

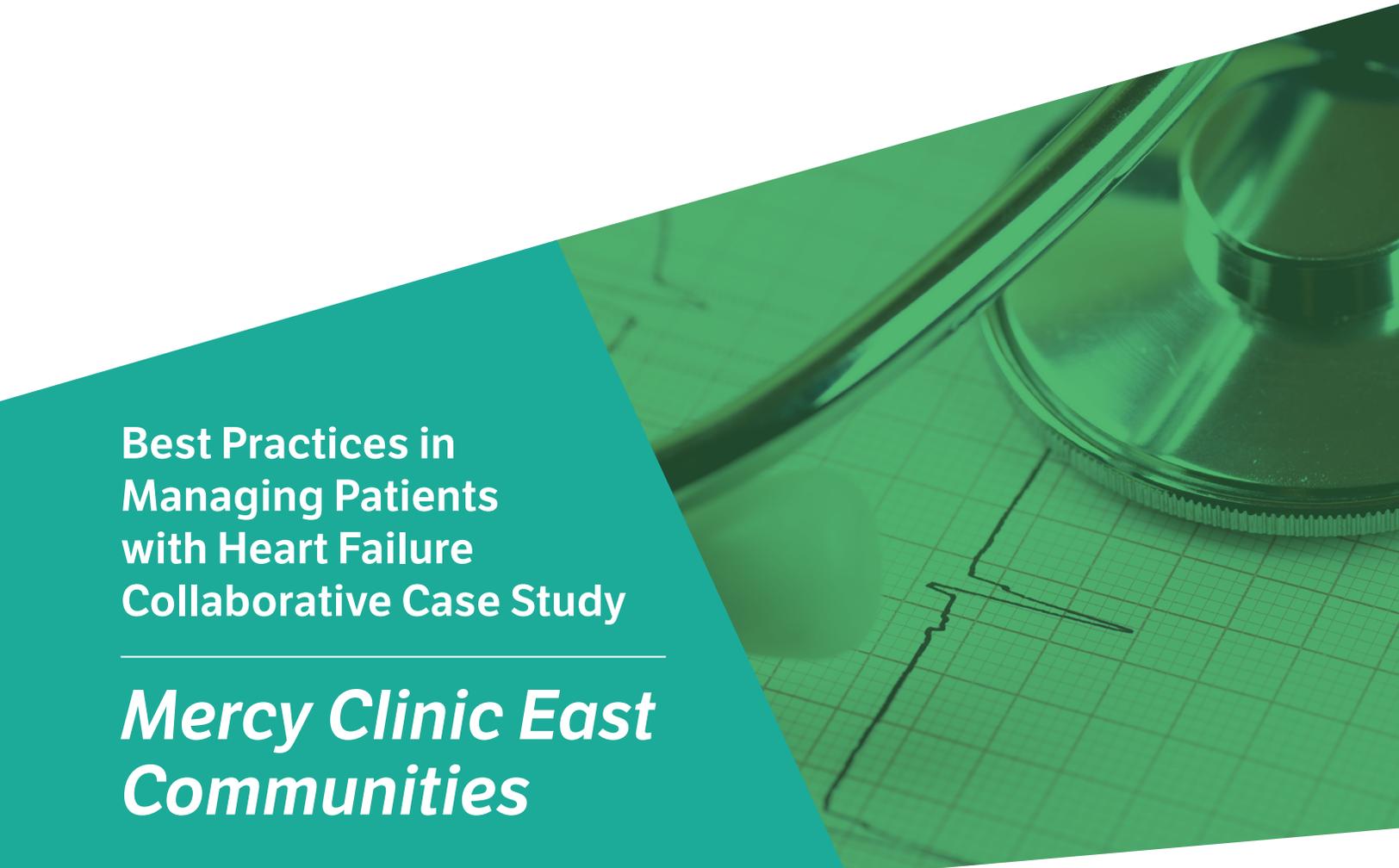


Advancing High Performance Health

AMGA Foundation

**Best Practices in
Managing Patients
with Heart Failure
Collaborative Case Study**

***Mercy Clinic East
Communities***



Organizational Profile

Mercy Health System is a large Catholic health system that covers a four-state Midwest region. Mercy Clinic East Communities, a subset of the larger Mercy Health System, is a large integrated physician group, with its own hospitals and clinics, located in Eastern Missouri. Mercy Clinic East Communities (Mercy Clinic) includes:

- 4 acute care hospitals
- 1 managed/affiliated hospital
- 1 heart hospital
- 1 rehab hospital
- 1 children's hospital
- 1 virtual care center
- 283 physician practices
- 95 clinic locations
- 3 outpatient surgery centers
- 11 urgent care sites
- 3 convenient care centers
- 707 physicians (including 157 primary care physicians and 45 cardiologists)
- 200 advanced practice providers
- 15,579 employees

Mercy Clinic utilization totals in the most recent 2016 fiscal year included:

- 3,549,921 outpatient/office visits
- 175,165 emergency department visits
- 58,670 inpatient discharges
- 53,865 surgeries
- 10,286 births

Mercy Clinic East Communities is physician-led and professionally managed and relies heavily on physicians to provide oversight over all financial, quality, and management matters.

Awards and Honors

- The team from Mercy Clinic East Communities recently won a national award called the “Stronger Hearts Best Practices Award,” through the National Forum for Heart Disease and Stroke Prevention. The award program aims to highlight innovative ways to improve outcomes for patients with heart failure by identifying community-based programs that have best practices to share.
- Mercy Clinic East Communities’ Ambulatory Heart Failure Care Management Team was selected as one of this year’s Stronger Hearts Best Practices awardees (there were two winners nationwide).
- They also received the AMGA-Optum Award for Innovation in Population Health in March 2016, and they were a CDC/ Million Hearts Hypertension Control Champion in 2015.

Executive Summary

By 2014, the 30-day heart failure (HF) all-cause readmission rate at Mercy Hospital St. Louis had reached 18.9% and was trending up. The hospital readmission steering team began working to improve care for patients with complex psychosocial and medical needs, and ultimately reduce hospital readmissions. As part of its overall commitment to improve care for HF patients, Mercy Clinic East Communities (Mercy Clinic) then elected to participate in the AMGA Best Practices in Managing Patients with Heart Failure Learning Collaborative (HF Collaborative) from October 2015 to November 2016.

Mercy Clinic chose to participate in the AMGA HF Collaborative because they wanted to decrease HF readmission rates. Through the HF Collaborative, they received support from AMGA and were able to learn from clinical experts. Participating organizations also share insights and best practices.

Mercy Clinic commissioned the Ambulatory Heart Failure Care Management Team (AHFCM Team) in 2014. The team, led by primary care, quality, and care management divisions at Mercy Clinic, targeted high-risk HF patients and assisted them with the transition from hospital to ambulatory setting. In concert with the HF Collaborative, nurses began following patients in October 2015.

The goal was to improve continuity of care, patient outcomes, and quality of life. The team focused on treating the whole person, taking into account relevant social and psychological factors, rather than focusing solely on the physical symptoms of the disease or the number of hospital readmissions.

The results have led to readmission rates well below the national average for those patients managed by the AHFCM Team.

Program Goals and Measures of Success

The program goal was to decrease HF readmissions. The measures of success were identified in the decreased HF readmission rates that were tracked monthly, along with individual case studies. The AHFCM Team followed the sickest HF patients and was able to successfully keep them out of the hospital and live a better quality life.

Population Identification

The AHFCM Team is available to high-risk HF patients at Mercy Hospital St. Louis or HF patients referred by Mercy primary care offices or providers in Mercy Clinic's skilled nursing facilities. Because the goal is to engage HF patients prior to hospital discharge, most HF patients are identified in the inpatient setting using a readmission risk score that is embedded in the electronic medical record (EMR). Primary care, specialists, hospitalists, inpatient care management, and other medical professionals in the Mercy Clinic system may also refer patients to the AHFCM program through a referral order in the Mercy Clinic EMR. As of January 2017, the team has followed 349 high-risk patients.

Intervention

As part of Mercy Clinic's involvement in the HF Collaborative, the AHFCM Team began following patients in October 2015. The AHFCM Team targeted high-risk HF patients and assisted them with the transition from hospital to ambulatory setting.

The first step of the intervention involved patient referral into the AHFCM program from a Mercy Clinic hospital, PCP, SNF, or other Mercy Clinic medical professional. The designated AHFCM nurse explained the program to each patient and family and scheduled the first home visit. Home visit frequency was based upon the individual needs of each patient. These visits are at no cost to the patient.

On home visits, nurses assessed HF symptoms, reviewed medications, and provided patient education regarding medications, early signs/symptoms of heart failure, and self-care skills. Nurses assisted with follow-up appointments and other ambulatory services, and also ensured unmet needs were promptly addressed. The nurses helped to manage the patients' HF conditions by communicating problems with the treating PCPs or cardiologists to ensure patients received prompt medication adjustment if necessary. A social worker was also available to address complex social and/or financial needs.

In addition to in-home visits, the AHFCM Team implemented several innovative care delivery strategies. A home IV Lasix protocol was rolled out in July 2016 for patients identified as needing long-term diuretics in the ambulatory setting. The use of telemonitoring devices to transmit data (BP, HR, SpO₂, daily weight, and symptoms of HF exacerbation) was also implemented, allowing the team to be alerted if a patient's data fell outside parameters, triggering timely interventions by an AHFCM nurse.

Additionally, the AHFCM Team used non-invasive external impedance monitors to detect changes in fluid status. A baseline reading was obtained before or shortly after hospital discharge, and the nurses analyzed subsequent readings after the patient returned home. The monitor detected early warning signs of dehydration or fluid overload oftentimes before the patient could recognize that there was a problem.

Patients were also set up to receive text messages or automated phone calls, daily or as needed, asking questions related to HF. This automated tool was instrumental in reaching a large quantity of patients in a short period of time and quickly alerting nurses if a patient was developing signs or symptoms of exacerbation.

The AHFCM nurses remained engaged for the long term and acted as liaisons between the patients and providers.

A multidisciplinary team met weekly to support the AHFCM team, discuss individual patient cases, identify causes of readmissions, and investigate breakdowns in systems which led to readmissions. Those at the table included ED, primary care, cardiology, hospitalists, nutrition, home care, palliative care, hospice, cardiac rehab, inpatient care management, social work, pharmacy, and chaplaincy.

Outcomes and Results

To date, the AHFCM Team has followed 349 high-risk HF patients. The 30-day unplanned readmission rate of patients managed by the AHFCM team is currently 7.2%.

The current 30-day hospital all-cause readmission rate at Mercy Hospital St. Louis is 16.5%, as compared to 18.9% percent at the beginning of the Collaborative in 2014, and the national rate of 21.9%.

The rate for ACE/ARB remains high at 88.6%, as does the rate for beta blocker (72.1%).

Lessons Learned and Ongoing Activities

Approximately 70% of HF admissions and readmissions are related to co-morbid conditions and diagnoses unrelated to HF. Having nurse care managers and a social worker in the home, along with an interdisciplinary team that meets weekly to review complex patients, were keys to Mercy Clinic's success in reducing readmissions. Another essential feature was the involvement of a high-level administrative steering team to monitor results and shape future initiatives.

The AHFCM team is evaluating common themes involved in readmissions, such as low patient engagement, and exploring ways to better address these problematic issues. Patient identification has also been a challenge, as the team works on ways to identify patients who would best benefit from the program.

Many patients at high risk for readmission actually declined participation in the program when the intake coordinator nurse contacted them for enrollment. The AHFCM Team is researching ways to improve the process. The most important step is to enroll patients before they leave the hospital. Having PCPs recommend this care management program also improves rates of patient enrollment.

Mercy Clinic is in the process of developing a post-acute care strategy involving preferred skilled nursing facilities to better enable communication and follow-up with PCPs after skilled nursing discharge.

Mercy Clinic is also considering expansion of the in-home care management team to include a virtual care concept.

Going forward, Mercy Clinic plans to use the information gathered from the AMGA HF Collaborative as a model to expand for use in managing other chronic conditions throughout the Mercy Clinic healthcare system.

References

Medicare Hospital Comparison. (n.d.). Retrieved January 12, 2017, from: <https://www.medicare.gov/hospitalcompare/compare.html#cmpTab=4&cmpID=260052%2C261337&cmpDist=2.6%2C31.3&dist=50&loc=63090&lat=38.5434439&lng=-91.0394635>.

Patient Story

The team evaluated a 79-year-old female patient who had 15 hospital admissions for heart failure (HF) in 2015 alone. It became clear she did not know how to effectively manage her disease and she was overwhelmed with her medications. The patient had become accustomed to contacting her primary care office for all of her health issues, but if she did not hear back within one or two hours, she would go to the emergency department to be checked out.

The AHFCM Team received a referral in October 2015 during an inpatient stay for pneumonia and exacerbation of congestive HF.

An AHFCM nurse began seeing the patient in her home two to three times each week, and provided education on HF, medications, and diet. The nurse also set up the patient's medications every two weeks to avoid patient confusion (since she was prescribed 16 different medications).

The patient and her family expressed their appreciation for the direct communication that occurred between the AHFCM nurse and the patient's physician. It was a comfort to the patient to know that her physician would be contacted if any issues were to arise and would follow-up with a treatment plan, thus preventing trips to the hospital.

The patient had only three hospitalizations in 2016 and only for serious complications, including pneumonia with MRSA-resistance, UTI requiring intravenous antibiotics, and wide-complex tachycardia requiring pacemaker placement. This one patient went from 15 readmissions in 2015 to only 3 in 2016.

In November 2016, she was diagnosed with endometrial cancer. The patient now takes 23 medications and is seen by the AHFCM nurse every other week. Her HF condition remains stable.

Appendix

Figure 1A: Measure 1 - ACE/ARB/ARNi (Mercy East Comm)

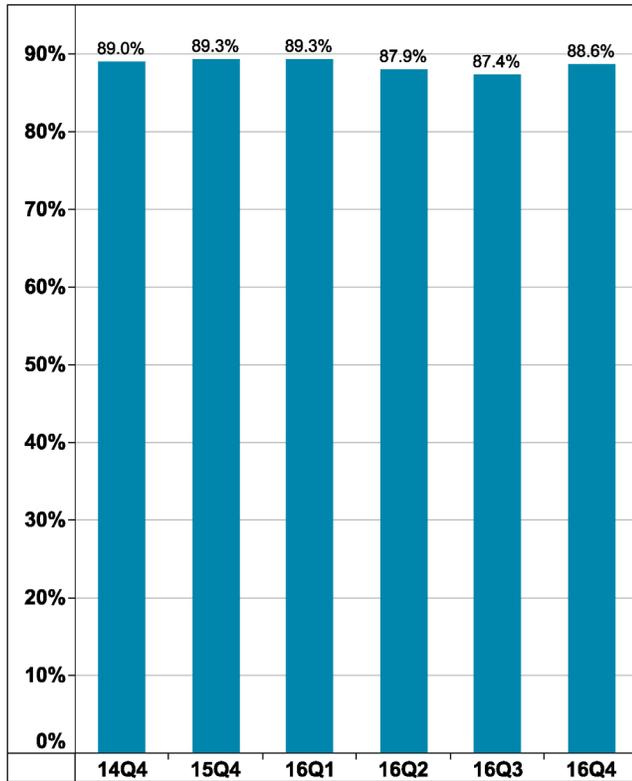


Figure 1B: Measure 2 - Beta Blocker (Mercy East Comm)

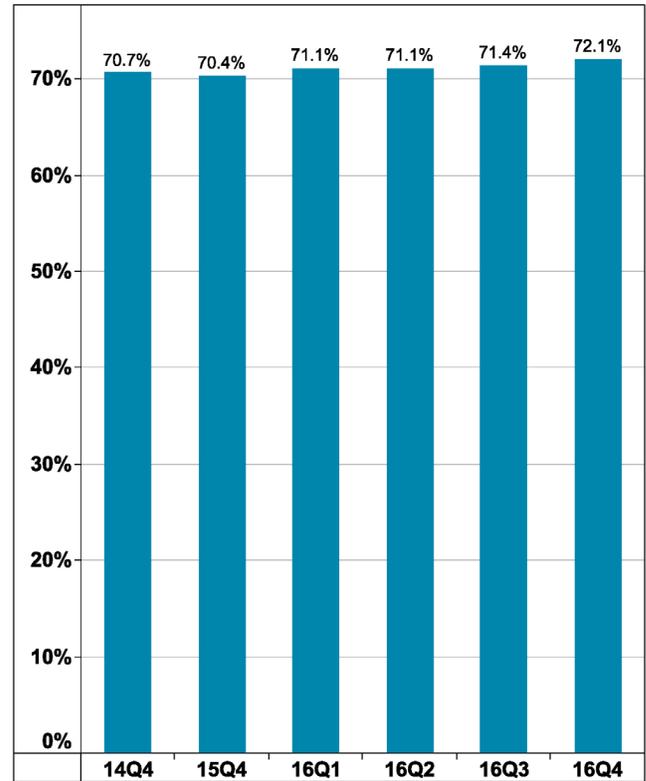


Figure 2: Measure 3 - Readmission Rate (Mercy East Comm)

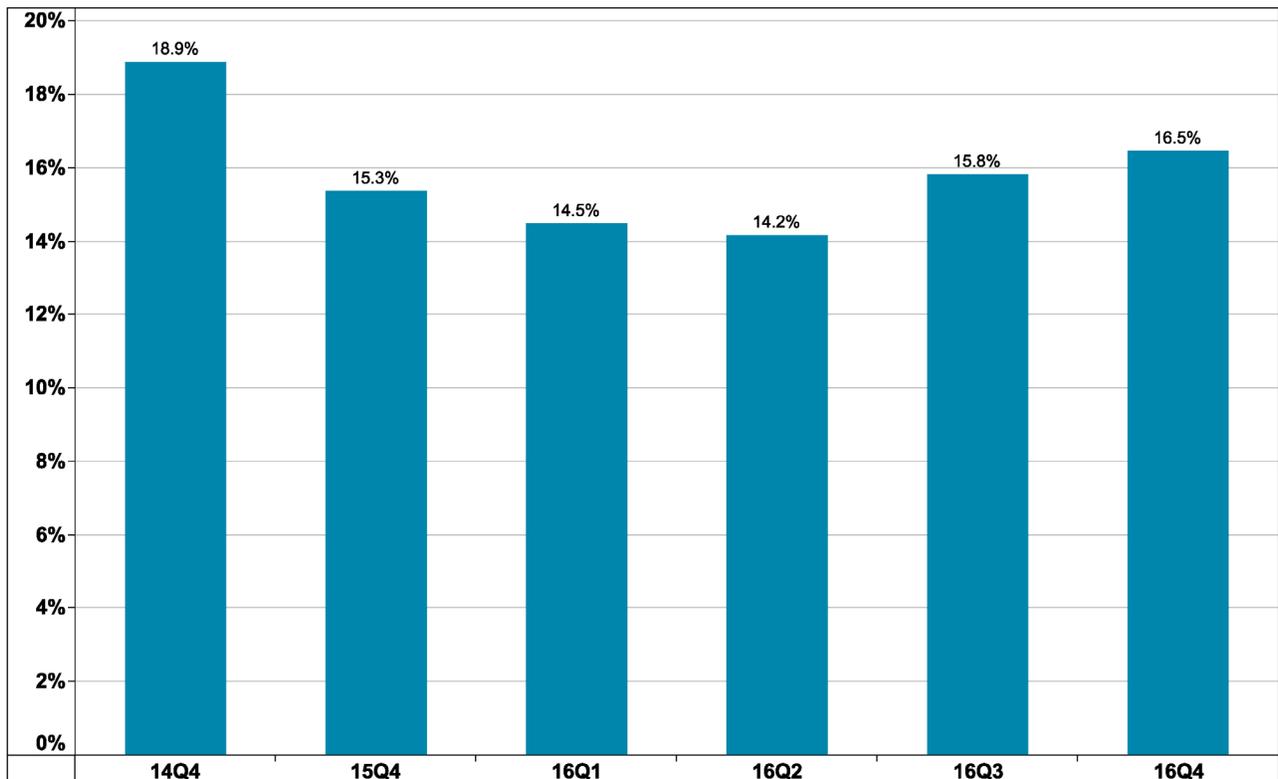
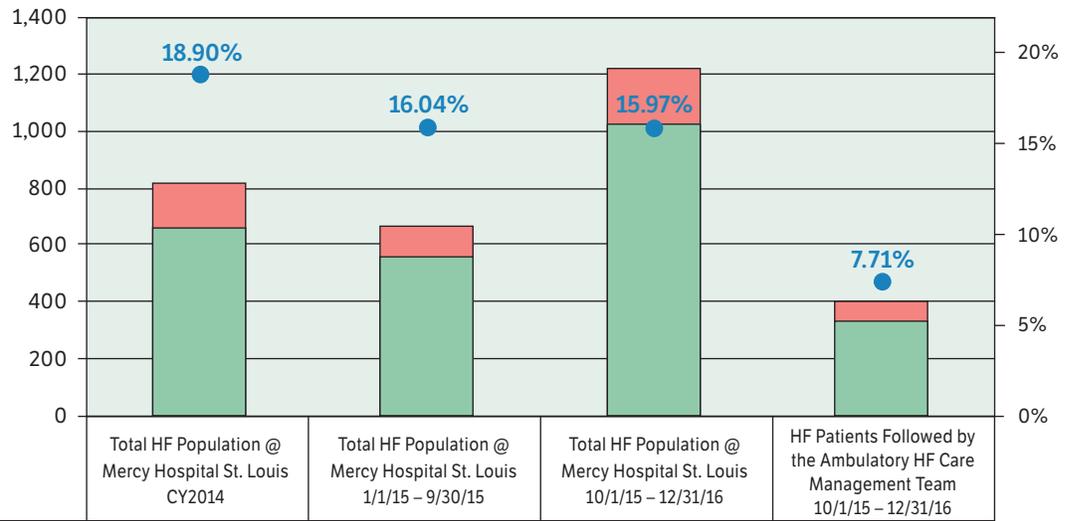


Figure 3: Mercy Hospital St. Louis – HF Readmission Rates



30-Day Readmission	154	107	195	31
Did Not Have a 30-Day Readmission	661	560	1,026	371
Total Number of HF Inpatient Admissions	815	667	1,221	402
Percent	18.90%	16.04%	15.97%	7.71%



Project Team

Carolyn Koenig, M.D., Medical Director

Mary Laubinger, R.N., M.S.N., Executive Director of Quality,
Mercy Clinic East Communities

Laura Tuschhoff, R.N., B.S.N., Clinical Outcomes Manager
and Project Lead for the AMGA Best Practices in Managing
Patients with Heart Failure Learning Collaborative

Ambulatory Heart Failure Care Management Team:

- **Cathy Martin, R.N., B.S.N.**, Director of Care Management
- **Dawn Brandenburg, R.N.**, Supervisor Care Management
- **Lindsay Klemm, L.P.N.**, Intake Coordinator
- **Kim Porter, R.N.**, Transition/Referral Coordinator
- **Carol Murphy, M.S.W., LCSW**, Ambulatory Social Worker
- **Dawn Dorsey, R.N.**, Supportive Care Field Nurse
- **Laura Pastrana, R.N.**, Supportive Care Field Nurse

- **Jean Young, R.N.**, Supportive Care Field Nurse

- **Stacey Cooksey, R.N.**, Supportive Care Field Nurse

Interdisciplinary Heart Failure Weekly Team Meetings:

- **Carolyn Koenig, M.D.**, Medical Director
- **Bruce Czarnik, M.D.**, Cardiologist
- **Cheryl Street, N.P.**, Cardiology Nurse Practitioner
- **Alok Sengupta, M.D.**, ED Physician
- **Teresa Schultz, M.D.**, Palliative Care Physician
- **Catherine Saint**, Pharmacist
- **Susan Stucco**, Ambulatory Chaplain
- **Rachel Keech, D.O.**, Hospitalist

The team meetings also involved participation by Home Health, Palliative Care, Hospice, Nutrition, Cardiac Rehab, Inpatient Care Management, Social Work, and the Supportive Care Field Nurses, Supervisor, and Director.



Sponsored by AMGA and Novartis Pharmaceuticals Corporation

© 2017 AMGA and Novartis Pharmaceuticals Corporation

Printed in the USA on Recycled Paper 