors collaborate with Memorial Hermann, payors and patients to practice evidence-based medicine and hold each other accountable for the care they deliver.

OBSTETRIC SAFETY INCENTIVE PROGRAM

The CPC Obstetrics and Gynecology subcommittee successfully mandated a 22-hour Safety CME to maintain obstetrics privileges in that specialty in Memorial Hermann hospitals; 99 percent of eligible physicians successfully completed this program. More recently, this group recommended six obstetric safety checklists to improve perinatal outcomes. Requiring continuing education of MHMD members helps foster improvements in patient safety and clinical outcomes and reduce the incidence of perinatal safety events. New online Obstetric Safety CME courses funded by Memorial Hermann were made available to help ensure obstetric physicians are up-to-date on the latest safety techniques and aware of key patient safety issues and medical risks in perinatal care.

The Obstetric Safety e-Education course was endorsed by the CPC OB/Gyn subcommittee and all Memorial Hermann hospital MECs. The program is designed to reduce such events by establishing obstetrical collaborative teams to standardize care for pregnant patients across the Memorial Hermann system.

Developed by Advanced Practice Strategies (APS), the online Obstetric Safety e-Education curriculum delivers important obstetric information to the entire obstetric healthcare team, using a common language and evidence-based expectations for care delivery. The course reflects national standards for perinatal care while addressing the primary drivers of obstetrical claims.

Additionally, the CPC OB/Gyn subcommittee recommended six obstetric safety checklists to improve perinatal outcomes.

the individual hospital Medical Executive Committees for approval. This has resulted in more rapid adoption of these quality and safety measures than in the past, and is a definite benefit for our patients.

The Clinical Ethics and Palliative Care CPC is establishing a systemwide palliative care program for each market area covered by our Advanced Primary Care Practices.

The Bariatrics CPC and Cardiovascular Surgery CPC have established consistent privileging and credentialing criteria for their specialists throughout the system.

ELECTRONIC ORDER SETS: FACILITATING SAFER, EVIDENCE-BASED CARE

MHMD's CPC Editorial Board guided the creation of electronic Order Sets, evidence-based order set templates embedded into Care⁴, Memorial Hermann's electronic patient care record. MHMD's involvement with order set creation offers unequalled control of order set usage and accountability for care standardization based on evidence-based medicine for patients in the Houston area.

This control also offers targeted disease interventions to meet the needs of insurers to address specific patient issues in an insured population.

Order sets are instrumental tools in improving quality, standardizing care, reducing unnecessary variation, and improving efficiency in the delivery of medical care. An order set is a standard collection of predetermined medications and interventions usually associated with a particular disease, condition, or procedure. Evidence-based care has been shown to reduce length of stay and cost of care among patients and is associated with better patient outcomes.

TOP SIX ORDER SETS USAGE SAVINGS

MHMD has helped Memorial Hermann realize more than \$1 million in cost savings through nearly 100 percent compliance with Order Set usage by medical staff physicians for these six conditions:

1. GI bleeding
2. Heart failure
3. Chest pain
4. Sepsis
5. Pneumonia
6. Acute MI



Roberto Montoya, M.D., and Chris Salcedo, M.D., discuss eOrdering implementation.

To improve safety and streamline care delivery, Memorial Hermann is currently utilizing eOrdering (computerized physician order entry) throughout the majority of its nine acute-care facilities, with deployment in all Memorial Hermann Emergency Centers.



Order sets are made available to the physicians on paper or through the use of eOrdering or computerized physician order entry (CPOE). Memorial Hermann is currently utilizing eOrdering throughout the majority of its nine acute-care facilities with, deployment in all Memorial Hermann Emergency Centers.

This approach to standardizing high-quality care has been used to target both high-frequency and high-cost diseases and conditions. More than 400 physicians serving on MHMD's Clinical Program Committee have created more than 400 electronic order sets. Utilizing the advanced computing infrastructure of Memorial Hermann, MHMD also tracks the usage of order sets and has the infrastructure to hold individual physicians accountable for appropriate usage in targeted populations and conditions.

Members of the CPC eOrdering subcommittee include Trevor Rabie, M.D.; Robert Murphy, M.D., Memorial Hermann Chief Informatics Officer; and Bela Patel, M.D.

CPC SUPPORTS THE INPATIENT QUALITY & SAFETY INITIATIVE

To improve patient safety and clinical outcomes, Memorial Hermann and MHMD have established shared objectives and goals for inpatient quality and safety as part of a new Inpatient Quality & Safety (IPQS) Initiative endorsed by the MHMD CPC.

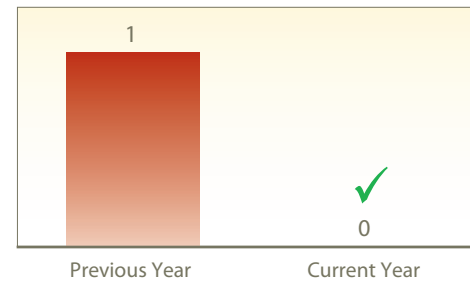
These objectives and goals include:

- Improving clinical quality and safety
- Reducing complications from long hospital stays
- Improving quality and safety scores against national benchmarks

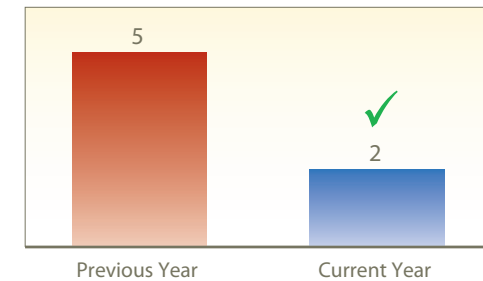
Through the innovative IPQS, the task forces are leading efforts to reduce or eliminate serious safety events, pulmonary emboli and venous thromboses, hospital-acquired infections and occurrences of iatrogenic pneumothorax.

MEMORIAL HERMANN INPATIENT QUALITY & SAFETY (IPQS) INITIATIVE CAMPUS DASHBOARD FOR REDUCING ADVERSE EFFECTS

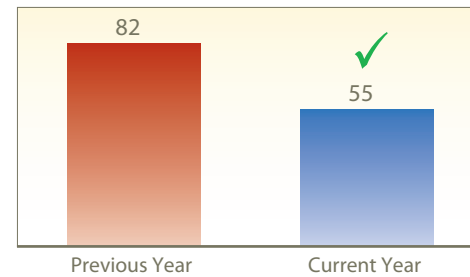
Iatrogenic Pneumothorax Events



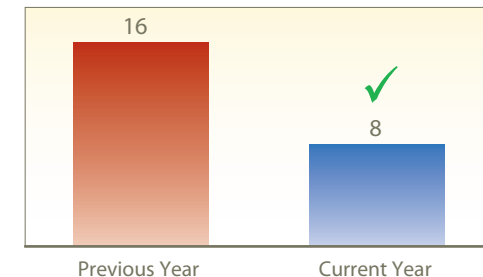
Adult Pulmonary Emboli and Venous Thromboses



Hospital-Acquired Infections



Serious Safety Events



Each Memorial Hermann campus is assigned individual targeted goals for reduction of these adverse patient events. The goal for each adverse event category is zero. Progress toward the goals is monitored at each campus and presented for hospital leaders and medical staff to view.

PATIENT-CENTERED MEDICAL HOME MODEL OF CARE

The patient-centered medical home (PCMH) is a model for care provided by physician practices that seeks to strengthen the physician-patient relationship. Episodic care based on illnesses and patient complaints is replaced with coordinated care that builds a long-term healing relationship. This model delivers value across key areas by helping patients stay healthy through the use of sophisticated tools and health biometric monitoring which leads to improved patient satisfaction, better healthcare quality, improved involvement of patients in their own care and reduced avoidable costs over time.

The physician-led care team is responsible for providing all the patient's healthcare needs and, when needed, arranges for appropriate care with other qualified physicians. A medical home also emphasizes enhanced care through open scheduling, expanded hours and communication between patients, physicians and staff.

PCMH care is facilitated by registries, information technology, health information exchange and other means to assure that

patients get the indicated care, when and where they need and want it.

The National Committee on Quality Assurance (NCQA) Medical Home Recognition Program identifies medical facilities that deliver superior care using measurable standards. At MHMD, our goal is to have our entire PCMH network NCQA certified. Practice facilitators work with MHMD physicians and staff members to expedite the certification process.

To be designated a PCMH by the NCQA, medical facilities are evaluated based on nine identifiable standards of care:

1. Access and communication
2. Patient tracking and registry functions
3. Care management
4. Patient self-management support
5. Electronic prescribing
6. Test tracking
7. Referral Tracking
8. Performance reporting and improvement
9. Advanced electronic communications with patients

Advanced Primary Care Practices:
MHMD's Patient-Centered Medical Home
The largest networked medical home

in the region, Advanced Primary Care Practices (Advanced PCPs) is the patient-centered medical home centerpiece of the Memorial Hermann Physician Network. Advanced PCPs builds on the achievements of MHMD's Clinical Integration (CI) Program. Participating physicians represent an elite group of providers, committed to delivering coordinated care for adult patients consistent with the PCMH joint principles as defined by the American Academy of Family Physicians, the American Academy of Pediatrics and the American College of Physicians.

The Primary Care CPC and the associated Primary Care Leadership Council are the main forces behind MHMD's Advanced Primary Care Practices initiative. These committees have overseen the process changes in office-based care that will transform the practice of medicine for patients and physicians. This transformation will allow for the health management of populations of people rather than just individual patients. The team-based approach works closely with population care managers to provide continuum of care. Additionally, Advanced Primary Care Practices utilize information technology to increase care effectiveness. A point-of-care tool delivers real-time knowledge of a patient's



Advanced Primary Care Practices physician Kevin Giglio, M.D., discusses new patient care measures with staff members.

The largest networked medical home in the region, Advanced Primary Care Practices (Advanced PCPs) form the patient-centered medical home centerpiece of the Memorial Hermann Physician Network.



health status and needs. The Memorial Hermann Information Exchange, the first health information exchange in Houston, connects caregivers to the patient's latest clinical data. Advanced PCPs also use IT tools to report MHMD's "Measures of Excellence" quality metrics.

Through the initiative, PCPs agree to be accountable to the group and its payors, providing the opportunity to continuously improve the quality of care they deliver, qualifying for pay-for-performance incentives for their efforts. Currently, more than 200 clinically integrated, independent physicians are participating.

To participate in MHMD's Advanced Primary Care Practices initiative, physicians must:

- Be an active MHMD CI participant in good standing
- Be willing to participate in performance-based contracts
- Agree to deploy IT tools and participate in team-based care management programs
- Adhere to quality metrics and focus on optimizing patient health.

Memorial Hermann Medical Group's Tiffany Albritton, M.D., explains a treatment plan to a patient.

MEMORIAL HERMANN ACCOUNTABLE CARE ORGANIZATION

In 2012, the Centers for Medicare and Medicaid Services (CMS) approved Memorial Hermann and MHMD to participate in its Medicare Shared Savings Program as an Accountable Care Organization (ACO).

Through the Medicare Shared Savings Program, Memorial Hermann ACO (MHACO) works with CMS to provide Medicare fee-for-service beneficiaries with high-quality care, while lowering the rate of growth in Medicare costs. The MHACO manages a defined set of lives with participating providers sharing in the cost savings achieved.

In addition to Memorial Hermann's 12 hospitals, numerous specialty institutes and advanced outpatient facilities, MHACO is a 332-member provider group comprised of both independent physician practices and physicians employed by Memorial Hermann affiliates. These physicians are a part of MHMD's Advanced Primary Care Practices (Advanced PCPs), a patient-centered medical home initiative. The foundation for the



Advanced PCPs is MHMD's Clinical Integration program that unites independent physicians of every specialty throughout the Houston area in a common commitment to quality and accountability.

The MHACO's clinically integrated physicians integrate health information technology and other innovative tools to manage the care of patients, delivering a higher level of care and better clinical outcomes. MHACO's clinically

integrated healthcare providers are able to share patient information with each other, allowing them to deliver more coordinated care. This gives each healthcare provider treating a patient a more complete picture of that patient's health.

Through the use of preventive medicine and a team-based, proactive approach, MHACO physicians deliver careful management of patients diagnosed with chronic diseases and provide better value to healthcare consumers.

MHMD Director of Care Management Mary Folladori explains new point of care tools to MHMD physician Ankur Doshi, M.D., and his staff.



EFFECTIVELY MANAGING POPULATIONS



MORE EFFECTIVE UTILIZATION OF HEALTHCARE RESOURCES

REDUCING HOSPITAL READMISSIONS BY IMPROVING THE CONTINUUM OF CARE

Research data shows that as many as 50 percent of patients re-hospitalized within 30 days of a hospital admission or emergency room (ER) visit never saw a healthcare professional after their initial discharge. This represents a significant cost and resource utilization in potentially avoidable readmissions.

Memorial Hermann's Medical Home Continuum of Care Program focuses on connecting patients with medical homes after inpatient stays or ER visits. MHMD utilizes patient-care coordinators to assist patients in finding a clinically integrated MHMD primary care physician (PCP) as their medical home. The coordinator will schedule a follow-up appointment and hospital and ER discharge summaries are relayed to the PCP. Post-discharge follow-up calls are made to each patient to validate health status and address patient concerns while ensuring adherence to physician's instructions given at a follow-up visit.

COMMUNITY OUTREACH FOR PERSONAL EMPOWERMENT (COPE)

The Community Outreach for Personal Empowerment (COPE) program was developed as an integral part of the Memorial Hermann Community Benefit Corporation to empower participants to take control of their health and wellbeing. COPE helps participants establish a primary medical home and encourages use of available community resources. As a result, the program has reduced unnecessary ER visits, observation stays and inpatient admissions.

When potential COPE participants are identified, an initial assessment is conducted by phone. COPE is staffed by full-time master's-prepared social workers. The assessment establishes a management plan and begins a collaborative relationship for building trust and giving participants an opportunity to express any concerns. COPE social workers help connect participants to available community-based services and assist them in better understanding and managing their conditions to maximize quality of life.

**MEMORIAL HERMANN
MY HEALTH ADVOCATE
DISEASE MANAGEMENT**

Through Memorial Hermann’s My Health Advocate, a nurse case manager trained in outpatient disease management provides telephonic support to patients by regularly contacting and encouraging them to follow their physician’s instructions for medical compliance, exercise, diet and lab work, as well as office follow-ups. With patient consent, physicians receive routine reports of progress and activity and they are notified promptly of any emergent problems. Patients enter the program through physician referral, self-referral or by contact with a program representative during an inpatient hospital stay.

**MEMORIAL HERMANN
CARDIAC LIFE PROGRAM**

Designed for patients with congestive heart failure (CHF), the Memorial Hermann Cardiac Life program combines traditional home health services with community case management overseen by a designated nurse

**RE-HOSPITALIZATION
30-DAY RATE—ALL CAUSES**

National Average	27.0%
Texas Average	30.0%
Cardiac Life Patients	15.7%

practitioner. Through ongoing education about their disease and supportive telephonic follow-up, the program empowers CHF patients to make necessary changes that lead to improved health by preventing disease progression while allowing patients to remain in their own homes. Services provided in the patient’s home include nursing care, diagnostic testing, physical therapy, occupational therapy, nutrition and diet counseling, and patient and family education. Each avoided CHF hospital admission is estimated to save \$7,000.

**MEMORIAL HERMANN
PALLIATIVE LIFE PROGRAM**

Designed to palliate symptoms and return patients to healthy lifestyles, the Memorial Hermann Palliative Life Program brings together a specialized team of home health experts, including palliative care physicians associated

with the program, nurse practitioners, nurses, therapists, chaplains and social workers.

The Palliative Life Program is appropriate for any stage of illness. Patients who qualify for the Palliative Life Program include those diagnosed with CHF, COPD, renal disease, neurological disease or cancer, and who find leaving home a taxing effort. Patients in the program experience improved independence and quality of life while decreasing the need for rehospitalization.

**IMPROVING THE CONTINUUM
OF CARE**

MHMD is focused on improving the continuum of care by embedding case managers in its physician practices.

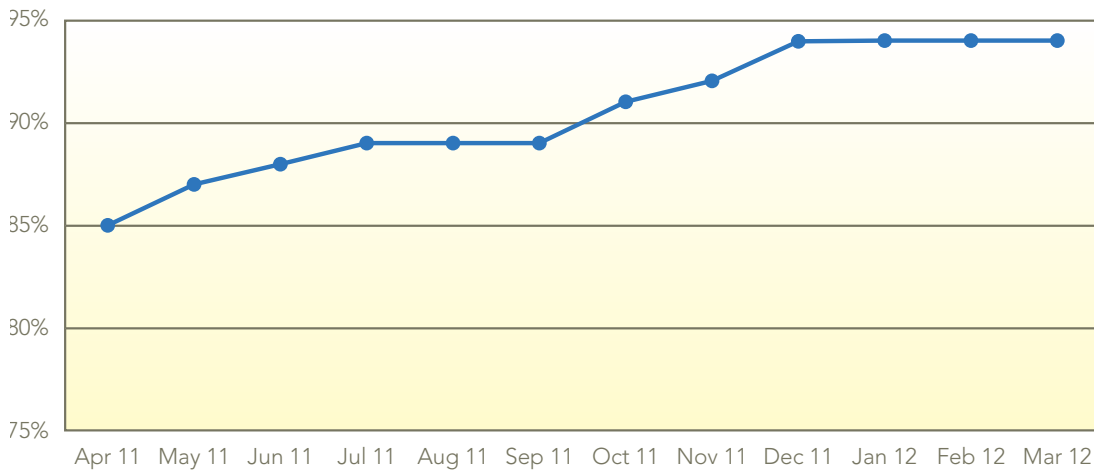
Case Manager. A case manager specially trained in outpatient care will help manage the practice’s patients who have chronic diseases or are members of identified populations. Utilizing IT tools, the case manager ensures patients receive coordinated care, schedules follow-up appointments, tracks test results and connects patients to community resources as needed.



David Bauer, M.D., and Troy Fiesinger, M.D., of Physicians at Sugar Creek discuss a patient's treatment plan.

The first level 3 NCQA-certified Medical Home in Texas, Physicians at Sugar Creek has demonstrated marked improvement in disease markers among a largely underserved population, where compliance is an issue.

MONTHLY QUALITY TREND: HEMOGLOBIN A1C (HBA1C) TESTING



Compliance % Diabetes – Hemoglobin A1c (HbA1c) testing

Throughout treatment, patients visit with certified diabetes educators, registered nurses, registered dietitians, and other healthcare professionals, all committed to helping patients take control of diabetes.

DIABETES MANAGEMENT PROGRAMS

Evidence shows that when diabetic patients control their diabetes, they experience fewer complications of care, inpatient hospitalizations and better overall health and wellbeing. MHMD and Memorial Hermann offer a variety of diabetes management programs.

Self-Management Programs

The Memorial Hermann Diabetes Education Network Team offers programs designed for newly diagnosed as well as established diabetic patients. MHMD physicians may enroll their diabetic population in these education classes.

Each participating Memorial Hermann location offers a unique program for patients

diagnosed with Type 1, Type 2 and gestational diabetes. The programs are approved by the American Diabetes Association and are taught by certified diabetes educators.

Diabetes Education covers the principles of Diabetes Self-Management, including:

- General facts about diabetes
- Nutritional management and carbohydrate counting
- Exercise and glucose control
- Avoiding complications
- Foot care
- Medications
- Blood glucose monitoring
- Behavior modification
- Psychosocial issues and community resources

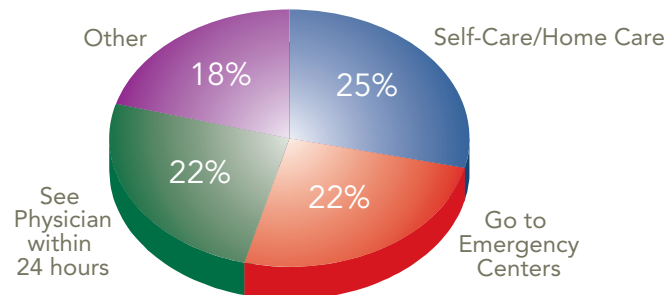
NURSE TRIAGE LINE SYSTEM

The “Call First” Urgent Care Nurse Triage Line is a value-added service offered through MHMD to enhance the member benefit structure and help drive members to the appropriate level of care. It uses state-of-the-art technologies and has repeatedly proven to be cost-effective, reducing inappropriate

or unnecessary utilization of healthcare resources, enhancing risk management, increasing caller satisfaction and producing referrals within healthcare systems.

Nurse Triage Line ROI Data

Available data demonstrates how effectively the Nurse Triage Line reduces the number of unnecessary presentations at an Emergency Center. Callers are instead directed to their PCPs for care more appropriate to their conditions. Reports can be generated to include member demographics, symptoms presented, guideline used and triage outcome that can be used to assist with ROI initiatives.





INVESTING IN HEALTHCARE TECHNOLOGY

With eClinicalWorks, MHMD physicians receive everything they need to easily access patient information, whether in the office or on the go.

eCLINICALWORKS

Working with eClinicalWorks®, MHMD offers an integrated Practice Management and EMR solution, along with the training and support MHMD CI physicians need to implement it.

Physicians can easily access patient information, whether in the office or on the go. eClinicalWorks is integrated with Memorial Hermann's secure, encrypted electronic network that moves health information among authorized physicians, specialists and healthcare organizations, providing physicians access to the latest patient data, radiology images and lab results.

eClinicalWorks automates reporting of Clinical Integration quality measures and features many specialty-specific features.

Patient Portal

Through the eClinicalWorks patient portal, patients can request appointments, submit questions to their physicians and more. The online prescribing feature streamlines the prescription process by electronically transmitting prescriptions to the pharmacy of choice, so medications are ready to be picked up when the patient arrives.





INNOVATION AND INFORMATICS: IMPROVING THE QUALITY AND EFFICIENCY OF CARE

MHMD recognizes the important role of technology and analytics in today's healthcare environment. MHMD has a long record of innovation in health information technology. Our physician leaders have and will continue to play key development roles in multiple technologies.

Crimson Continuum of Care is one of the most widely deployed physician inpatient analytic platforms in the country. It was conceived at Memorial Hermann and three of our physician leaders have received awards for contributions to the creation and development of the platform. Those original contributions, and ongoing development efforts, created an analytics platform that is now deployed in almost one-fifth of U.S. hospital systems and enables over 20,000 physicians to understand the quality and efficiency of the care they deliver. Our physicians serve as nationally

MHMD Chief Informatics Officer Shawn Griffin, M.D., oversees the deployment of Crimson and other informatics tools.

recognized experts on the deployment and successful use of Crimson and other informatics tools.

Memorial Hermann serves as a nationally recognized leader in the deployment and improvement of informatics technology with multiple inpatient facilities achieving benchmark status in HIMSS level and “Most Wired” recognition by Hospitals & Health Networks magazine for information technology achievements. Our commitment has always been to serve our patients and physicians with highly skilled personnel and innovative technology. MHMD physicians have been key contributors to the deployment and use of electronic medical records, computerized physician order entry, and evidence-based medicine order sets. This inpatient technology integration and control is a unique resource enabling our Accountable Care Organization to reach its goals for quality and efficiency.

Recognizing the need for new personnel and tools to support population management and improve population quality metrics, MHMD recently hired its first full-time Ph.D. informatics analyst and launched two new technology initiatives in 2011 for our

members: Crimson Care Registry and Crimson Population Risk Management.

Crimson Care Registry is a software registry that extracts patient information from the multiple electronic medical records (EMRs) used in our physician practices to create a patient population registry for each practice. Our primary care physicians have adopted more than 70 standardized disease and wellness rules to follow using the data in the registry. This tool then produces reminders and performance reports or wellness gaps for the patients in their practice. This tool improves population care performance and can be customized to focus on specific care issues unique to a population. It also can be used to measure the performance of individual physicians, groups of physicians, geographic areas, and entire networks, for the purpose of benchmarking and demonstrating the value of care management interventions. This platform works with the EMRs representing over 70 percent of our provider offices and allowing all our physicians to improve the quality of care they provide.

Richard Blakely, M.D., and other MHMD physician leaders are frequently requested to speak to physician organizations on clinical integration and collection of office-based physician quality metrics.



Crimson Population Risk Management

is an innovative claims-based database that provides physicians with member-level risk stratification and performance benchmarking. Traditionally, claims-based risk stratification and benchmarking were only found within the insurance industry to measure plan and provider performance. MHMD recognized that full population management would only be possible with the ability to process all the claims related to the care of a population. Without access to and the ability to see all claims, providers would always have a scope of understanding limited to only those patients cared for by the provider. We also recognized that having a parallel process for benchmarking performance would allow physicians to have ongoing insight into the members’ needs as well as gaps in care. Our partnership with Crimson (utilizing Milliman analytics) now provides physicians with a standard reporting platform for claims-based performance tracking.

While technology is a vital tool for any high-performing organization, it is our physician experts who provide the leadership for successful programs. MHMD physician leaders are frequently asked to host visits

and speak to other organizations on clinical integration, physician alignment, inpatient and outpatient quality and safety, and accountable care. MHMD physicians have spoken to the American Medical Association and hosted meetings for the National Quality Forum regarding collection of office-based physician quality metrics and physician education for inpatient quality.

MEMORIAL HERMANN INFORMATION EXCHANGE: CONNECTING THE COMMUNITY THROUGH INTEGRATED INFORMATION SYSTEMS

Delivering the best possible care begins with having access to the most up-to-date patient information and clinical data. The first health information exchange in Houston, Memorial Hermann Information Exchange (MHiE) puts the latest patient health data at the fingertips of Exchange members through a suite of innovative solutions. MHiE integrates silos of health data that exist in doctors’ offices, diagnostic testing facilities, outpatient services, emergency rooms, hospitals, home health agencies and post-acute providers. MHiE leads to improved patient safety and quality of

care, because it offers the medical history and data of patients aggregated from Exchange members throughout the region. Having access to MHiE’s network of patient data can expedite care, streamline medical practice workflow and eliminate redundant testing and imaging. Streamlined workflow can lead to early detection and diagnosis of medical conditions.

Advantages of MHiE:

- Improves treatment effectiveness while decreasing costs
- Makes the patient’s health information easily accessible in the event of medical emergencies or natural disasters
- Provides access to patient diagnostic images and test results
- Reduces duplicate testing and the incidence of denied claims
- Uses a secure HIPAA-compliant network
- Free service encourages patients to opt-in

MHiE Community Health Exchange (cHX).

This secure, encrypted electronic network gives authorized users access to consented patients’ most up-to-date health information contributed by all Exchange members.



Jamie McCarthy, M.D., Emergency Center medical director at Memorial Hermann-Texas Medical Center, accesses radiology images using the MHiE Image Gateway.

MHiE's suite of solutions facilitates access to important clinical information and radiology images to provide safer, efficient and equitable patient-centered care.

MHiE Image Gateway. This image exchange provides secure, access to view and share medical images. Relevant diagnostic images are available for Exchange members as patients transition to different venues of care. The MHiE Image Gateway supports the regional trauma network as well as physician-to-physician and imaging center-to-physician image sharing.

MHiE Diagnostic Health Exchange (dHX). Thousands of users currently access this diagnostic exchange for lab orders, real-time lab and radiology results, radiology image links and transcription documents. MHiE dHX directly integrates with selected EMR systems, making Memorial Hermann diagnostic test results immediately available to authorized caregivers.

MHiE eClinicalWorks® Health Exchange (eHX). This solution facilitates interoperability between physicians within the eClinicalWorks community. This tool supports a holistic view of a patient's ambulatory record within the connected eCW community. With patient consent, records can be shared between treating physicians to ensure greater accuracy.

MHiE eClinicalWorks® Provider to Provider (eP2P). This integrated network connects physicians using eClinicalWorks to electronically share patient records, referrals, messaging and appointments. It is a scalable and secure way to enhance patient care through improved provider-to-provider dialogue.

MHiE ScheduleNow. This free scheduling tool enables patients to easily search and book appointments online. Memorial Hermann is one of the first healthcare systems in the nation and the first in Houston to offer appointment scheduling for an array of outpatient services through a website.

From doctor office visits to mammograms and even emergency room reservations, patients can now book their appointments at the click of a mouse. Patients go to www.memorialhermann.org, select the *ScheduleNow* icon, and choose physician office visit, screening mammogram or ER. Patients then follow the prompts to schedule an appointment. ScheduleNow provides appointment reminders via email as well as a link to a map for directions. Appointments can be made 24/7 from any Internet-connected device.

eNOTIFY: KEEPING PCPS INFORMED OF PATIENT HOSPITALIZATIONS

Communication with a patient's Medical Home throughout the patient's episode of care is critical in order to affect quality and cost. eNotify notifies PCPs of patient admissions electronically via an email, text message and/or their clinical computer system upon an emergency visit. Real-time notification facilitates proactive management of the patient's care in the ER and potential hospital visit and coordinates information-sharing to help diagnose and treat the patient. This can significantly impact quality of care and emergency and hospital utilization.

Patients declare a PCP at time of admission and indicate that they want the PCP notified. The physician's eNotify preferences are set up online to properly route the communications. eNotify is HIPAA compliant and contains no patient health information. Proper authentication is required to receive specific details about the patient admission.



MHMD physician Ankur Doshi, M.D., of PrimeCare Medical Group, is kept informed of patient hospitalizations via eNotify.

One way in which we connect the primary care physicians with in-patient hospital stays is to notify PCPs electronically via an email, text message and/or their clinical computer system upon an emergency visit.

DELIVERING VALUE TO PAYORS AND MEMBERS

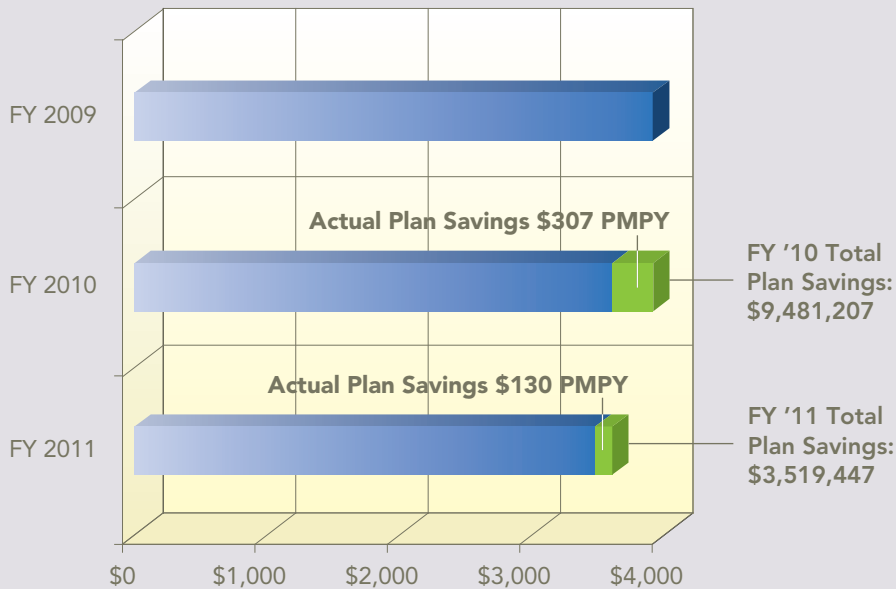
MHealth Population Cost Reductions

MHMD is the contracted network for Memorial Hermann, the largest employer in Houston. In conjunction with MHealth Insurance Company, MHMD physicians are encouraging their patients to take a proactive approach to health management. MHMD is enabling these physicians to achieve the desired health metrics.

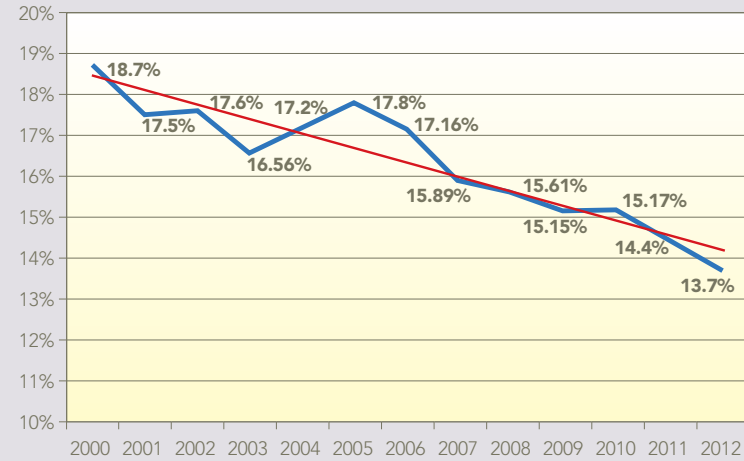
Requiring employees to establish a physician relationship by choosing a PCP and taking biometric health screenings is contributing to earlier diagnosis and intervention. For employees and family members with chronic illnesses, coordinated disease management has provided a continuum of care that helps to better manage chronic illnesses and reduce hospital readmissions.

Through our combined efforts, we have been successful in reducing total healthcare costs of the Memorial Hermann employee population. Through education and wellness programs, these MHealth members are making the necessary lifestyle changes to stay healthy and avoid illness.

MHMD SHARED SAVINGS PER MEMBER/PER YEAR (PMPY)

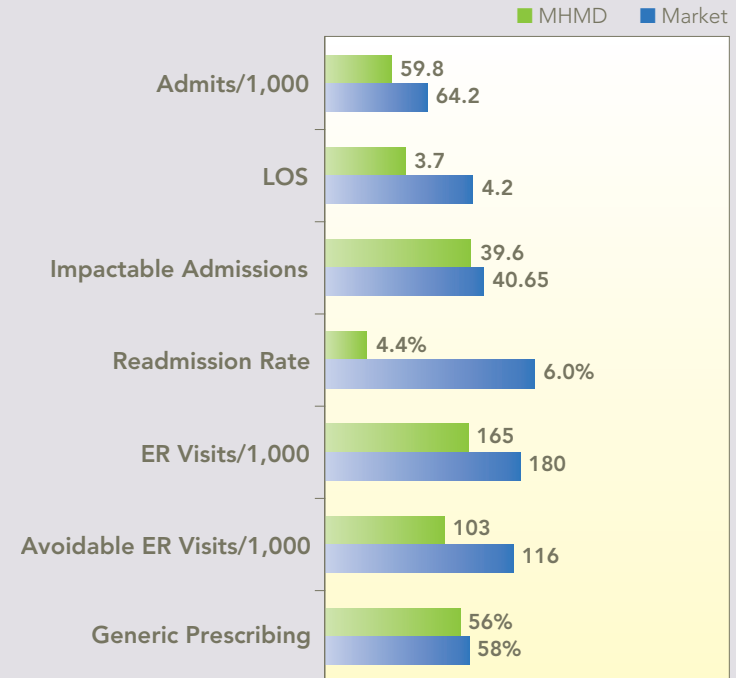


SUPPLY EXPENSES/NET OPERATING REVENUE



Supply Chain Orientation June, 2012

PERFORMANCE COMPARISON OF MHMD PHYSICIANS VS. HOUSTON MARKET



GLOSSARY OF TERMS

Accountable Care Organization (ACO)

– a group of healthcare providers working voluntarily with Medicare to provide high-quality care at the right time, in the right setting.

Clinical Integration – involves independent physicians of every specialty coming together in a common commitment to quality and accountability.

Clinical Programs Committee (CPC) – physician committees serving as the primary source of evidence-based practices intended to improve quality and efficiency of care.

CPOE or eOrdering – a computerized physician order entry system for medical orders integrated with adverse event data to streamline delivery of safer patient care.

Continuity-of-Care Document – the accepted electronic format for the exchange of clinical information, including patient demographics, medications and allergies.

Diagnosis-Related Group (DRG) – a coding system used in determining reimbursement that classifies hospital cases into groups to identify the products/procedures that a hospital provides.

Electronic Medical Records (EMR) – electronic healthcare tool that can be used to facilitate, inform, measure and sustain improvements in the quality, efficiency and safety of healthcare.

Evidence-based Medicine – a collaborative effort between scientific researchers and physicians to deliver better patient outcomes based upon patient observation and scientific data.

Medical Home – a model of care that builds a long-term healing relationship between the patient and a physician-led care team and uses advanced IT tools, patient care reminders and biometric screenings to optimize patient health.

Meaningful Use – the incentivized use of certified electronic medical records technology to achieve health and efficiency goals through data capture and information sharing.

National Care Quality Association (NCQA) – organization that provides accreditation and certification of patient-centered Medical Homes and provider organizations.

Order Sets – standard collection of predetermined medications and interventions appropriate to a particular disease, condition or procedure and proven to lead to better clinical outcomes.



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