PROVIDER
Regions Hospital — Neurosurgery Department

CHALLENGE
To reduce the rate of posterior spinal surgeries going back for surgery due to infection. Published rates of revision surgery are 10-12% with total costs approximated, but potentially exceeding $300,000–$900,000 in additional health care dollars per patient.

INNOVATION
Intra-wound antibiotic powder has been successful in traumatic spinal injuries. Instituted the routine use of prophylactic intra-wound Vancomycin powder in posterior spinal surgery, regardless of the indication.

IMPROVING HEALTH
• Prevention and reduction in operative infections

ENHANCING PATIENT EXPERIENCE
• Smoother recovery/rehabilitative post-operation course
• Reduce time and expense associated with possible reoperation to patient

TAKING AIM AT AFFORDABILITY
• In a pilot study involving 300 patients, when a $12 vial of Vancomycin prevented reoperation for infection, a mean cost of $41,251 was saved.
• From published studies, a 10-20% reduction in the frequency of revision surgery has been demonstrated.

Vancomycin Powder Significantly Reduces Revision Surgery Rates in Posterior Spinal Surgery
PROVIDER
Blood and Marrow Transplant (BMT) Program
- University of Minnesota Medical Center, Fairview
- University of Minnesota Amplatz Children’s Hospital

CHALLENGE
The rate of central line associated blood stream infection (CLABSI) among BMT patients exceeded the National Healthcare Safety Network (NHSN) threshold.

INNOVATION
Implementation of a central line care bundle focusing on the areas of strict central line antisepsis, limiting line access and clinical staff education.

IMPROVING HEALTH
- Reduction of CLABSI rates in adult and pediatric BMT patients from 6.0/1,000 line days in 2009 to 0.8/1,000 line days in 2012. This represents a decrease of 86%.

ENHANCING PATIENT EXPERIENCE
- Improved patient recovery and decreased CLABSI related morbidity.

TAKING AIM AT AFFORDABILITY
- Centers for Disease Control and Prevention estimates that every CLABSI results in an additional $16,550 in healthcare spending. This is likely grossly underestimated for a severely immune compromised population such as BMT. The reduction in CLABSI results in fewer hospital days, less antibiotic use and fewer procedures to remove or replace infected lines.
PROVIDER
Chiropractic Care of Minnesota, Inc.

CHALLENGE
Limited data was available on the outcomes of back and neck pain treatment

INNOVATION
Collected data on outcomes of back and neck pain treatment and also determined that doctors were not using available tools

IMPROVING HEALTH
• Created compelling argument for use of back and neck pain treatment
• Demonstrated reduction in pain after back and neck pain treatment
• Demonstrated increase in body function after back and neck pain treatment

ENHANCING PATIENT EXPERIENCE
Patients reported:
• Statistically significant increase in function
• Statistically significant decrease in pain
• Missing less work and other activities

TAKING AIM AT AFFORDABILITY
• Demonstrated decreased cost when treatment utilized as opposed to other treatments
• Patients undergoing treatment missed less work and made fewer mistakes at work
• Less invasive, less expensive treatment protocol than other treatments
PROVIDER
Center for Diagnostic Imaging (CDI) Vascular Care

CHALLENGE
Critical limb ischemia (CLI), the most severe manifestation of peripheral artery disease (PAD), is caused by blockages in the arteries of the leg. CLI is a major public health burden due to limb amputation and cardiovascular events. Amputees have a significant decrease in the quality of their life, which negatively affects their families and the community. Significant variations in the intensity and quality of vascular care can result in excessive amputations and costs.

INNOVATION
CDI created a state-of-the-art outpatient vascular center for consulting, diagnosing and treating patients. CDI’s patient-centered program provides patients with consistent, high quality vascular care in a convenient outpatient setting. Patient care and management is carefully coordinated with the patient’s entire treatment team. CDI’s program is focused on reducing amputation rates by providing the best endovascular care available, utilizing the latest technology and techniques. Endovascular treatments can replace most open operations, reducing patient morbidity and mortality.

IMPROVING HEALTH
This comprehensive treatment center provides patients with access to:
• A complete evaluation and treatment plan in a single visit and the use of a non-invasive vascular lab, state-of-the-art imaging and the latest endovascular devices and techniques to maximize outcomes and limb salvage
• Continuity of care maintained throughout initial visit, treatment and long-term follow-up
• Referring provider partnerships for managing each patient’s long-term care

ENHANCING PATIENT EXPERIENCE
• Reduced appointment wait times with next-day appointments available
• Enhanced shared-decision making options available because of CDI’s services

TAKING AIM AT AFFORDABILITY
• Prevented costly amputations and expensive rehabilitation
• Provided high quality revascularization in a less costly outpatient center
PROVIDER
Crutchfield Dermatology, P.A.

CHALLENGE
While staff training and supervision by the medical director is exhaustive and subject to continual analysis, Crutchfield Dermatology sought additional training opportunities to enhance familiarity with medical and aesthetic skills, administration and an objective basis to measure continued growth in knowledge.

INNOVATION
The clinic explored a range of credible training and evaluation opportunities through increased access to available technology. The clinic contracted and paid for staff certification by The Association of Certified Dermatology Techs and THE Aesthetic Practice Association. The program provides every employee who serves patients with an expanded, measurable base of knowledge of medical, customer service and administrative functions.

IMPROVING HEALTH
• Improved in-depth expertise and knowledge base for delivery of care and service to patients

ENHANCING PATIENT EXPERIENCE
• Met patient expectations with consistent level of care
• Improved patient education and decision making prior to consultation with the physician

TAKING AIM AT AFFORDABILITY
• Improved efficiency as better able to evaluate patient needs and questions; minimized administrative errors
• Lowered cost with shorter encounter due to greater competence
PROVIDER
Minnesota Gastroenterology (MNGI), P.A.

CHALLENGE
Minnesota Gastroenterology recognizes the value of high quality customer service. MNGI identified missed opportunities to excel in this area and the challenge was to respond to patient expectations for excellent service at every contact. Although a patient-focused mission, values and a “golden rule” message had been communicated by MNGI, there was not a clearly articulated customer service philosophy and set of standards.

INNOVATION
Created and implemented the EXTREME Customer Service Program. A multidisciplinary project team was formed to investigate, develop and implement a clearly articulated patient experience philosophy. The EXTREME program, and each letter of the “extreme” word, establishes service standards and encourages MNGI staff and physicians to “go above and beyond” at every contact.

IMPROVING HEALTH
• Improved quality of care delivery and how treatment is delivered to patients
• Established expectations throughout the care visit ensuring appropriate diagnosis and treatment from the time of arrival
• Improved understanding with patients and families regarding results and/or follow-up care

ENHANCING PATIENT EXPERIENCE
• Provided clearly established service standards to patients and proactively sought their feedback
• Feedback identified areas for improvement; ongoing training and support provided to physicians and staff

TAKING AIM AT AFFORDABILITY
• Patients are more empowered to communicate concerns and ask questions during the initial visit
• Anticipating questions and concerns made MNGI’s care team more efficient, reducing need for subsequent visits due to lack of communication or misunderstanding
• Patients have a higher perception of the value they received
With a positive societal trend toward increased physical fitness, there has been a correlated increase in activity related injuries. Athletes in a high school and collegiate setting often have access to preventive education and post-injury treatment in the form of an athletic trainer. Some schools and most club sport participants, however, do not have access to a resource such as this and often resort to utilizing more costly health care services, often in a more advanced state of injury.

Established a centralized access model to athletic trainer services for active individuals

• Provided access to preventive education to avoid activity related injury
• Earlier access to health care services to establish a plan before further, more advanced injuries occur

• Provided timely access to the right care at the right time
• Facilitated continuity of care should more advanced care be required
• Direct feedback from pilot group has been overwhelmingly positive

• Realized an estimated 92% reduction in access to more advanced care in the pilot group
• Direct cost savings to pilot group patients of more than $5,000
PROVIDER
Tria Orthopaedic Center

CHALLENGE
Residents were not receiving hands-on training to perform various procedures outside of training in the operating room. A lack of training prior to operating room experience has meant that it is difficult for residents to maximize their operating room experience. This has lead to residents feeling that they do not get enough exposure and hands on experience during the course of the rotation.

INNOVATION
Developed a curriculum for third, fourth and fifth year residents that starts with a brief didactic session and then moves them into the BioSkills lab to complete hands-on work and perform various surgical procedures.

IMPROVING HEALTH
• Quality training by board certified physicians
• Timely feedback on technique
• Improved patient care

ENHANCING PATIENT EXPERIENCE
• Improved surgical skill by residents
• Decreased teaching time in the operating room due to increased knowledge by the residents from the non-operating room experience

TAKING AIM AT AFFORDABILITY
• More efficient training results in decreased overall system costs
• Improved efficiency of young surgeons
Minneapolis Gastroenterology (MNGI), P.A.

**CHALLENGE**
Colonoscopy for colorectal cancer screening is a common procedure often avoided. Non-compliance can result in risk to an employer’s well-being plans, and raises concern about future claims and lost productivity. The cost of a colonoscopy can vary greatly by physician and more specifically by facility, creating additional expense to patients, health plans and ultimately employers.

**INNOVATION**
MNGI collaborated directly with employers to increase the compliance of colorectal cancer screening. The result is a Pay-One-Price Colonoscopy program that bundles the cost of professional fees, facility fees, lab tests, preparation kits, biopsies and more into a fixed price. The program provides both procedural savings and budget management for the employer while educating and motivating employees to be screened. The employer supports the program through employee incentives, driving plan participants to MNGI for the procedure with assurance of no out-of-pocket costs.

**IMPROVING HEALTH**
- Increases compliance with recommended colorectal cancer screening
- Supports early detection
- Program flexibility allows symptomatic patients to use as well
- Promotes comprehensive screening education

**ENHANCING PATIENT EXPERIENCE**
- Provides prepping materials and instructions for full understanding and completion
- 24-hour nurse phone support before and after
- Prompt turnaround of results
- Convenient outpatient access to five metro locations

**TAKING AIM AT AFFORDABILITY**
- Removes price variation for predictable costs to employers and patients
- Reduces overall treatment costs with early cancer detection
- Streamlines billing
- High quality, high value care; employees directed to nationally-recognized leaders in gastroenterology with assurance of no out-of-pocket costs
PROVIDER
Regions Hospital; HealthPartners Medical Group

CHALLENGE
An opportunity was identified to safely reduce the number of hospital admissions for low-risk heart failure patients presenting to the emergency department.

INNOVATION
A protocol to identify low-risk heart failure patients presenting to the emergency department and discharge them to home or to an observation unit was implemented. Patients are initially evaluated to assess for an acute coronary syndrome, respiratory failure, cardiogenic shock and hypotension. If none, then patients receive a single dose of IV diuretic. If they have clinical improvement with the diuretic, they are then evaluated to see if they qualify as low risk, which consists of a normal blood pressure, normal serum Na, troponin <0.1, resting heart rate less than 100 beats per minute and resting oxygen saturation greater than 92% on room air. Patients that satisfy these requirements are then discharged, with a next day follow-up arranged in the cardiology clinic.

IMPROVING HEALTH
• 12% readmission rate within 30 days, which is lower than the average Minnesota hospital readmission rate for heart failure of 15.2%

ENHANCING PATIENT EXPERIENCE
• Patients are discharged home or to a short stay in the observation unit, which is preferred to hospitalization. This results in less time in the hospital and more time at home.

TAKING AIM AT AFFORDABILITY
• In a seven month period, 13 total 30-day inpatient readmissions were saved
• Four total 30-day inpatient admissions were saved by placing patients in observation
• Nine total 30-day inpatient admissions were saved by discharging patients to home
An opportunity was identified to reduce hospitalizations and the cost of care for patients presenting to the emergency department with chest pain that is stratified as low-risk of representing an acute coronary syndrome. The typical experience in the United States is that patients who present to the emergency department with chest pain are hospitalized while waiting for testing to be completed that determines if their pain is cardiac in nature. This is despite the fact that the vast majority of chest pain patients are not experiencing an acute coronary event.

Patients presenting to the emergency department with chest pain that is stratified as low-risk for an acute coronary syndrome, based on TIMI score, troponin draw and electrocardiogram, are discharged for outpatient stress testing within 72 hours.

- Since the program’s inception in August of 2011, more than 1,000 admissions have been avoided
- This protocol is safe, as less than 1% of these patients have required a coronary intervention in the follow-up period
- Patients stay at their home instead of being hospitalized while awaiting their stress test
- Less time away from home and less time away from work
- The program saves $500,000 annually in avoided hospital admissions
PROVIDER
Children’s Hospitals and Clinics of Minnesota

CHALLENGE
Research indicates ventilator-associated pneumonia (VAP) is the second most acquired infection among pediatric intensive care unit (PICU) and neonatal intensive care unit (NICU) patients. The NICU saw its VAP cases nearly double from 2010 to 2011 and wanted to address this challenge.

INNOVATION
An interdisciplinary group consisting of neonatologists, nurse practitioners, nursing education, respiratory therapy and infection control was formed. This group utilized current literature and reviewed protocols and feedback from hospitals throughout the country to develop a “ZAP-VAP” protocol specific to the NICU. Key components of this protocol included oral care, suctioning, formalized bedside equipment setup and standardized intubations with a clean insertion technique.

IMPROVING HEALTH
- Decreased length of time on ventilator by decreasing infection risk factors, which can significantly reduce premature baby lungs from developing chronic lung disease of prematurity
- Study showed that the group of infants that had a VAP case during their stay was on the ventilator for approximately 30 days longer than the non-VAP diagnosis patients of the same gestational age group (2010–11)

ENHANCING PATIENT EXPERIENCE
- Enhanced bonding, physical interaction and connection with their infant

TAKING AIM AT AFFORDABILITY
- After the implementation of the ZAP-VAP bundle, the NICU decreased its VAP rate by 84.2% in comparison to retrospective data collected from 2010–11
CHALLENGE
Back pain continues to be the fifth most common visit to a provider. Patients often seek back pain care and treatment in a variety of ways, which leads to higher costs, lower quality and more use of resources.

INNOVATION
A spine model was developed:
• Standardized communication and tools across the organization to ensure all back pain patients get the same best practice treatment plan
  - Appropriate messaging for primary care physician on back pain care
  - Patient education on stretching, exercising and over-the-counter medications
  - Primary physician access to a medical spine physician for “curb-side consults”
• Measurement focused on areas that contribute to the Triple Aim
  - Use of narcotics within the first visit
  - Imaging, injection and surgeon referrals
• Patient shared decision-making that offers choice for the direction of care based on all treatment options
• Acute back pain clinic with one visit using a multi-disciplinary approach with physical therapy

IMPROVING HEALTH
• Physician baseline metrics to “raise awareness” on improvements needed
• Active spine protocol and education
• Upstream acute back care

ENHANCING PATIENT EXPERIENCE
• Convenience: Patients able to see the physician they know and trust
• Self-empowerment for patients to improve back pain through self-care
• Timely access with coordination of services

TAKING AIM AT AFFORDABILITY
• $1.2 million total cost savings from 2010 to 2012
• Imaging: 4% reduction
• Narcotics: 6% reduction
• Surgeon and injection referrals: 2% reduction in each
PROVIDER
Integrity Health Network, LLC

CHALLENGE
Inappropriate referrals or inadequate pre-referral management of certain conditions

INNOVATION
Development and publication of a set of simple, one-page guidelines that outline the ideal pre-referral care and work-up of specific conditions

IMPROVING HEALTH
• Early access to definitive specialty care
• Improved pre-referral care or care that eliminates the need for referral

ENHANCING PATIENT EXPERIENCE
• Quicker access to specialty care first appointment
• Shorter episodes of care
• Reduction of the need for referrals as more efficient primary care is delivered

TAKING AIM AT AFFORDABILITY
• Reduction in high cost imaging and other diagnostics
• Fewer specialty referrals for conditions not warranting specialty intervention
PROVIDER
North Memorial Health Care

CHALLENGE
Improper emergency department utilization and large patient populations without established primary care led to the development of a new program. The focus is on patients that need additional assistance after discharge from the hospital or in-between clinic visits.

INNOVATION
Expanded the role of a pre-existing group of health care workers that have experience dealing with the end result of patients not receiving continuative care. Paramedics, meeting the necessary requirements, receive training on chronic disease management and community resource alignment.

IMPROVING HEALTH
- Connected patient populations with primary care team
- Enhanced patient’s knowledge of chronic disease management
- Allowed for in-home care to ensure accurate information dissemination is taking place

ENHANCING PATIENT EXPERIENCE
- Patient safety increased through in-home wound care management
- Family involvement in the home, with a provider, is a key component to successfully empowering patients
- Reduction in medication error through medication reconciliation

TAKING AIM AT AFFORDABILITY
- To date, 64% of patients received medical assistance
- Utilization reduction of the emergency department equates to long-term savings while offering better health outcomes for patients
- Since the launch of the program in October 2012, there has been more than 600 patient encounters with nearly 48 providers utilizing these services
The electronic medical record added challenges for physicians managing patient test results, which increased physician burnout. This created a need to find ways to decrease physician work volume, standardize Pap result tracking and eliminate variation in patient recall and services.

Early in 2012, completed implementation of a Pap Hub strategy that assigned registered nurse resources to manage screening Paps and diagnostic results using protocols and a provider Pap plan.

- Provided clear, consistent information to patients and engaged them in follow-up care
- Centralized systematic tracking of Pap results to ensure required follow-up and treatment when needed
- Adherence to Pap protocol provided standard quality patient care

- Increased registered nurse availability for enhanced patient education
- Used standard, evidence-based protocols to support patient communication
- Increased patient convenience with extended evening and weekend hours
- Notification of Pap results, plan and education within 24 hours of lab results

- 80% of women returned for their colposcopy within three months
- Provider time savings during and between visits as registered nurses provided patient education; estimated 1,300 hours in 2012 for 550 physicians
- Standardized evidence-based protocol recommendations being followed across the organization
PROVIDER
Park Nicollet Health Services

CHALLENGE
An emerging ecobiodevelopmental model within pediatric literature provides a framework to identify the origins of adult disease and to address them early in life — critical steps to change the current health care system from a “sick care” to a “well care” model. Such a framework is key to improving patient experience and managing the total cost of care now and in the future.

INNOVATION
The group selected to implement the American Academy of Pediatrics’ Bright Futures across the system by component. The core of Bright Futures is population health. Operational definitions and education around standards and measurements were developed. A standardized screening schedule to confirm patients were reaching the developmental milestones was also implemented. Throughout the well-child visit, opportunities were called out with visual cue “😊” smiley faces to help coach and remind care teams of opportunities to add a personal touch to the visit.

IMPROVING HEALTH
• Population screening schedule for developmental milestones
• Early intervention for developmental delays

ENHANCING PATIENT EXPERIENCE
• Involved patient partners on improvement teams for “real-time” input
• 13% increased satisfaction on parents indicating their child’s moods and emotions were addressed since implementation

TAKING AIM AT AFFORDABILITY
• Streamlined care through supporting processes
• Avoided potential for more serious or permanent complications by ensuring care was not missed
• Pediatric preventive care impacted future health care costs
PROVIDER
Summit Orthopedics

CHALLENGE
Patients have various demands on their time and schedule. Musculoskeletal injuries and problems occur at any time. With increasing health care costs, economic issues for patients and a need for access to specialized care, a walk-in orthopedic access point was needed in convenient locations that are close to home.

INNOVATION
Provided walk-in access to specialized orthopedic care with extended hours, which provided options to help manage health care costs

IMPROVING HEALTH
- Increased access to specialized care close to home
- Decreased health care costs to patients and employers

ENHANCING PATIENT EXPERIENCE
- Increased availability and access to specialty care
- Provided an affordable and appropriate alternative to the emergency department
- Provided consistent and comparable care in more than 98% of cases using physician assistants rather than medical doctors

TAKING AIM AT AFFORDABILITY
- Reduced strain on emergency departments
- Access to the appropriate level of care
- $3 million in savings in one year when compared to the emergency department setting

OrthoQuick — Orthopedic Walk-in Clinic
Patients who are readmitted to the hospital often do so within five days of discharge, yet often do not see a physician in follow-up during this vulnerable time.

Created a systematic approach, “Follow-up in Five,” to schedule post-hospital follow-up appointments before the patient leaves the hospital, give written appointment details to the patient and provide a “touch-base” phone call within three days of discharge.

- Early post-hospital follow-up enabled physicians to address minor issues before they escalated and caused a potentially preventable readmission
- 84% of patients stated “staff talked to me about having the help I needed after a hospital stay.”
- Optimized the electronic medical record and used existing staff to schedule follow-up appointments before discharge 85% of the time and called patients within three days of discharge 87% of the time