Mayo School of Continuing Medical Education

The Way We Work: Keeping the Service Promise

9th Annual Mayo Conference on Quality

January 22 & 23, 2004

KEYNOTE SPEAKERS:

Jerome H. Grossman, MD
Member, Mayo Clinic Board of Trustees

Horst H. Schulze
Chairman, President and CEO
The West Paces Hotel Group

Originating from
Phillips Hall, Siebens Building
Mayo Clinic Rochester

Broadcast to Jacksonville, Rochester, Scottsdale, and Mayo Health System Sites
Memo

Denis A. Cortese, M.D.
Administration

January 2004

Dear Colleagues:

Welcome to the ninth edition of “A Quality Year,” published in conjunction with Mayo Clinic’s annual Conference on Quality. This report includes summaries of the platform and poster presentations given at the conference and the stories of continuous improvement teams from throughout the organization, including Mayo Clinic Jacksonville, Mayo Clinic Scottsdale, Mayo Clinic Rochester and Mayo Health System sites.

These stories reflect the tremendous range of continuous improvement activity at Mayo Clinic. Some projects in this book are still in progress, while others are complete and “holding the gains.” Some solutions are being replicated in new areas, and others are specific to particular work units. The common theme is a group of people tackling an important problem and looking for efficient, effective and lasting solutions.

This publication serves four purposes. First, it is intended to be used by conference participants and attendees. Second, we hope this will become a resource to everyone at Mayo Clinic wanting to embark on an improvement project. Third, we will share this externally with selected audiences to demonstrate our continuous improvement efforts. And finally, we hope this publication will provide recognition for members of the teams whose work is described here.

The staff of Mayo Clinic’s Office of Continuous Improvement facilitates continuous improvement teams, teaches classes on improvement techniques and advises work units on ways to improve their processes and procedures. If you have any questions about the information in this book, or if you are considering a project that is similar in type or focus, call the designated contact for the team or the Continuous Improvement Office at 507-266-1698.

Sincerely,

Denis A. Cortese, M.D.
President, Mayo Clinic
Ninth Annual
Mayo Conference on Quality
January 22 & 23, 2004

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Program Schedule (times are listed in Central Standard Time)

Thursday, January 22, 2004

8:00 a.m. Pre-Conference Workshops (Optional)
  Individual workshop descriptions provided on page xiii.

11:00 a.m. Registration
  Phillips Hall, Siebens Building
  Poster Viewing
  Ballroom, Second Floor, Marriott Hotel
  (Light lunch provided)

1:30 p.m. Conference Welcome
  Terrence L. Cascino, MD, Mayo Clinic Rochester

1:40 p.m. Opening Remarks and Introduction of Keynote Speaker
  Denis A. Cortese, MD, Mayo Clinic

1:55 p.m. Keynote Presentation
  Jerome H. Grossman, MD, Member, Mayo Clinic Board of Trustees

3:00 p.m. Break
Choose from one of the following three concurrent sessions:

**CONCURRENT SESSION A: CLINICAL IMPROVEMENT AND PATIENT SAFETY**
Leighton Auditorium, Second Floor, Siebens Building
Moderator: P. Stephen S. Shultz, MD, Franciscan Skemp Healthcare, Mayo Health System

**Patient Safety Champions**
Eileen Oswald and Ricardo Escobar, Mayo Clinic Scottsdale
The Patient Safety Champions Initiative was established to promote and engage staff throughout the organization relative to patient safety and to facilitate the spread of patient safety to all levels of the organization.

**Build New Hospital Beds or New Pathways: Impact of the Continuum of Care Program**
Mark Lindsay, MD, Luther Mideifort, Mayo Health System
Build new hospital beds or new pathways? The presentation will focus on the impact of the Continuum of Care Program focusing on off-site ventilator unit, sub-acute units (within rural hospitals), and homecare.

**Good Will Hunting: Review of 100 In-Hospital Deaths Using IHI Methodology**
Dennis Manning, MD, Mayo Clinic Rochester
Is it possible, even in hospitals with lower-than-expected mortality, to reduce inhospital deaths by aggressively searching for potential systems improvements? Learn how we applied the Institute for Healthcare Improvement methodology, developed a relevant taxonomy and database, and the preliminary results.

**CONCURRENT SESSION B: EFFECTIVENESS**
(This session will be broadcast to Mayo sites)
Phillips Hall, Main Floor, Siebens Building
Moderator: David C. Herman, MD, Mayo Clinic Rochester

**Managing From the Patient’s Perspective – Process Management at Luther Mideifort**
Randall Linton, MD, Luther Mideifort, Mayo Health System
Key to Luther Mideifort’s strategic commitment to transform itself to a patient centered healthcare organization has been the development of capabilities such as Six Sigma and Process Management. By adding a “horizontal” patient’s perspective of Luther Mideifort, we are finding unique opportunities to improve the management of our patients’ care.

**Making Innovation Real in the Department of Medicine**
Michael D. Brennan, MD, Mayo Clinic Rochester
Current innovation projects in the Department of Medicine will be shared. A new program entitled SPARC that will systematically explore innovations in the delivery of clinical care will be highlighted.

**Voluntary Reporting . . . Or Is It?**
Richard S. Zimmerman, MD, Mayo Clinic Scottsdale
Voluntary public reporting of data for quality comparison and improvement has become a recent endeavor of CMS, and has been endorsed by multiple entities interested in the public’s health. A history of public data sharing (reporting) and first hand experience of Mayo Clinic Scottsdale and the state of Arizona in the three state Hospital Public Reporting Pilot (HPRP) will be presented. A demonstration of the CMS website with actual hospital data also will be provided.
No More Wheezing! Asthma Guideline Implementation Results in Improved Asthma Control and Patient Satisfaction
Brian H. Bach and Marlis M. O’Brien, Franciscan Skemp Healthcare, Mayo Health System
It is possible to improve asthma care through disease management guideline implementation. The NAEPP considers “patient education” to be the cornerstone of asthma care. To address this priority, we have employed the assessment and management skills of two certified asthma educators in a unique asthma management program. The program has demonstrated measurable improvements in asthma care in just two years.

Setting the Stage and Taking the Lead Role in Building a Healthier Community
Sue Orme, Red Cedar Medical Center, Mayo Health System
As a 2003 AMGAACCLAIM Award Honoree, this presentation will describe how our organization took a lead role in building a healthier community by collaborating with community health professionals, workplaces, churches, and schools. Results from 3 programs will be shared as part of this community outreach effort; disease prevention, tobacco cessation and community fitness.

Caring for Exceptional Families
Marilyn Baker, Mayo Clinic Rochester
The continuous improvement process was utilized to address needs of the exceptional family in the hospital setting. The process was documented and guidelines for effective interventions were developed for these patients on the neurological surgical patient care unit. A pre and post implementation survey will be shared on the attitudes and knowledge of staff caring for these exceptional families.

Can We Fix It? Yes We Can! Employee Identification Cards
Ann Thayer, Mayo Management Services, Inc. (MMSI)
Can a process that has been broken for years be rebuilt to offer our customers an attractive, cost effective and accurate membership card? We will describe how we were able to successfully design a standard membership card, implement a new data extraction process, identify a new vendor and design an audit process to assure accuracy.

4:30 p.m. Adjourn

Friday, January 23, 2004

7:00 a.m. Registration
Phillips Hall

Poster Viewing
Ballroom, Marriott Hotel
(Continental breakfast provided)

8:00 a.m. Welcome and Recap of Day 1
Terrence L. Cascino, MD, Mayo Clinic Rochester

8:10 a.m. Presentation of the Mae Berry Award for Service Excellence
Denis A. Cortese, MD, Mayo Clinic, and Leonard L. Berry, PhD, Texas A&M University

8:40 a.m. Introduction of Keynote Speaker
Michelle A. Leak, Mayo Clinic Rochester
8:50 a.m.  Keynote Presentation  
*Horst H. Schulze, Chairman, President and CEO, The West Paces Hotel Group*

9:50 a.m.  Break

10:10 a.m.  Quest for Service and Success Has No Finish Line  
*Bijoy K. Khandheria, MD, and Douglas A. Parks, Mayo Clinic Rochester*  
Moderator: Robert H. Lohr, MD, Mayo Clinic Rochester  
Achieving the highest level of satisfaction for the patient requires a satisfied work force participating in delivery of care as a team. This presentation will highlight the steps and results of an ongoing effort to achieve 90+% satisfaction among patients and cardiovascular team delivering care.

10:35 a.m.  Patient-Centered Discharge: Using Innovation to Improve Quality  
*Dennis M. Manning, MD, Jeanne M. Huddleston, MD, and Lori A. Larson, Mayo Clinic Rochester*  
Moderator: Robert H. Lohr, MD, Mayo Clinic Rochester  
As a patient or a healthcare provider, have you ever been part of a hospital discharge that felt chaotic? We don't believe it has to be that way. In partnership with the IHI IMPACT initiative, the Innovation and Quality Unit at Saint Marys Hospital has been working to help patients and their families plan for their discharge. Learn how this team has been using small test of change methodology to schedule and orchestrate the transition of care for patients from the hospital to their homes.

11:00 a.m.  Leadership Roundtable Discussion on Quality, Safety, Service and Innovation  
Moderator: Roger K. Resar, MD, Luther Midelfort, Mayo Health System  
*Jerome H. Grossman, MD, Horst H. Schulze, and Mayo Clinic Senior Leadership*

12:00 Noon  Adjourn

12:30 p.m.  Post-Conference Seminar (Optional)  
Workshop description provided on page xiv.
Ninth Annual
Mayo Conference on Quality
January 22 & 23, 2004

Conference Description and Objectives

Join us January 22 and 23, 2004 in Rochester or via broadcast in Jacksonville, Scottsdale, or Mayo Health System sites to learn more about quality improvement efforts across the entire Mayo System. Conference attendees will have an opportunity to hear noted national leaders in healthcare quality improvement, learn about improvement projects throughout Mayo, learn more about a particular topic through workshops, and have a chance to share a storyboard at the conference.

Upon conclusion of this conference, participants should be able to:
• Interpret the results obtained from Mayo’s improvement efforts.
• Integrate pertinent improvement efforts into daily work.
• Outline techniques for implementing improved clinical techniques.
• Describe innovative, new technologies for improving effectiveness of a continuous improvement action plan.
• Discuss current improvement issues with peers who are interested in quality improvement.
• Describe current efforts in improving patient safety.
• Describe innovative methods for improving patient service.

Intended Audience

All Mayo physicians and allied health staff are encouraged to participate in this event if you:

• Have a particular interest in new tools and approaches to improving the way you work.
• Have already taken part in formal or informal improvement efforts.
• Would like to participate in the improvement process.
• Would like to learn about Mayo’s improvement results.

Keynote Speakers

Dr. Jerome H. Grossman’s principal activity is as Senior Fellow and the Director of the Health Care Delivery Project. At his new position at Harvard, he will be bringing his expertise in the health care system and information technology, and his experience in community services to develop innovations and reforms in the medical care delivery system. He is Chairman Emeritus of New England Medical Center, where he served as Chairman and CEO from 1979 to 1995 and Professor of Medicine at Tufts University School of Medicine. Currently, he is an Adjunct Professor of Medicine at Tufts University School of Medicine and Honorary Physician at Massachusetts General Hospital where he served full-time from 1966 to 1979. Grossman was a member of the founding team of several health care companies, including Meditech, a medical software company, as well as Tufts Associated Health Plan, Chartwell Home Therapies, and Transition Systems, Inc., a medical care information management company.

Named to the Institute of Medicine of the National Academy of Sciences in 1984, he has served as Chairman of four committees on issues concerning utilization management and guidelines. More recently he has served on the Committee for Quality of Health Care in America. He was the first IOM member to Chair a National Academy of Engineering Committee on the Impact of Academic Research on Industrial Performance, and is now serving as Co-chairman of the NAE/IOM Workshop on Engineering and Health Care Delivery Systems.
In 1999, he was appointed to the National Academies Council on Government-University-Industry Research Roundtable (GUIRR). Grossman also served as Scholar-in-Residence at the Institute in 1996.

He serves as a director/trustee of a number of organizations including: Mayo Clinic, Penn Medicine (University of Pennsylvania Medical School and Health System), the Stryker Corporation, Landacorp, and the Committee for Economic Development. His past services include the Board of the Federal Reserve Bank of Boston from 1990 to 1997 serving as chairman from 1994 to 1997, Wellesley College and Massachusetts Institute of Technology.

**Horst H. Schulze** is the founding president and chief operating officer of The Ritz-Carlton Hotel Company, L.L.C. Under his charismatic leadership, the company won unprecedented two Malcolm Baldrige National Quality Awards in the Service category, and has been continuously voted “best hotel company in the world” by convention and trade publications.

Mr. Schulze is a recognized leader in the service world. His vision has helped reshape customer service concepts in both the hospitality and the service industries. Today, The Ritz-Carlton Hotel Company is considered the benchmark for service excellence.

Horst Schulze is a charter member of The Ritz-Carlton Hotel Company, which he joined in January 1983. He was instrumental in the conceptualization of the operating and service standards of the newly formed company. Mr. Schulze retired from The Ritz-Carlton Hotel Company in 2001, after expanding the company to over 40 hotels worldwide.

Currently, Mr. Schulze serves as the Chairman, President and CEO of The West Paces Hotel Group – a hotel management company. He is proud to serve as a member of the Board of Directors of several prestigious organizations – Cancer Treatment Centers of America, The Cancer Treatment Research Foundation, Institute of Certified Travel Agents, Reliance Trust Company and The Georgia Family Council.

**Continuing Education Credit — Rochester & Mayo Health System Sites**

Mayo Foundation is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Mayo Foundation designates this educational activity for a maximum of 9.5 (5.5 conference, 3.0 preconference workshop, and 1.0 post-conference seminar) category 1 credits toward the AMA Physician’s Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

Mayo Continuing Nursing Education is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center’s Commission on Accreditation. Participants can earn up to 11.4 contact hours (6.8 conference, 3.4 preconference workshop, and 1.2 post-conference seminar).

Other health care professionals will be provided a certificate of attendance for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.

**Continuing Education Credit — Jacksonville, Florida**

Mayo Foundation is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Mayo Foundation designates this educational activity for a maximum of 5.5 category 1 credits toward the AMA Physician’s Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.
Mayo Continuing Nursing Education is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center’s Commission on Accreditation. Participants can earn up to 6.8 contact hours.

Other health care professionals will be provided a certificate of attendance for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.

**Continuing Education Credit — Scottsdale, Arizona**

Mayo Foundation is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Mayo Foundation designates this educational activity for a maximum of 6.5 (5.5 conference and 1.0 Brown Bag session) category 1 credits toward the AMA Physician’s Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

Mayo Continuing Nursing Education is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center’s Commission on Accreditation. Participants can earn up to 6.8 (conference) contact hours.

Other health care professionals will be provided a certificate of attendance for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.
FACULTY

Ninth Annual
Mayo Conference on Quality
January 22 & 23, 2004

Course Director
Carleton T. Rider

Guest Faculty
Jerome H. Grossman, MD
Member, Mayo Clinic Board of Trustees

Horst Schulze
Chairman, President and CEO
The West Paces Hotel Group

Gordon Mosser, MD
Institute for Clinical Systems Improvement (ICSI)

Gary Oftedahl, MD
Institute for Clinical Systems Improvement (ICSI)

John Sakowski
Institute for Clinical Systems Improvement (ICSI)

Mayo Clinic Rochester
Amy Anshus
Marilyn Baker
Susan Berg
Michael D. Brennan, MD
Joan Broers
Terrence L. Cascino, MD
Dennis Clark
Bart Clarke, MD
Scott Copeman
Denis A. Cortese, MD
Gene Dankbar

Jennifer Dusso
JoAnn Farnham
Deb Fischer
Valerie Halling
David C. Herman, MD
Jeanne Huddleston, MD
Carmen Kane
Bijoy K. Khandheria, MD
Steve Kopecky, MD
Lori A. Larson
Michelle A. Leak
Robert H. Lohr, MD

Dennis Manning, MD
Robert Nesse, MD
Vuyisile T. Nkomo, MD
Mark Nyman, MD
Michael J. Osborn, MD
Douglas A. Parks
Sidna Scheitel, MD
Hugh Smith, MD
Robert Stroebel, MD
Nona Thackeray
Prathibha Varkey, MD
Thomas Viggiano, MD

Mayo Clinic Jacksonville
Jack P. Leventhal, MD

Mayo Clinic Scottsdale
Ricardo Escobar
Eileen Oswald
Victor Trastek, MD
Renee White
Richard S. Zimmerman, MD

Mayo Management Services, Inc. (MMSI)
Ann Thayer

Mayo Health Systems

Franciscan Skemp Healthcare
Brian Bach
Marlis O’Brien
P. Stephen S. Shultz, MD

Luther Midelfort
Mark Lindsay, MD
Randall Linton, MD
Roger K. Resar, MD

Red Cedar Medical Center
Sue Orme
FACULTY DISCLOSURE FOR

Ninth Annual
Mayo Conference on Quality

January 22 & 23, 2004

As a provider accredited by the Accreditation Council on Continuing Medical Education (ACCME), Mayo Foundation must ensure balance, independence, objectivity and scientific rigor in its educational activities. All faculty participating in a Mayo Foundation activity are required to disclose commitments to and/or relationships with pharmaceutical companies, biomedical device manufacturers or distributors, or others whose products or services may be considered to be related to the subject matter of the educational activity. Faculty also will disclose any off-label and/or investigational use of pharmaceuticals or instruments discussed in their presentation.

Listed below are faculty who have disclosed (a) relationship(s) with industry:

Lori A. Larson Institute for Healthcare Improvements

Listed below are faculty who have disclosed they will be referencing off-label usage(s) of pharmaceuticals or instruments in their presentation:

Disclosure statements have not been returned by the following faculty members:

The following faculty members responded with nothing to disclose:

Amy Anshus          Valerie Halling          Gary Oftedahl, MD
Brian H. Bach       David C. Herman, MD    Sue Orme
Marilyn Baker       Jeanne Huddleston, MD   Michael J. Osborn, MD
Susan Berg          Nancy Jacekels           Eileen Oswald
Michael D. Brennan, MD Carmen Kane          Roger K. Resar, MD
Joan Broers         Bijoy K. Khandheria, MD  John Sakowski
Dennis Clark        Jack Leventhal, MD      P. Stephen S. Shultz, MD
Bart Clarke, MD     Mark E. Lindsay, MD     Horst H. Schulze
Scott Copeman       Randall L. Linton, MD   Hugh Smith, MD
Denis Cortese, MD   Robert H. Lohr, MD     Robert J. Stroebel, MD
Gene Dankbar        Dennis M. Manning, MD    Nona L. Thackeray
Jennifer Dusso      Gordon Mosser, MD       Ann Thayer
Ricardo Escobar     Robert Nesse, MD        Victor Trástek, MD
JoAnn Farnham       Vuyisile T. Nkomo, MD    Prathibha Varkey, MD
Deb Fischer         Mark Nyman, MD          Thomas R. Viggiano, MD
Jerome H. Grossman, MD Marlis M. O’Brien    Richard S. Zimmerman, MD
Pre-Conference Workshops
(Available only on-site in Rochester, MN)
Thursday, January 22, 2004
8:00 – 11:00 a.m.

Voluntary Public Reporting: A Workshop of Details and Methods
Hiawatha A, Mezzanine Level, Kahler Grand Hotel
Richard S. Zimmerman, MD, Mayo Clinic Scottsdale

This workshop will include three 45-minute sessions that will address:
• a review of the history and pros and cons of public reporting
• current measurement issues, and methods of data collection and analysis
• suggestions for communication with staff and operational solutions for improvement

ICSI: An Improvement Resource for All of Minnesota
Leighton Auditorium, Second Floor, Siebens Building
ICSI Presenters: Nancy Jaeckels, Gary Ofte Dahl, MD, Gordon Mosser, MD, John Sakowski
Mayo Clinic Presenters: Bart Clarke, MD, Robert Stroebel, MD, Mark Nyman, MD, Steve Kopecky, MD,
Robert Nesse, MD, JoAnn Farnham, Scott Copeman and Dennis Clark

The Institute for Clinical Systems Improvement (ICSI) was founded in 1993 by Mayo Clinic, HealthPartners,
and Park Nicollet Health Services. ICSI is a collaboration of 43 medical groups and hospitals throughout
Minnesota and immediately adjacent areas. Its program includes development of clinical practice guidelines, a
series of topic-specific collaboratives on topics such as diabetes care and change management, and various
educational opportunities on topics such as rapid cycling and measurement for improvement. The purpose of
this session is to explain the origin, structure, and program of ICSI in order to make clear the opportunities that
it provides for participation by physicians, nurses, pharmacists, managers and others at Mayo Clinic Rochester
and the Mayo Health System.

Tips and Tricks from the World of Facilitation
Northview Room, Third Floor, Charter House
Joan Broers, Susan Berg, Valerie Halling, Carmen Kane, Mayo Clinic Rochester

Would you like the opportunity to learn some new tools to expand your facilitation toolbox? Come to this
session and learn about four exciting tools that this team learned at the most recent International Association of
Facilitators Conference. Build new skills around the use of: visual facilitation and metaphors, building
consensus, use of pinpoint facilitation, and designing questions that work.

Enhancing Your Innovation Tool Kit: Rapid Prototyping
Cultural Arts Room, Main Floor, Charter House
Amy Anshus, Gene Dankbar, Jennifer Dusso, Deb Fischer, and Nona Thackeray, Mayo Clinic Rochester

Prototyping provides the opportunity to develop many ideas and solutions to a problem, and offers a tangible
product to assist with communication of an idea or concept. Along with providing a broader solution set,
effective prototyping can reduce time and development costs of projects. Rapid prototyping enhances these
capabilities to optimize results. During this workshop you will learn more about the rapid prototyping process
and participate in actual prototyping exercises. You will find that prototyping is a fast-paced, exciting exercise
for developing solutions to problems.
Educating to Improve Care: Integrating the Science of Quality Improvement to the Medical School Curriculum
Prathibha Varkey, MD, and Thomas R. Viggiano, MD, Mayo Clinic Rochester

The milieu, in which today’s medical school graduates will be practicing, is changing rapidly. A curriculum focused on disease and the management of disease is no longer adequate for the training of physicians who are expected to practice in an environment where medical errors, system shortcomings, and physician/practice scorecards are the norm. This interactive session will focus on the framework for integrating and introducing QI to the medical school curriculum. It is relevant for educators in the medical undergraduate and graduate schools as well as the allied health science schools who are working on QI and or innovative curriculum.
Mayo Conference on Quality
Oral Presentations

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Mayo Conference on Quality
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Patient Safety Champions Initiative

**Leader:** Dr. Richard Zimmerman, Eileen M. Oswald  
**Location:** Mayo Clinic Scottsdale  
**Project Relation:** Safety  
**Team Members:** Key staff members of all units/departments of Mayo Clinic Arizona (MCA). The MCA Patient Safety Subcommittee members. (Chair, Dr. Richard Zimmerman; Secretary, Eileen M. Oswald)  
**Summary:** The Patient Safety Champions Initiative was established to promote and engage staff throughout the organization relative to patient safety and to facilitate the spread of patient safety to all levels of the organization. Key highlights of the program include: The identification of over 60 Patient Safety Champions representing units/areas/departments of Mayo Clinic Arizona; The education of Patient Safety Champions utilizing a curriculum centered on the JCAHO National Patient Safety Goals in a Workbook format; The publication of articles in the "Update" regarding patient safety improvements- authored by Patient Safety Champions; The sharing of patient safety information at staff meetings; The development of a Patient Safety Web site; The survey of the organization relative to the MCA culture of patient safety.

Continuum of Care Program

**Leader:** Mark Lindsay MD  
**Location:** Luther Midefelt Clinic, Mayo Health System  
**Project Relation:** Patient-Centered  
**Team Members:** Mark Lindsay MD, Department Chair of Pulmonary/Critical Care, Luther Midefelt, Eau Claire, WI, Mary Kerg Administrator, Bloomer Medical Center, Bloomer, WI, Patricia Pope, Director, Northwest Wisconsin HomeCare, Eau Claire, WI, Gilbert Johnson PA, Cardiovascular Surgery, EauClaire, WI, Jill McCarthy, MSW, Director, Social Services and Utilization Review, Eau Claire, WI  
**Summary:** The Continuum of Care Program focuses on developing pathways to provide alternatives to traditional acute care hospitalization. Included in these efforts are the development of an off-site nursing home ventilator unit, development of transitional care units in our underutilized rural hospitals, as well as the development of the "Medical House Call Program." The off-site nursing home ventilator unit cared for 15,384 ventilator patient days from 1997 through 2002. Sixty-seven percent of patients were successfully liberated from the ventilator. Cost savings to more than 20 referring hospitals was $18.5 million. More than 50% of the patients were from the Mayo Health System. The Bloomer Transitional Care Unit Program has cared for 4,591 swing bed patient days from mid-2001 through the third quarter of 2003. More than 90% of Transitional Care Unit patients have had an improvement in their Functional Independence Measure prior to discharge. The Medical House Call Program will provide patients timely access to nurse practitioners and physician assistants in the home and nursing home settings with physician oversight. This program is being developed within a nonprofit corporation of Northwest Homecare. The off-site nursing home ventilator unit, the Bloomer Transitional Care Unit, and Medical House Call Program provide patients alternatives to traditional acute care hospitalization. These programs emphasize a patient-centered, multidisciplinary approach to care, with emphasis on improving patient outcomes. These programs improve the flow of patients through our tertiary care facility.

Review of 100 in-hospital deaths using IHI methodology

**Leader:** Dennis M. Manning MD  
**Location:** Mayo Clinic Rochester  
**Project Relation:** Safety  
**Team Members:** Dennis M. Manning MD, Inpatient Internal Medicine, Jeanne M. Huddleston MD, Inpatient Internal Medicine  
**Summary:** Review of 100 consecutive in-hospital deaths at Mayo Clinic Rochester using Institute for Healthcare Improvement (IHI) methodology. The 62 patients initially admitted to non-ICU Care Units (and NOT for
Comfort Care Only) whose deaths were less "expected" were reviewed in detail for potentially remediable circumstances or events. The 62 cases in "Quadrant 4" are characterized in detail, and speculation on potential systems improvements (that might have positively influenced their care or outcome) is invited. Speculation as to impact of enhancements in planning, communications, and responsiveness are discussed. The potential impact of specific interventions such as a Medical Emergency Team (recently tried at 2 Australian Medical Centers) is included.

Managing From the Patient's Perspective: Process Management at Luther Midelfort
Leader: Randall Linton, M.D.
Location: Luther Midelfort Clinic, Mayo Health System
Project Relation: Patient-Centered
Team Members:
Luther Midelfort Leadership
Summary:
As part of Luther Midelfort's strategic, data-driven, system-oriented approach to continuous improvement, we have directed significant energy over the past two years to managing our core as well as key support and leadership processes. This extension of our Six Sigma implementation offers a "horizontal" view of our organization from the patient's perspective. After clearly defining these processes, we have established permanent, interdisciplinary "Process Management" teams who have begun to manage these processes with concrete process and outcome measures. This new structure offers a mechanism that both gives a place to "hold the gains" from previous improvement efforts as well as a unique opportunity to focus future improvement activities in areas with high potential for improvement. While these efforts are unique in the healthcare environment, we are confident of the potential they hold for the future.

Making Innovation Real in the Department of Medicine
Leader: Michael Brennan, M.D.
Location: Mayo Clinic Rochester
Project Relation: Patient-Centered
Summary:
Current innovation projects in the Department of Medicine will be shared. A new program entitled SPARC that will systematically explore innovations in the delivery of clinical care will be highlighted.

Voluntary Reporting.... Or is it?
Leader: Richard Zimmerman, MD
Location: Mayo Clinic Scottsdale
Project Relation: Patient-Centered
Team Members:
Dr. Lisa Hurst, Hospital Internal Medicine, Mayo Clinic Scottsdale Carol Hansen, RN, Clinical Nurse Specialist, Mayo Clinic Scottsdale N. Cisar, RN, Clinical Nurse Specialist, Mayo Clinic Scottsdale Anna Marie Hunsaker, RN, Quality Management Specialist.
Summary:
The 7th Scope / JCAHO Core Reporting Project focuses on quality of care for patients with acute myocardial infarction, heart failure, and community acquired pneumonia. A work-flow process was developed to outline the various steps in data collection necessary to analyze the results in a timely fashion. A multidisciplinary team consisting of physicians, midlevel practitioners, nurses, pharmacists, case managers, and quality assurance staff was organized. This hospital reporting work group meets monthly to review data and variance reports and develop action items for improvement. This information is reported monthly to the Hospital Practice Subcommittee (our hospital medical executive committee). Systems and process improvements include development of Emergency Department fast-track pathways as well as admission and discharge order sets. Staff education continues to expand. There are monthly reviews on the 7th Scope indicators for the house staff. The indicators are displayed on posters throughout the hospital and on laminated pocket cards for nurses and physicians. Pharmacy has developed a drug utilization evaluation (DUE) linked to the quality measures; compliance as well as non-compliance is communicated in writing to the medical staff involved in the care of these patients. Physician involvement in the DUE process provides significant feedback for identifying opportunities for improvement, and compliance rates are also incorporated into credentialing/privileging review. Likewise, practice variances are communicated to allied health staff by a formal letter to promote education and encourage improvement. In related activities, Mayo Clinic Hospital participates in the three-state hospital public reporting (HPRP) pilot. The purpose of the pilot is to develop a model for measuring and
reporting compliance with best practices that can be repeated nationwide. This public report card began with a subset of the quality measures used in the 7th Scope of Work and JCAHO Core measures, with the first presentation of comparative data released on the Internet in October 2003. We relate our experience with this activity to our quality improvement efforts.

**Asthma Management**  
**Leader:** Marlis O’Brien  
**Location:** Franciscan Skemp Healthcare, Mayo Health System  
**Project Relation:** Effectiveness  
**Team Members:**  
Marlis O’Brien – Asthma Program Coordinator, Brian Bach – Pharmacist, Dr. Daniel Deetz – Pulmonologist  
Medical Director, Dr. Doug Nelson – Allergist, Doris Doherty – Patient Education  
**Summary:**  
To standardize asthma management across the FSH system, the asthma team implemented the NAEPP/ICSI guidelines, standardized teaching and educational materials, established a referral process to the asthma program and implemented written action plans based on asthma-related hospitalizations, ER visits and visits to urgent care and increased patient self-management and quality of life.

2003 AMGA Acclaim Award Honoree, "Building a Healthier Community through Disease Prevention and Health Promotion"

**Leader:** Sue Orme  
**Location:** Red Cedar Medical Center, Mayo Health System  
**Project Relation:** Patient-Centered  
**Team Members:**  
Sue Orme, RN, DMS Coordinator, Red Cedar Medical Center  
Hank Simpson, MD, Family Practice physician and Medical Director, Red Cedar Medical Center  
**Summary:**  
In January 2003, Red Cedar Medical Center was awarded the AMGA Acclaim honoree award. The project titled: “Building a Healthier Community through Disease Prevention and Health Promotion” demonstrated the integration of evidenced-based guidelines into our disease prevention and health promoting efforts. This patient-centered quality improvement project highlighted 3 successful programs that include the Disease Management Strategies program, tobacco cessation, and community fitness. The project describes how we achieved our vision for improving the health of our patients and community by internal process redesign and by reaching outward to provide access and education.

**Caring for Exceptional Families Continuous Improvement Team**  
**Leader:** Marilyn K. Baker  
**Location:** Mayo Clinic Rochester  
**Project Relation:** Patient-Centered  
**Team Members:**  
Team Leader: Marilyn Baker, RN, Nurse Manager, Facilitator: Stephanie Sulla, Nursing Informatics, Members: Kari Bottemiller, RN, Heidi Dunfee, OT, Mary Kate Harris, Social Services, Tiffany Horton, Patient Affairs, Sharri Kalgren, Patient Affairs, David H Kossman, Social Services, Heilia Mamitag, RN, Anne Miers, Clinical Nurse Specialist, Joseph Perumpuzha, Chaplain, Catherine Shea, Clinical Nurse Specialist  
**Summary:**  
Families of patients and staff caring for the patients need more support when identified situations arise that make the hospital stay more difficult than anticipated for both parties. A Continuous Improvement Team, "Caring for Exceptional Families," was initiated to develop a system with tools and interventions for a proactive multidisciplinary approach to identify families at risk for maladaptative behavior. Data was collected to survey family and staff satisfaction. The baseline data collected in the family survey measured satisfaction in care received by a family member involved in the patient's care (spouse, sibling, child). Staff survey baseline data was also collected to determine the level of understanding by all disciplines related to the process for handling difficult family situations in the inpatient setting. The "Exceptional Family Triage Process" (a decision process flow diagram) and related "Guidelines" were developed and implemented in April 2003 on a Neurosurgical Patient Care Unit. The findings of this process and re-surveying will be presented.
Can We Fix it? Yes We Can! Employee Identification Cards  
**Leader:** Ann Thayer  
**Location:** Mayo Management Services, Inc. (MMSI), Rochester, Mn.  
**Project Relation:** Effectiveness  
**Team Members:**  
M. Katherine Reller - Foundation CI - MMSI - Ann Thayer, Kim Thiesse, Mary Kristo, Janet Kappers, Rob McMahan, Connie Henderson, Pat Borth, Kris Smith, Deb Christenson, Ronaelle Hoffman - MHPA - Delia Inclian, Valerie Clapp  
**Summary:**  
**SITUATION:** The process used for the production and distribution of the current membership cards is very complex. The current process has many phases where errors can and have been made and timeliness is an ongoing concern. **AIM:** In March 2003 the team was charged to develop a new process for producing and distributing member identification cards. These cards need to have a professional appearance, be error free, timely, and delivered at a fiscally responsible price, and ready for distribution by year end 2003. **OUTCOMES:** At year end 2003 a new process was developed that reduces opportunities for errors by decreasing the number of steps in the process and obtaining data directly from the system. One process (external) replaced the current two (internal and external) processes to improve efficiency and accuracy. A standard language was introduced reducing the opportunity for spelling and other types of grammatical errors. A new extraction process was developed to include event triggers to eliminate manual intervention. Card volume was reduced by listing all family members on cards. Projected cost savings will be from $.50 to .85 per card derived primarily from labor and postage.

Quest for Service and Success Has No Finish Line  
**Leader:** Bijoy K Khandheria, Cathleen Altwegg, Doug Parks, Joan Broers  
**Location:** Mayo Clinic Rochester  
**Project Relation:** Efficiency  
**Team Members:**  
Darlene Albrecht, Jane Biers, Nicole Brennan, Joan Broers, Facilitator, Linda Huntington, Julie Klemmensen, Martha Mangan, RN, CNP, Angela Mc Curdy, RN, Vuyisile Nkomo, MD, Cyndy Niesen, RN, Rochelle Putzier, Lynn Schaefer, Denise Schouweiler, Doug Parks, Patty Simmons, MD  
**Summary:**  
**Hypothesis:** Verify and, if required, change the perception within the Division of Cardiovascular Disease about a higher than acceptable degree of employee as well as patient dissatisfaction. **Method:** The leadership of the division appointed a multidisciplinary group to gauge customer satisfaction [customer here being the patients, their families, employees and staff of the division], establish a baseline, and, then make efforts to provide solutions to achieve the highest level of satisfaction. Based on a baseline survey conducted over a defined period [170 patients, 170 staff/employees within CV] three key issues were identified as being barriers to excellent satisfaction: Access and Communication Respect, After analysis of the survey findings goals were set to achieve 90% excellent rating for services rendered to the patients and 80% excellent rating for satisfaction within the staff. **Results:** In the ongoing journey towards change the following have been implemented: Change in triage and, providing access to patients seeking appointments in the division A team of appointment coordinators work for a group of providers rather than a single appointment coordinator. Technology, standardized approach, and telephone etiquette has been implemented to facilitate this. The team of appointment coordinators also have a standard yet personalized approach to the provider preferences for pre-scheduling tests, ensuring right orders are executed and knowing the preferences of the provider. This is in contrast to having a single appointment coordinator work with a group of providers which clearly resulted in inefficiencies, and decreased satisfaction amongst other things. In order to improve satisfaction within the staff cross-visitation so that each employee knows and appreciates the value of the others job, recognition program, contests for innovative ideas and benchmarking with other service organizations are being undertaken. A survey is under-way to see the effect of changes and will be compared to the baseline data to objectively quantitate the increase in excellent rating to meet the goals. This is an ongoing process with the goal to ensure timeliness, efficiency, effectiveness of delivering high-quality, error-free care to the patient, and ensuring that their experience in the Mayo Clinic cardiovascular environment is satisfying and, worthy of return. **We propose to present our journey of successes and highlight the issues with a brief scenario played by different members of the team.**
Patient-Centered Discharge: Using Innovation to Improve Quality
Leader: Dennis M. Manning, MD, Jeanne M. Huddleston, MD, and Lori A. Larson, Mayo Clinic Rochester
Location: Mayo Clinic Rochester
Project Relation: Patient-Centered
Summary:
As a patient or a healthcare provider, have you ever been part of a hospital discharge that felt chaotic? We don't believe it has to be that way. In partnership with the Institute for Healthcare Improvement (IHI) IMPACT initiative, the Innovation and Quality Unit at Saint Marys Hospital has been working to help patients and their families plan for their discharge. Learn how this team has been using small test of change methodology to schedule and orchestrate the transition of care for patients from the hospital to their homes.
Mayo Conference on Quality
Storyboards

Project Relation: Effective

Colonial Library - exhibit/display
Leader: Karen Larsen
Location: Mayo Clinic Rochester
Team Members:
Colonial Library Staff - Mayo Medical Libraries - Rochester
Summary:
Mayo's Colonial Library serves all Mayo employees and students who need books, journals, videos, audiotapes, and online resources dealing with the subject areas of nursing, healthcare and business management, and personal development. This marks the 9th year the Colonial Library has had a display at the Conference.

CV Service and Success in the Heartland Team
Leader: Nicole Brennan and Cathy Altwegg
Location: Mayo Clinic Rochester
Team Members:
Bijoy Khandheria M.D., Cathy Altwegg, Jane Biers, Darlene Albrecht, Martha Mangan, Denise Schouweiler, Nicole Brennan, Vuyisile T. Nkomo, M.D., Linda Huntington, Julie Klemmensen, Lynn Schaefer, Doug Parks, Cyndy Neisen, Patty Simmons, M.D. (Ad-hoc), Rochelle Putzier, Joan Broers (Facilitator), Angela McCurdy
Summary:
We wanted to recognize years of service and dedication within the Cardiovascular Division. When we surveyed the division, the survey identified the area of recognition within the division and among co-workers as an important element to job satisfaction. We came up with a system to enhance satisfaction.

Employee Communications Team
Leader: Amy Davis
Location: Mayo Clinic Rochester
Team Members:
Amy Davis, Division of Communications, Sherri Lowrey-Schrandt, Division of Communications, Hoyt Finnimore, Division of Communications, Judy Samson, Division of Communications, Catherine Benson, Division of Communications, Rebecca Hynes, Division of Communications
Summary:
The Employee Communications Team has completed an analysis of Mayo Clinic Rochester's primary operational employee communications vehicle, "This Week at Mayo Clinic." Based upon the analysis and identified needs, the team has implemented a number of improvements, including an updated design, new columns and features, and more visual examples.

Grant Preparation Training for Research Secretaries: Responding to a Need
Leader: Cheryl A. Nelson
Location: Mayo Clinic Rochester
Team Members:
Cheryl A. Nelson, Research Administrative Services, Colleen L. Allen, Biochemistry and Molecular Biology, Dawn P.B. Bergen, Division of Medical Informatics Research, Terri A. Gardner, Division of Orthopedic Research, Ann B. Peterson, Division of Cardiovascular Diseases
Summary:
Mayo secretaries have long been assisting in the preparation and submission of NIH, industry, and foundation grant applications through self-study and interaction with experienced research secretaries and investigators. In the past, no program or mechanism has been in place to assist in training, and only basic assistance has been available for troubleshooting. Research Services, in collaboration with a team of experienced research secretaries, has established a curriculum to assist in the training and mentorship of secretaries who are new to the grant preparation process. The team is responding to an initial need for training, as well as soliciting feedback to most efficiently serve those who seek training in the future.
Help Desk Knowledge Base Initiative
Leader: Larry Edwards
Location: Mayo Clinic Rochester
Team Members:
Larry Edwards, Help Desk, Lisa Stoltz, Help Desk, Mark Peterson, Help Desk, Shelley Franko, Help Desk, Sabrina Menz, Help Desk
Summary:
Approximately five years ago, the Help Desk launched a new development initiative designed to increase effectiveness by fostering a learning culture, and intended to result in documentation and reuse of best practices. The project generated a state-of-the-art software knowledge-base, containing thousands of Mayo-specific computer problem symptom and solution sets, and dramatically increased effectiveness, efficiency, and accountability by and for Help Desk staff and their customers -- Mayo Help Desk callers. Additional natural by-products are a true learning and knowledge-gathering culture, and a new reputation for the Mayo Help Desk; it is now considered world-class.

How CME and Industry Can Work Together - Creating a Win-Win
Leader: Sheila Newby
Location: Mayo Clinic Jacksonville
Team Members:
Sheila Newby, Mayo School of Continuing Medical Education, Mayo Clinic Jacksonville, Leanne Andreasen, Mayo School of Continuing Medical Education, Mayo Clinic Scottsdale, Mary Keene, Mayo School of Continuing Medical Education, Mayo Clinic Jacksonville, Michael Lambert, Mayo School of Continuing Medical Education, Mayo Clinic Rochester
Summary:
Relevance: The relationship between CME providers and industry is a valuable partnership that can be enhanced by establishing a forum that allows discussion among medical staff, CME and industry. Purpose: To establish an organized forum for representatives from pharmaceutical companies to interact with medical staff and employees for the benefit of both. This forum will provide a defined channel for open communication and enhanced continuing education to meet the mission of improving patient care. Objectives: At the conclusion of this poster presentation, participants should be able to identify ways to establish a more organized approach to foster positive relationships between CME providers and industry. Key Points: Positive, healthy relationships can be built between industry and medical staff in the interest of bringing quality education to physicians to attain improved patient care. Expected Outcome: Health-care systems can readily integrate into practice the creative ideas and tools presented to establish an organized forum between CME providers and industry that will result in quality CME activities to improve patient care. Reference: ACCME Standards of Commercial Support.

Improving Outcomes for Patients with Community Acquired Pneumonia
Leader: Deborah Storlie
Location: Francisca Skemp Healthcare, Mayo Health System
Team Members:
Dr. Michael DiBella, Emergency Medicine, Theresa Gentry, LPN, Family Health Clinic, Dr. Joseph Meyer, Walk-in Clinic, Richard Gardner, RN, 7th Medical, Dr. Willie Pangilinan, Internal Medicine, Scott Mihalovic, R.Ph, Pharmacy, Dr. Jonathan Ridgen, Family Practice, Dr. Myung Ho Hahn, Pulmonary Medicine, Cheryl Paar, RN Emergency Medicine, Jean Wozniak, RCP Respiratory Care Services, Janine Engen, RN Walk-in Clinic, Jan Hutchens, Administration, Debra Wieland, RN Clinical Quality Management, Debra Clarkin, Laboratory, Elaine Humm, Registration Supervisor, Doris Doherty, RN Patient Education, Kathie Hengel, RN Utilization Management
Summary:
Practice patterns at FSH in the management of hospitalized pneumonia patients had developed over time and demonstrated variability. Outcome data revealed that our mortality and readmission rates were consistently higher than our benchmarks, and our process measures also revealed many opportunities for improvement. For this reason a multidisciplinary Clinical Quality Team was launched to develop an action plan for improvement. This team developed an inpatient management strategy document to describe appropriate care for adults hospitalized with pneumonia. The strategies for improvement included: -Design a chronic disease model to include all of the key components for appropriate care. - Develop and promote utilization of preprinted admission orders. - Initiate appropriate antibiotic therapy. - Provide prompt administration of the initial antibiotic therapy. - Merge outpatient labs with the hospital record. - Screen patients for instabilities prior
to discharge. - Educate patients prior to discharge on self-management care and signs and symptoms to report to their physician. - Provide education to all providers on coding and appropriate documentation. - Provide education and communication on the changes for improvement to all of the appropriate staff.

Improving the Way We Work: Process Efficiency Within the Division of Engineering
Leader: Christian Milaster
Location: Mayo Clinic Rochester
Team Members:
Kevin Bennet, Division of Engineering (DOE); Roger Wichmann, DOE; Mark Wehde, DOE; David Suckling, DOE; Nathan Buntrock, DOE; Tom Halvorsen, DOE; Christian Milaster, DOE

Summary:
The Division of Engineering at Mayo Clinic Rochester has a workplace culture that seeks to continually adapt to the changing needs of the Foundation. The management team in the Division has been leading a multiyear effort towards defining, revising and optimizing our internal work-flow processes. Within the context of limited resources, the Division is seeking to balance competing priorities while at the same time increasing the availability of Division resources to the institution. Our efforts have focused in three main areas: 1) Creating a common vision through strategic planning and goals. Deploying those strategic goals in a three-year plan of strategic initiatives. Monitoring our progress to ensure results. 2) Developing an understanding of our internal processes through work-flow mapping techniques. Building on that knowledge by designing improved processes, emphasizing information flow throughout the processes. 3) Adopting best practices within our core business of engineering design and development, by emphasizing formal Project Management. This means creating a team of dedicated project managers, aligning our methodology with the Project Management Institute PMBOK, adapting project management tools and techniques to our unique environment and clarifying roles and responsibilities.

Just One Thing
Leader: Cynthia Niesen R.N.
Location: Mayo Clinic Rochester
Team Members:
CV Service and Success in the Heartland Team: Bijoy Khandheria M.D (Leader), Cathy Altwegg (Co-Leader), Jane Biers, Darlene Albrecht, Martha Mangan, Denise Schouweiler, Nicole Brennan, Vuyisile Nkomo M.D., Linda Huntington, Julie Klemmensen (Secretary), Lynn Schaefer, Doug Parks, Cynthia Niesen R.N., Patty Simmons M.D. (Adhoc), Rochelle Putzier, Joan Broers (Facilitator), Angela McCurdy R.N.

Summary:
The CV Service and Success in the Heartland Team had a goal to improve employee input related to patient care, cost efficiency, employee satisfaction, and quality. A "Just One Thing" contest was planned. The idea was: if there was just one thing that could be improved within the division related to patient care, cost efficiency, employee satisfaction or quality, what would that be? We created a contest and had a total of 94 great ideas submitted, with 5 people selected as winners by a panel of judges. Currently, all of the ideas have been sent out to appropriate committees and people for evaluation and potential use.

Lessons Learned from SCRIBE for Multisite Projects
Leader: Katie Scheele
Location: Mayo Clinic Scottsdale
Team Members:
Nancy Blume, MCR, IT, Katherine Cecala, MCS, PFS, Sharon Frye, MCS, PFS, Susan Fullerton, MCS, PFS, Jacque Jones, MCR, PFS, Lesley King, MCS, IT, Lani Kirby, MCS, IT, Barbara Kuk, MCS, PFS, Phil Lombardo, MCR, PFS, Jim Philo, MCR, IT, Katie Scheele, MCS, PFS, Richard Uribe, Internal Audit Services

Summary:
The Scottsdale Rochester Integrated Billing Effort (SCRIBE) Project Team’s goal was to implement a highly technical project on an existing shared billing system with Rochester. Though each site had different business practices and staffing models, the project team collaborated to develop mutual solutions. This presentation will outline: the tools used to develop a dedicated project team of system and operational experts from each site; the strategies used to maintain the momentum for the three-year project; and the lessons learned. This talented, knowledgeable, and motivated project team was willing and able to work together for the common goal. The team maintained momentum throughout the project which led to an easy transition to service delivery. Comments from the Project Team survey expressed that the team genuinely seemed to enjoy the challenge of implementing such a large project. Due to the dedication of the project team, SCRIBE came in on time and under budget.
Mayo Clinic in Scottsdale Human Resources Balanced Scorecard
Leader: Eric Erickson
Location: Mayo Clinic Scottsdale
Team Members: Eric Erickson, Arethea Erwin, Melissa Lockaby, Nikki Miller, Joan Topham MCS Human Resources Systems

Summary:
Background: To align its efforts with the Mayo Clinic in Scottsdale (MCS) Strategic Plan, Human Resources (HR) Systems staff developed a method to systematically capture human capital related metrics. Measures were chosen that aligned with the four-quadrant metric methodology of the Balanced Scorecard concept as posited by Kaplan and Norton of Harvard Business School. Each measure was also aligned to one of the six current objectives of the MCS Strategic Plan. Project Summary: With the development of the MCS Strategic Plan, HR Systems staff sought to coalesce a broad range of existing adhoc measures into a concise database and list of metrics. To assure that they would not be measuring for measures’ sake, each metric was carefully chosen to align with the MCS strategic plan. To begin, key ongoing HR efforts were identified. Next, a catalog of necessary calculations were compiled. These were converged into a warehouse of metrics called the “HR Annual Scorecard” containing each measure. Benchmarks were selected from the HR discipline’s “gold standard” measurement organization, the Saratoga Institute, so that each measure could be compared to other health-care organizations of like size. Selected measures were then developed in a visual and graphical way to support inclusion in a formal, printed, “Human Resources Balanced Scorecard.” Project Goals: · Assure strategic alignment of HR activities and the organization’s objectives · Develop metrics that can be compared to external organizations · Guide the efforts of HR activities toward the appropriate end goals (“what gets measured gets done”) · Develop a historical record of performance so that trends can be readily identified · Develop metrics that help identify areas of improvement or successes to be celebrated Outcomes and Process Improvements: The HR Balanced Scorecard was shared with MCS Leadership and internal HR staff, a communication effort that assured that the efforts of the organization’s most critical piece of capital – its employees – were effectively measured and noted. HR leaders were able to identify key improvement areas to assist in the Division’s planning efforts. The MCS Human Resources Balanced Scorecard development method has been widely shared with Phoenix area educational institutions and trade organizations. Significant interest has been expressed by other organizations that have struggled with organizing their measuring efforts in a way that aligns with the organizational strategy.

MCS Spring Medical Publishing Seminar Series
Leader: Dr. Joseph Sirven
Location: Mayo Clinic Scottsdale
Team Members: Mayo School of CME Section of Scientific Publications Library Services

Summary:
The purpose of this educational program is to: Promote a scholarly environment by educating MCS physicians (staff, fellows, residents, students) and allied health staff to all practical aspects of medical journalism. Teach how to successfully write manuscripts. Understand potential publishing pitfalls. Three CME accredited workshops were conducted covering a comprehensive approach to all aspects of medical journalism including practical advice and guidance in writing and submitting manuscripts to medical journals. 1) Introduction to Medical Publishing 2) Issues in Medical Publishing 3) What Editors Want.

MICS Chart+ On-call Reduction
Leader: Les Stevens
Location: Mayo Clinic Rochester

Summary:
Information Services on-call team was having an increasing number of on-call calls from the user community as we rolled out the MICS Chart+ application to all ORs, ICUs, and procedural areas. The challenge was to get at the root cause of the problems and reduce the calls, increasing staff satisfaction and making for a better life/work balance, not to mention better service for the clinician using the tool. The whole team has pitched in to help and has created a climate of focusing on improvement efforts throughout all project activities.
Outcome-Based Residency Training Program: A Transfusion Medicine Model

Leader: Barbara Litsenberger
Location: Mayo Clinic Rochester

Team Members:
Valerie Halling, Department of Finance, Craig Tauscher, Division of Transfusion Medicine, Jennifer Talmo, Division of Transfusion Medicine, Alvaro Pineda, M.D., Division of Transfusion Medicine, S. Brendan Moore, M.D., Division of Transfusion Medicine

Summary:
The educational philosophy of the Accreditation Council for Graduate Medical Education (ACGME) has changed from ensuring that a resident is provided with opportunities to learn, to ensuring that learning has indeed occurred. This change is the core of the ACGME Outcome Project, which should improve residency education. This project includes the evaluation of training outcomes to identify opportunities for resident and program improvement. To comply with the new ACGME requirements, the Division of Transfusion Medicine extensively modified our existing training program. Training documentation was modified to provide evidence of learning. Training assessments were developed to ensure that learning objectives were met. Formative and summative evaluations were designed to identify opportunities for resident and program improvement. The program changes were implemented as a pilot for one year. Training outcomes demonstrated resident learning and identified opportunities for program improvement that resulted in a process change. Pilot results suggest that the ACGME Outcome Project will meet its objectives and justify the effort to redesign training programs.

Quality Office Department Resources
Leader: Laurie Dahl
Location: Mayo Clinic Rochester

Team Members:
Jana Cossette, Disease Management Strategies, Jo Ann Farnham, Health Care Policy and Research, Debbie Hinrichs, Disease Management Strategies, Dick Sprague, Office of Patient Affairs

Summary:
The goal of the storyboard is to provide information about the newly formed Quality Office Department.

Quality School: A Formal Method for Preparing Technical Experts to Become Quality Experts
Leader: Mary Foss
Location: Mayo Clinic Rochester

Team Members:
S.B. Moore, MD, Division of Transfusion Medicine, Mayo Clinic Rochester, Jarett Anderson, Brenda Bendix, Tamara Estes, Val Halling, Jill Kruger, Barbara Litsenberger, Rebecca Reisner, Jennifer Talmo, Craig Tauscher, Sheri Tran

Summary:
To be better able to manage quality in our 200-person Transfusion Medicine Division, we promoted a technically competent technologist from each of our eight Operations work units to a Quality Assurance Tech position. We expected these individuals to assume additional quality responsibilities, but we realized that before they could do so they would need formal training. Quality School was established to provide systematic training in quality principles and practices. The two-week curriculum consists of training modules developed to align directly with our Divisional Quality Plan. Only upon successful completion of Quality School are individuals "authorized" to perform certain quality functions. Quality School provides a formal method for preparing technical experts to become quality experts and in our Division has increased the Quality Expert:Technical Expert ratio from 1:50 which was functionally inadequate to 1:18 which is significantly better.

Research Roles and Responsibilities' Team
Leader: Teresa J. Kreofsky
Location: Mayo Clinic Rochester
Project Relation: Effectiveness

Team Members:
Tim Geisler, Foundation Accounting, Mike Joyner, M.D., Research Committee Carmen Kane, Finance CI (facilitator), Teresa Kreofsky, Research Administrator Charlotte Nordrum, Research Accounting, Mike Pfennig, Research Administrator, Thomas Sellers Ph.D., Finance Subcommittee, Craig Stewart, Research Accounting, Elizabeth Wendorff, Internal Audit, Michelle Wood-Jensen, Research Accounting

Summary:
Our team charge was as follows: Define and communicate roles, responsibilities, and accountability of key staff in research administrative services, research accounting, and the research community related to the financial
aspects of research. With the assistance of our facilitator the team used the four phase process: Phase One - Understanding the current process; Phase Two - Where do we need to be?; Phase Three - Closing the gap; Phase Four - Implement. As a results of the team’s outstanding performance they produced an interactive Research website that lists all functions within the financial and administrative aspects of research and clarifies responsibility of key personnel in each function. The defining and communication of research roles and responsibilities decreased confusion, duplication, poor customer service and risk while furthering our ability to be compliant with federal regulations.

Staff Satisfaction Survey Response Plan Project-Billing Operations
Leader: Angela Jackson and Margo Yotter
Location: Mayo Clinic Rochester
Team Members:
Summary:
The Staff Satisfaction Survey Response plans really only offered a springboard and task list of initiatives. We took those initiatives and created a PM Project Matrix and detailed the initiatives to build in a step-by-step process to assist us in creating a measure and reinforcement plan for the ultimate results. We also have ongoing data in evaluation of these initiatives to show successes as we proceed. This is an ongoing process and we will continue to add initiatives and use this document to manage and support staff.

Surgical Site Infection Prevention Collaborative
Leader: Kim Dockham
Location: Franciscan SkempHealthcare, Mayo Health System
Team Members:
Dr. Joe Skemp, Surgery Department, Physician Leader John Nemec, VP, Senior Leader Mike Jacobsen, CRNA, Clinical Champion Kim Dockham, RN, Clinical Quality Management, Day to Day Leader Carol Cantlon, BS, Infection Control Coordinator Mark Allen, RPhD, Pharmacy Jenifer Schiltz, RN, 3rd Surgical Sandy Jennings, RN, Day Surgery Tricia Kaczmarowski, RN, OR
Summary:
Franciscan Skemp Healthcare (FSH) is participating in a statewide collaborative with 20 other Wisconsin hospitals. The aim of the collaborative is to improve the care of patients undergoing surgery at FSH. We will redesign practice and procedures to better prevent surgical site infections. - 100% of eligible surgical patients will receive appropriate prophylactic antibiotics. - 100% of eligible surgical patients will receive antibiotic within 1 hour of incision - 100% of prophylactic antibiotics delivered prior to surgery will be discontinued within 24 hours. - 100% of patients will have a temperature greater than or equal to 36 degrees Celsius. Effective changes will be spread to the remaining surgeons at FSH within one year after effective changes have been identified. Our pilot population includes mastectomies, hysterectomies, colectomies, and total hips and knees. Five surgeons have agreed to work with the team. Elements of the change package the team has worked on include the use of prophylactic antibiotics appropriately. Currently 100% of antibiotics are being hung within 60 minutes of incision. One hundred percent of appropriate antibiotic selections is occurring. Ninety-nine percent of the antibiotics are being discontinued within 24 hours. Maintaining normothermia continues to be a challenge. Currently, 78% of patients have a temperature of greater than 35.9C. This collaborative will continue until May 2004.

Use of Statistical Process Control to Evaluate Timeliness of ECGs in ER Patients with Chest Pain
Leader: David Klocke, M.D.
Location: Mayo Clinic Rochester
Team Members:
Lori Ehlenfeldt, ER Control Desk Supervisor, Nicola Schiebel, M.D., Luis Haro, M.D., Lois Torkelson, ECG Supervisor Saint Marys Hospital
Summary:
The purpose of this project was to demonstrate how statistical process control, long used in industry and manufacturing to achieve world class (Six Sigma) results, can be easily and effectively utilized to better evaluate and improve health-care processes too. In this project, an important indicator for ER patients, timeliness of ECG in patients with acute chest pain, was chosen. We demonstrated how we can visualize the process using simple but valid statistical methods. Use of this process helps us visualize the overall process,
monitor the process, and identify special causes vs. random causes for variation from target values. This greatly simplifies identification of areas for improvement as well as determining the effectiveness of any interventions.

Project Relation: Efficiency

**Beds R Us**

**Leader:** Sandra Smith  
**Location:** Mayo Clinic Rochester  
**Team Members:**  
Sandra Smith, Team Leader, Carmen Kane, Facilitator, Larry Albrecht, Bryce Anderson, Jim Anderson, Teresa Beard, Dan Bidding, Peter Conner, Sunil Desai, Steven Distad, Wanda Fjerstad, Ray Frick, Shirley Klebesadel, Keith Krupp, John Lage, Chuck Olson, Al Savage, Melissa Sperber, Michael Troska, Sherri Twohey, Melissa Van De Walker, Mary Jane Weamer, Sonia Winslett, MD

**Summary:**  
The aim of the team was to develop a bed counting process that is compliant with Medicare regulations, ensures that the Indirect Medical Education reimbursement is fair and reasonable and reflects correct available beds.

**Beginning A Team Journey On The Yellow Brick Road Of Creating Research Excellence In The Management Of Research Studies**

**Leader:** Dr. Steven Jacobsen  
**Location:** Mayo Clinic Rochester  
**Team Members:**  
Steven Jacobsen, Dianna Bryant, Linda Berge, Karen Elias, Division of Epidemiology, Department of Health Sciences Research, Mayo Clinic Rochester

**Summary:**  
Background: Research Associates, RN Abstractors, Research Study Coordinators and Study Assistants within the Division of Epidemiology, Department of Health Sciences Research, partner to support over 25 current, ongoing investigator-led studies, and yet are largely a young group in terms of formalized research experience and training. Mission: To develop, standardize and document the training of all staff, and promote an increased awareness and understanding of good clinical practices, and how they pertain to minimal risk or retrospective studies in epidemiology. Process Improvement: In response to a sample self-assessment of study files, the institutional staff satisfaction survey, and an internal departmental survey, we have identified and selected the following major areas of task force focus for 2004, in addition to more formalized training: creation and continuous review of Standard Operating Procedures for each study function; assembly and publication of good study process documentation to ensure consistent, reliable recording of activities; development of a standard framework for all study files (both electronic and paper) to correlate with categories within the Regulatory Binder for each study; and project analysis to encompass scheduled review of funding sources and duration for each study, budgeted resources to support study personnel, and inclusion of estimated completion dates; and to formalize orientation and training, with close documentation and continuous review of the process and methods. Results: Beginning in early 2002, division members have been evaluating the training and education needs of the personnel. With a new model of supervision, and a reorganization of roles and responsibilities within the division, more formalized and structured training will be put in place for all levels of personnel. Every new and existing study team member will undergo training and an ongoing review of roles and responsibilities to assure maximum functionality in each study team. Team building activities have already been conducted in the form of a half-day, work unit retreat focused on team participation in the board game Search for the Lost Dutchman’s Gold Mine. As a combined activity, we have also viewed the videotape of Who Moved My Cheese, drafting metaphors representing change. Bulletin boards posting these metaphors are on display. Further activities are under development. We plan to measure workload to resources for current and future studies by using individual study recruitment/enrollment projections to form a basis for time projection needs and completion dates on target. This will enable development of a generalizable performance metric for use in ongoing assessments, as well as future project planning. Communication methods will be enhanced to promote continuous and complete information dissemination between intra-study and inter-study personnel. Quarterly, semiannually and yearly reviews of specific process improvements will be conducted, with updates happening at each target zone.
Cross Training/Wisitation CV Division  
**Leader:** Linda Huntington  
**Location:** Mayo Clinic Rochester  
**Team Members:** Joan Broers, Julie Klemmensen, Bijoy Khandheria MD, Cathleen Altwegg, Jane Biers, Darlene Albrecht, Martha Mangan, Nicole Brennan, Vuyisile T. Nkomo, M.D, Linda Huntington, Lynn Schaefer, Douglas Parks, Cynthia Niesen, Rochelle Putzier, Denise Schouweiler, and Angela McCurdy  
**Summary:** The CV Service and Success in the Heartland task force has implemented a CV Downtown Campus Observational/Informational Tour for our employees.

Document Management  
**Leader:** Jennifer Hare  
**Location:** Mayo Clinic Rochester  
**Team Members:** Mayo Collaborative Services, Inc. and Department of Laboratory Medicine and Pathology Quality Assurance Offices  
**Summary:** Putting an organization's procedures down on paper can no longer be avoided. With increasing requirements for regulatory compliance, organizations need to document their quality and operational procedures. Mayo Collaborative Services, Inc., in collaboration with the Department of Laboratory Medicine and Pathology, has developed a document management process to control policies, processes, procedures, guidelines, and forms. The learning objectives for this storyboard include: * Overview of the Quality System Framework and how Documents and Records is one element of our Quality Program. * Definitions of document types * Elements of a document management system.

Emergency Department Utilization in the Medicaid/BadgerCare HMO  
**Leader:** Mary Strok RN,C  
**Location:** Health Tradition Health Plan, Onalaska, Wisconsin  
**Team Members:** Tradition Health Plan: Pamela Amundson, Quality Department Kim Stein, Government Programs Coordinator Jenny Oliver, Member/Provider Advocate  
**Summary:** Baseline study to determine MA/BC HMO utilization of Emergency Department services. Methodology: Collection of administrative claims-paid data. Analysis of data in terms of: age cohort; provider site location; primary ICD-9-CM code; county of residence; peak utilization times; returns within 72 hours; multiple visits. Results: Utilization highest in: <15-age cohort; FSH-Sparta; ICD-9-CM. Diagnoses: otitis media; superficial injuries; abdominal pain; Monroe county of residence. <5% returns and multiple visits. Conclusions: Non-emergent visits outnumbered emergent. Potential cost savings of $57,900 over 2 years if non-emergent visits managed more effectively. PI activities to focus on <15-age cohort; disease management; safety and injury prevention.

Enhance Scheduling System to Improve Satisfactions  
**Leader:** Jane Biers and Rochelle Putzier  
**Location:** Mayo Clinic Rochester  
**Team Members:** Cathleen Altwegg, Cardiovascular Diseases, Jane Biers, Cardiovascular Diseases, Bijoy K. Khandheria, MD, Cardiovascular Disease, Rochelle Putzier, Cardiovascular Diseases  
**Summary:** The Cardiovascular Appointment Offices redesigned workgroups and processes to provide integrated, consistent and high-quality standard support to the subspeciality clinics and physicians, thereby evenly distributing the workload, decreasing appointment scheduling turnaround time and improving staff satisfaction. Patient satisfaction has also been improved. There has been a reduction in phone tag between appointment coordinators, physicians, and patients.
FAST Track
Leader: Kerry Watkins
Location: Mayo Clinic Rochester
Summary: The history of the Financial Statement (FS) process: Labor Intensive - manual and rework involved; there were several distribution areas and unclear distribution guidelines; and high queue volumes. Baseline Data: 942 accounts pending in PowerCollect with $5,938,111 - outstanding balance. Average monthly FSs coming into PAS equaled 200. The team’s aim was: To reduce the total FS process time by 50%. Identified FS Process Delays fell into the categories of the patient being “uncooperative” (FS not returned by patient; incomplete FS returned; waiting for tax return or missing tax information; patient unwilling to release information) and sending the FS prematurely (insurance pending; no good faith payment; billing process incomplete). The solutions identified and implemented were: Control FS distribution areas / use of web; modify FS form communication to patients; staff training. The expected impact was: fewer financial statements to process; decrease queues; decrease turnaround time; increase customer satisfaction. Complete FS form: less rework; decrease delays. The first data collection post implementation (Sept. 30, 2003) showed: new FS forms coming into PAS from 9/2/03-9/30/03 = 120 (Baseline 200), which is a 40% reduction. Subsequent changes are projected to reduce another 20-30%.

Improving the Fulfillment Process for Requests for Diagnosis Information
Leader: Susan King
Location: Mayo Clinic Rochester
Team Members: Robin Woodwick, RN BSN Ask Mayo Clinic Triage Nurse Mary Freeman,RN Ask Mayo Clinic Triage Nurse Belinda Wesley,RN BSN Ask Mayo Clinic Triage Nurse Susan Seiler, RN Ask Mayo Clinic Triage Nurse
Summary: An informal process was in place to send Mayo-approved written materials to callers seeking diagnosis information. The team was formed to evaluate this process. We established goals to standardize the information and the process. The team developed a new process and work-flow, developed policy and procedure to support a new process, and educated the staff on the new process. The team currently provides ongoing support to the new process.

Improving the Work-Flow of Interlibrary Loans at the Plummer Library and Bursak Biomedical Library
Leader: Ann Farrell, Pat Erwin
Location: Mayo Clinic Jacksonville
Team Members: Ann Farrell, Bursak Biomedical Library, Mayo Clinic Jacksonville Sally Guthrie, Bursak Biomedical Library, Mayo Clinic Jacksonville Pat Erwin, Plummer Library, Mayo Clinic Rochester Marla Battey, Plummer Library, Mayo Clinic Rochester
Summary: No library is large enough nor wealthy enough to have all of the materials needed by its physicians, staff and students. The National Network of Libraries of Medicine established a robust network of medical, hospital and academic libraries to provide books and articles to libraries throughout the United States and Canada. The network is very effective – in 2002 the Mayo libraries in Rochester filled more than 44,085 requests for materials from libraries outside the Mayo systems, and received more than 6,141 requests for materials from Rochester staff and students. In Jacksonville the Bursak Biomedical Library received 582 requests from its staff and students, and filled 581 requests from libraries outside of the Mayo systems. The paperwork needed to track requests and billing was rapidly overwhelming the FTE available. In this area, the benefits of the new applications have been most dramatic. EFTS (Electronic Funds Transfer System) and QuickDoc interface with the National Library of Medicine’s Web-based document delivery system DOCLINE allow both libraries to streamline the work-flow of processing requests, and reduce the number of invoices significantly. The electronic billing system also minimizes the need for separate payments to outside vendors, reducing the load on non-library departments. Other benefits have been improved capability of updating staff and students about the status of their requests, and automatic generation of statistics.
Manual Tasks to Automation Medical Claims Processing at MMSI
Leader: Colleen Bjerke
Location: Mayo Clinic Rochester
Team Members:
Summary:
Team Charge: Optimize Productivity by Evaluating and Improving Claims Processing Functions. The workgroup was developed to find ways to automate medical claims processes that required manual intervention. The work-group developed standards for internal procedures and education to our members and providers outlining proper claim submission. The work-group identified several key issues to address, using a project prioritization matrix. Four key projects were defined: B Medical claims submitted with invalid or incorrect physician/facility tax identification number B Auto rejection of medical claims with missing codes B Auto rejection of medical claims with missing/illegible physician names _ Auto rejection of medical claims for patients who are not MMSI members. Baseline and post-project reporting will be shared.

Mayo Clinic Scottsdale Colonoscopy Access Management
Leader: Andrea Knapp
Location: Mayo Clinic Scottsdale
Team Members:
David Fleischer, M.D. Chair, Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale Darius Sorbi, M.D., Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale Jonathan Leighton, Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale Malshi Ambrose, Scheduling Department, Mayo Clinic Scottsdale Maureen Cain, R.N., Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale Linda Gorkis, R.N., Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale Darin Goss, Systems and Procedures, Mayo Clinic Scottsdale Brenda Kimery, P.A., Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale Andrea Knapp, Operations Administration, Mayo Clinic Scottsdale Jackie Lamis, R.N., Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale Richard Nelson, Systems and Procedures, Mayo Clinic Scottsdale Faith Pedersen, Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale Karyl Sanford, Division of Gastroenterology and Hepatology, Mayo Clinic Scottsdale
Summary:
Prior to the development of a multidisciplinary team at Mayo Clinic Scottsdale charged with addressing the large colonoscopy backlog, a waiting list of 2400 patients, existed for colonoscopy procedures. There was no systematic process to manage the waitlist, there was limited ability to review requests for colonoscopies, and there was a lack of published guidelines within MCS to determine the appropriateness of colonoscopy orders. A team was developed to determine the true waitlist volumes, implement immediate actions to reduce the waitlist, develop plans to eliminate the waitlist, develop a triage process, and educate referring physicians as to the recommended guidelines for ordering a colonoscopy. The solutions to these issues included the development of a colonoscopy database, education to referring physicians and patients, a review process for the appropriateness of colonoscopy orders, new policies, a streamlined work-flow, weekly reporting and a calendar management shift of physicians to the endoscopy unit. Through the development of a wide array of solutions and a multidisciplinary approach to the issue, the colonoscopy waitlist was reduced from 2400 patients as of Jan. 13, 2003 to 291 patients as of Sept. 12, 2003.

MCS GI Process Improvements for WaitList Management
Leader: Dick Nelson
Location: Mayo Clinic Scottsdale
Team Members:
Dick Nelson, Systems & Procedures, Mayo Clinic Scottsdale; Darin Goss, Systems & Procedures, Mayo Clinic Scottsdale; Linda Gorkis, RN, Gastroenterology, Mayo Clinic Scottsdale; Andrea Knapp, Operations Administration, Mayo Clinic Scottsdale; Anne Fecteau, Associate Administrator, MCS; David E. Fleischer, M.D. GI, MCS; Jonathan A. Leighton, M.D. GI, MCS; Darius Sorbi, M.D. SAC-GI, MCS
Summary:
We addressed the problem that was no systematic process to manage the GI Waitlist: colonoscopy requests came from two different electronic queues which were printed off and maintained in remote filing cabinets; status was tracked via and maintained through 26 manually maintained lists; no systematic method existed to remove patients from the waitlist or to easily gather information on the status of the request, the true number
of patients was really never known (exceeding 2400 in January 2003). The solution was to replace the paper tracking system with an electronic data base for real-time / local access to information which provided waitlist real-time statistics and the ability to track productivity such that reviews could be prioritized by acuity. This resulted in a more effective / efficient scheduling process which reduced the review processing time from 184 minutes to 50 minutes. Also, the electronically generated statistics improved the manual statistics generation process from 160 minutes to one minute.

**Optical Character Recognition (OCR) for Medical Claims Processing at MMSI**

**Leader:** Terry Timm and Julie Swanberg  
**Location:** Mayo Clinic Rochester  
**Team Members:**  
Project Sponsor: Leon Clark, Operations-MMSI  
Team Members: Julie Swanberg, Operations-MMSI  
Terry Timm, IS-MMSI  
Deb Christenson, Operations-MMSI  
Donna Lilly, Sungard Workflow Solutions  
**Summary:**  
Optical character recognition (OCR) is at the forefront of insurance industry technology. OCR allows the ability to capture text from a document and convert it into computer-based text. OCR greatly enhances the productivity of the data entry of the organization and reduces the number of full-time employees necessary to enter data.

**Patient Status Performance Improvement Team**

**Leader:** Kevin Lockett and Robin Silvester  
**Location:** Mayo Clinic Jacksonville  
**Team Members:**  
Robin Silvester, Revenue Recognition  
Saints Lukes Hospital (SLH)/Mayo Clinic Jacksonville (MCJ), Rachel Martin-Rolle, Systems and Administrative Support, SLH/MCJ, Kevin Lockett, Patient Financial Services, SLH/MCJ, Elaine Heilmier, Compliance & Quality, SLH/MCJ, Luanne Lentz, Outcomes Management, SLH/MCJ, Lisa Deluca, Revenue Recognition, SLH/MCJ, Felicia Barnes, ED Registration, SLH, Millie Morgan, Main Admitting SLH, Rayna James, Case Management, SLH, Corene Tilly, Unit Secretaries, SLH, Viola Brown, Nursing, SLH, Dawn Henley, Coding, SLH, Denise Sikes, Precert / Preadmit MCJ  
**Summary:**  
The Patient Status PI Team’s Aim is to identify system changes that will help to ensure that patients are assigned to the appropriate status, i.e., Inpatient, Outpatient, Observation. The measures are percent of patients assigned to each status, percent of patients assigned incorrectly upon admission to the hospital, and percent of patients assigned inpatient status with length of stay <= 2 days. The process flow was completed and the issues identified and prioritized. SLH will be participating in a project with the state of Florida Quality Improvement Organization to initiate a case management protocol which delegates the assignment of patient status to case management. The protocol will address most of the issues identified with correct assignment of patient status.

**PICC Project**

**Leader:** Jo Burgess  
**Location:** Mayo Clinic Jacksonville  
**Team Members:**  
Karen Garrett, RN, PICC Team Member, St. Luke's Hospital, Jacksonville  
**Summary:**  
This project was designed to train registered nurses to place peripherally inserted central catheters (PICC) on the patient floors. This project was developed as a pilot project to decrease the backup in the radiology department which has been placing the PICC lines. The lines needed to get placed in a more timely manner and decrease the overtime for the radiology staff. This is a combined project between nursing services and the radiology department. This was also an effort to cut costs to the patient by having an RN place the line at the bedside. This poster presentation reflects the results of the project to date.

**Rat Race Team (Re-evaluating Appointment Times Reschedule and Cancel Efficiently)**

**Leader:** Kim McGarry  
**Location:** Mayo Clinic Rochester  
**Team Members:**  
PM&R SMH - 1 Domitilla, Mayo Rochester Kristi Pesch, PT Linda Pirius, PT Heather vankoeverden, OT Daniel Neveau, OT Kim Stillman, Desk Sandra Durgin, Desk Kim McGarry, PT Assistant Supervisor Kathy Wegener, Technician Diane Malone, Supervisor, Team Leader Department of Finance, Mayo Rochester Kelly Rossin, Facilitator Susan Berg, Facilitator
Aim of Project: To reduce the number of cancels and reschedules of inpatient therapy appointments.
(Reschedule is defined as a change in appointment. Cancel is defined as the patient was not treated.)
Additional outcomes of improvement will include increased efficiency and staff satisfaction. The CI process led
this team to eliminate the previous GPAS scheduling system for hospital inpatients. Instead, a simplified
scheduling system was developed. Therapists are assigned to a hospital location and utilize unit-based MICS
worklists. Therapists self-manage this worklist, determining provider, therapy time and frequency. Therapists
stay in the area throughout the day with equipment and supplies on site. Data from pilot areas showed a
significant decrease in cancellations (22%) and reschedules (100%) when compared to pre-pilot data. Therapist
efficiency (average evaluations and treatments per day) increased. Feedback from nursing, social services and
therapists has been positive, noting fewer cancellations, enhanced teamwork, improved consistency of
therapist provider, and decreased staff travel time.

Reprocessing Unsatisfactory ThinPrep Paps Using Glacial Acetic Acid

Leader: Renee Root
Location: Mayo Clinic Rochester
Team Members:
Amy Clayton, M.D., Division of Anatomic Pathology, Mayo Clinic Rochester Renee Root, CT, Division of
Anatomic Pathology, Mayo Clinic Rochester

Summary:
After implementation of the ThinPrep Pap test in our laboratory, unsatisfactory specimens were re-evaluated
for possible salvage. The specimens were reprocessed using glacial acetic acid in an attempt to gain
satisfactory specimens. A total of 997 unsatisfactory ThinPrep Paps were reprocessed using this technique. Of
these, 949 (95%) of specimens were satisfactory after reprocessing, including 82 epithelial abnormalities.
Reprocessing unsatisfactory ThinPrep Paps using this method has proven effective for our laboratory as
manifested by these results. Abnormal as well as normal cells appear to tolerate the reprocessing treatment and
an otherwise unsatisfactory specimen can usually be salvaged. The results support the use of this method on
bloody specimens at the time of initial processing to improve efficiency and cost-effectiveness of the laboratory.

Short Stay Pilot

Leader: Cheryl Phillips
Location: Mayo Clinic Scottsdale
Team Members:
Cheryl Phillips, Karen Biel, Kathi Overstreet, Lynn Pajerski, Cheryl Lassiter,

Summary:
Changed unit from Phase II/Observation unit to ambulatory surgery unit during pilot to increase patient
throughput. The Short Stay unit admitted, recovered and discharged all outpatient surgery and procedural
patients. The main Pre/PACU was responsible for inpatients and AM admission patients. During the pilot we
were able to eliminate wait times by having all patients ready for surgery on time. We also decreased the
discharge/recovery phase by an average of 42 minutes/patient.

Simplifying the Document Annual Review Process

Leader: Lisa Colborn
Location: Mayo Clinic Rochester
Team Members:
Lisa Colborn, CT (ASCP), Heather Eidenschink, Shari Halling CT (ASCP), Sanda Humphrey, (CT
ASCP), Johnita Ihrke, CT (ASCP), Sally Nelson, CT (ASCP), Renee Root, CT (ASCP).

Summary:
The Cytopathology Laboratory is a high-volume laboratory with numerous documents to control and review.
The College of American Pathologists (CAP) requires that all procedures must undergo annual review and be
signed off by the laboratory technical director or designee. With hundreds of documents to review and
approve, it became a challenge for management staff to keep up with the timely review of the procedures. A
team was formed comprised of laboratory management staff and the administrative secretary. The team was
called the Cytology Procedure Review Group (CPRG) and was charged with review of all existing documents
and the creation of any new documents. The end result has been: the creation of several hundred documents a
Web-based archive of the documents, a process for change and/or review of documents a process for the
review and documentation of the document changes by staff. During a recent internal audit of documents and
records, the lab was praised for the processes in place and was urged to share the practice with others.
SPD Compliance Contest  
**Leader:** Janis Dzyndra  
**Location:** Mayo Clinic Jacksonville  
**Summary:**  
Cost-saving initiatives have garnered much interest at Mayo/St. Luke’s Hospital. We became aware of our lack of follow through in something as simple as charges for SPD items used with a tremendous loss in revenues to our units. After presenting posters and mailbox inserts that informed the staff of the need to charge items appropriately, we came up with a friendly competition that would hopefully establish a habit of charging for items used. This poster will reflect the outcomes of that competition.

SPEDE Delivery CI Team  
**Leader:** Nancy Newton  
**Location:** Mayo Clinic Rochester  
**Team Members:**  
Nancy Newton - Team Leader, Purchasing, Shane Danielson, Purchasing, Jim Fulbright, Research, Tom Kollmeyer, Research, Donna Meyer, Research, Nick Sanner, Finance, Sandy Severson, Research, Sue Theobald, Materials Management IS, Jan Marie Willard, Research, Coaches - Tammy Kisper and Carmen Kane  
**Summary:**  
SPEDE Delivery CI Team - Solving Problems of Existing Delays to Expedite Delivery. The team’s aim statement: Decrease cycle time by 25% from the research laboratories’ initiation of a purchase requisition (special or non-stock items) to the time Purchasing released the order to the vendor. The team flowcharted and measured cycle time for the Lab customers to create, submit and mail a paper purchase requisition and to create and submit an electronic requisition. The team also flowcharted and measured Purchasing’s cycle time for processing a paper requisition and an electronic requisition. The team discovered that paper requisitions took an average of 4 business days (including mail time) from initiation of a paper requisition to release of the order by Purchasing. The team also discovered that it took an average of 2 hours from initiation of an electronic requisition to release of the order by Purchasing. The team concluded that electronic requisitions were the most efficient way to handle customers ordering needs. The team began looking at available tools for customers to utilize Mayo’s electronic requisitioning system, Lawson Web Reqs II. The team determined that the then-current tools were not effective for customers. The team decided to enhance and improve the existing tools to make learning Lawson easy for Purchasing’s customers. A new training manual and class structure were developed, tested and piloted with great success. Representatives of the SPEDE team then met with Purchasing leadership to share their findings. Purchasing decided to implement the team’s findings. Purchasing would provide a training manual and class for customers and would institute a new electronic requisition policy for supplies and services effective June 1, 2003. SPEDE team members then met with key Rochester departments prior to the announcement of the policy change. An institutionwide announcement was made, a 10-week training period commenced and then on June 1, 2003 the electronic requisition policy took effect.

Stress Testing Efficiency  
**Leader:** Suzanne Lovell RN  
**Location:** Mayo Clinic Jacksonville  
**Team Members:**  
Suzanne Lovell RN, Supervisor stress testing, Debbie Aloska NMT, Supervisor nuclear medicine, Emery Kapples, supervisor echocardiogram, Nancy Adams RN Division of cardiology, Clay George RN Division of cardiology, Elaine Macomb RN Division of cardiology, Cindy Smith RN Division of cardiology, Luanne Ducker RN Division of cardiology, Lori Weaver RN Division of cardiology, Tammy Couch Division of cardiology, Hyacinth Roberts Division of cardiology  
**Summary:**  
Our original staffing model was to have an ECG technician and RN in each treadmill room for routine exercise treadmill test. We eliminated the ECG tech and better utilized the RN to conduct the test. Our original staffing model for exercise echocardiogram stress test was to have an ECG tech, RN, and echo tech in the room. We eliminated the ECG tech and utilized the echo tech to assist the RN in conducting the test. We did the same thing in our nuclear medicine stress testing utilizing the nuclear medicine tech. to assist the RN and thereby reducing the need for the ECG tech to be in the room. We had 4 full-time ECG techs prior to this change. We now have two. One transferred to another area in the clinic, the other one retired. We did not eliminate any positions, but we are not replacing those that leave. The two full-time ECG techs are utilized by keeping the flow of the department going, such as placing electrodes on the patients ahead of time, keeping the machines stocked and rooms stocked. They also tech during dobutamine stress echocardiograms.
The Stepping Stones ... A Self-Directed Team Approach To Effectively Manage A GME Training Program
Leader: Karen Goodman, Julie Hewett, Lavinta James & E.J. Outman
Location: Mayo Clinic Jacksonville
Team Members: Patricia Adam, Peggy Cleary, Karen Goodman, Linda Hammer, Julie Hewett, Lavinta James, E.J. Outman, Melissa Paglia, Mary Ellen Wofford & Jennifer Wood Graduate Medical Education Department, Mayo Clinic Jacksonville
Summary: Mayo Graduate School of Medicine-Jacksonville was established in 1993 with one accredited program. Today, Mayo Graduate School of Medicine-Jacksonville has 9 accredited residency programs, 7 accredited fellowship programs and 12 unaccredited fellowship programs. The MCJ Program Coordinator’s Manual was created to provide a resource whereby coordinators could refer for the best-established practices in facilitating MGSM program policies and requirements. A strong need was identified to develop a more advanced reference tool that would link an appreciation for the established guidelines in place by varying accrediting bodies, both internal and external of the Mayo Graduate School of Medicine, to effectively manage a training program. The manual will be accessible via Mayo Clinic Jacksonville intranet Web site or a hard copy. The purpose of this manual is to provide a resource tool where a current or new program coordinator can obtain information on policies/procedures, step-by-step instructions on general program coordinator responsibilities, specific details outlining the processes for program requirements and the management of a training program.

The Treasure is in the Triage
Leader: Julie O'Donnell
Location: Franciscan Skemp Healthcare, Mayo Health System
Team Members:
  Dr. Kenneth Horth, GI Department, FSH
  Dr. Zuhair Yaseen, GI Department, FSH
  Dr. Robert Shaffer, GI Department, FSH
  Dr. Greg Cramer, GI Department, FSH
  Dr. Joanne Ormand, GI Department, FSH
  Nancy Hammes, RN, Director of Patient Care Virginia Marzan, RN
  Outreach Coordinator Janet Graves, RN,
  Endoscopy Anna Meiners, RN
  Endoscopy Jennifer Poelma, RN
  Endoscopy Julie O'Donnell, RN, Lead Nurse,
  Endoscopy Tara Stephens, RN
  Endoscopy Ida Vessels, RN
  Endoscopy Carol Waters, RN
  Endoscopy Debbie Butterfiled, HUC
  Endoscopy Diane Jolivette, MRA
Summary: The aim of this team was to gain easier access to GI services for a relatively healthy patient population with delivery of high-quality care and patient satisfaction in a timely fashion and to develop a process that was user-friendly to the providers. Limitations of the current practice were identified as being limited GI Physician appointments, limited space to do endoscopies, and no screening process in place to determine patients who were relatively healthy. Changes made included the development of a multidisciplinary team that broke down the tasks and built workable pathways for access to medical records, faxing of requests, computer scheduling, development of screening criteria and improved communication with providers and patients. The other change made was the addition of an RN triage. The triage RN uses approved set of GI Physician Screening Criteria for the healthy and stable population on the La Crosse Campus initially and now has introduced the triage process into the Outreach areas. The numbers of colonoscopies have increased greatly.

Project Relation: Patient-Centered

Advance Directives Management Across the Continuum
Leader: Paul Mueller, MD and Kathleen Meyerle, JD
Location: Mayo Clinic Rochester
Team Members:
  Paul Mueller, MD, Division of General Internal Medicine, Co-Leader Kathleen Meyerle, JD, Co-leader Sandy Asmussen, Quality Office, Accreditation, Facilitator Sharon Prinsen, Nurse Manager Steve Kruisselbrink,
  Systems & Procedures Janet Befort, Systems & Procedures Amy Anshus, Systems & Procedures Estelle Souchet,
  Health Information Management Sherry Rush, Systems & Procedures Janelle O'Brien, Systems & Procedures Kristi Schoenmann, Medical Social Services
Summary: A patient’s right to formulate advance directives supports Mayo’s core value “the needs of the patient come first.” Advance directives are documents that state patients’ wishes about the health care they want to receive when unable to communicate for themselves or to designate someone to make decisions for them. A
multidisciplinary team at Mayo Clinic Rochester has revised the Advance Directives Policy to guide advance directive management across the continuum of care. Specifically it addresses the role of the health-care team when patients are admitted to the hospital, undergo sedation, or are seen by their primary provider in the clinic setting. New processes and access to advance directives in the electronic medical record are expected to facilitate timely discussions about advance directives and assure easy access to the advance directive information, in the event it is needed. Prior to full implementation in December 2003, the process was tested on Gonda 10 Medical Oncology. Pre-implementation medical record review and surveys of the medical and midlevel providers were conducted. A post-implementation evaluation with these Medical Oncology staff will be conducted mid-2004. Major milestones of the project include: - Revising the policy with input from all health-care disciplines - Enhancing the scanning capability of the Mayo Clinic Rochester Advance Directives form - Designing the mechanics and process for advance directives scanning - Revising forms to include associated documentation prompts - Developing staff education material - Gathering pre-implementation data - Testing the process - Communication and education - Full implementation - Plans for post-implementation evaluation.

Amazing Newborn Clinic Owatonna Community Collaborative
Leader: Louanne Kaupa
Location: Owatonna Clinic - Mayo Health System
Team Members: Nancy Martin, RN, IBCLC, Owatonna Hospital Sarah McCauley, RN, Steele County Public Health, Vanessa Rotchadel, Owatonna School District #761 Early Childhood Family Education
Summary: A community-wide collaborative effort for providing consistent educational messages regarding breast-feeding, infant feeding, newborn care, postpartum self-care and child development concerns. This is a weekly support group with an educational focus staffed by a multidisciplinary team representing the collaborative organizations. Two registered nurses, one registered dietitian and one early childhood education/parent educator are present at the weekly 1 1/2 hour sessions where on average 25 mothers (and some fathers) present with their newborns. Greater than 200 families have been served each of the past 3 years. A few of the goals of this program are to 1) provide newborn care, child development and breast-feeding education/support, 2) baby weight checks and screening for possible problems (same day referrals are made to the clinic when needed), 3) free up clinic phone nurses' time, and 4) introduce new parents to the Early Childhood Family Education Program.

Anticoagulation Clinic
Leader: Ardyce Olson
Location: Owatonna Clinic, Mayo Health System
Team Members: Ardyce Olson, NP, Internal Medicine, Owatonna Clinic, Owatonna, MN Mary Funk, NP, Internal Medicine, Owatonna Clinic, Owatonna, MN Ralph Wertwijn, MD, Internal Medicine, Owatonna Clinic, Owatonna, MN
Summary: This is a point-of-care clinic for patients who are on long- or short-term anticoagulation. Project was started about 4 years ago and has grown to manage 425 patients. Patient compliance has improved, and there is a very high rate of patient satisfaction.

Can We Get A Handle On Recognizing Elevated Blood Pressure?
Leader: Dr. Reema Khurram
Location: Owatonna Clinic, Mayo Health System
Team Members: DMS Team: Reema Khurram, MD Internal Medicine Patrick Greenwood, MD Medical Director Jay Mitchell, MD Family Practice Scott Bangs, MD Family Practice Craig Oien, MD Family Practice Mary Jo Boerboom, Nurse Family Practice Jill Manthei- Nurse Internal Medicine Donna Neubauer- Nurse Neurology Pat Buretta - Nurse Nurse Manager Dawn Ritter- Nurse Health Education Cathy Glovka- Dietician Health Education Peggy Johnson - Reception; phone pool Cathy Anderson - Reception Diane Olson- nurse- facilitator
Summary: Data collection from chart audits demonstrated an opportunity to improve on 2 areas for patients with elevated blood pressure: 1. recognition of elevated blood pressure, and 2. documentation by provider of a follow-up plan. The Disease Management Team (DMS) discussed options for flagging elevated blood pressure and documentation ideas. A plan was created with 2 components: circling an elevated blood pressure, which
triggers the provider to document a follow-up plan. Project was piloted in 2 areas of family practice. Preimplementation data for documented follow-up plan for elevated BP ranged from 0% to a high of 36%. By Week 5 of the pilot project the following improvement was noted: FP 26th FP North 1 was elevated BP circled? 55% 67% 2. Dictated Note/Elevated BP 67% 78% After review of the data, decision was made to expand the pilot to the Department of Internal Medicine on 10/20/03.

Closing the Loop
Leader: R. Scott Gorman, MD
Location: Mayo Clinic Scottsdale
Team Members:

Summary:
As part of our Strategic Plan for Mayo Clinic in Scottsdale, one key area of emphasis in 2003 was the Closing the Loop initiative. Closing the Loop is the concept of completing the episode of care in a manner consistent with the Mayo Clinic Model of Care. The transition to the Electronic Medical Record (EMR) has changed the delivery of care at Mayo Clinic. Most of these changes have improved access to information. However, some changes have not allowed consistent delivery of the Mayo Clinic Model of Care. The Closing the Loop initiative specifically includes an effort to enhance the delivery of the Mayo Clinic Model of Care in the new EMR environment. Key components of the Closing the Loop initiative include: Improving our methods of reporting results to both providers and patients; faxing GI reports; delivering lab paper copy; e-mailing radiology results; automating through Physician Electronic Results Notification (PERN) project; reestablishing the concept of a "responsible physician" in our EMR environment (the responsible physician is responsible for managing a patient's episode of care); reestablishing a dismissal process (the Mayo Clinic dismissal process is a final check of a patient's results by the responsible physician); and improving our communications with referring physicians. We are very encouraged by our progress thus far. Process improvements associated with closing the loop will continue throughout 2004.

Diabetes Management in the Medicaid/BadgerCare HMO
Leader: Mary Strok
Location: Health Tradition Health Plan, Onalaska, Wisconsin
Team Members:
Health Tradition Health Plan: Pamela Amundson, Quality Department Kim Stein, Government Programs Coordinator Jenny Oliver, Member/Provider Advocate

Summary:
Baseline study to determine level of comprehensive diabetes care in the Medicaid/BadgerCare HMO. Methodology: Collection of administrative claims-paid data and medical record audits. Analysis of data in terms of prevalence in the MA/BC HMO population of Health Tradition, the number and type of comprehensive diabetes care screenings, and the percentage of comprehensive diabetes care indicators demonstrating control of the disease. Results: While the prevalence of diabetes is lower in the Health Tradition population than in the general population, screening is inconsistent. Screening rates are much lower and control is less often achieved than in the commercial population. Conclusions: PI will focus on increasing the number and type of screenings that occur, education on risk factors, prevention and treatment of the disease and individual case management as needed.

Discharge Order Set
Leader: Kenneth J. Mishark, M.D.
Location: Mayo Clinic Scottsdale
Format: Poster MCS
Team Members:
Kenneth J. Mishark, M.D., HIM, MCH Lisa M. Hurst, M.D., HIM, MCH Ann Marie Hunsaker, Support Services, MCH
Summary:
The 7th Scope Indicators are an integral part of quality patient care. At baseline, our 7th Scope data did not approach MCS expectations. Attempts at educating the provider staff did not result in significant improvement. This led to the design of a “Medical Discharge Order Set” which will re-engineer our discharge process. This new order set will require all medicine patients to be screened for the 7th Scope Indicators prior to discharge. The discharging physician will review and address each measure prior to dismissal of the patient. We anticipate these changes will result in significant improvement of patient care.

"Exceeding Expectations in the Desert"
Leader: Pat Giordano
Location: Mayo Clinic Scottsdale
Team Members:
Kris Jones, Anita Demar, Leslie Lepisto, Sharmain Hastings, Anna Packes, Betty Miller, Patty Trautman, CIM, MCS; Carol Ann Attwood, MPH,RN,C Clinical and Patient Education, MCS

Summary:
CIM General Medical Exam Waitlist Management. THEORY: The focus of our improvement efforts was to establish and maintain a systematic process improvement plan for utilization and management of the CIM General Medical Exam (GME) Wait List. CIM previously had been opening physicians’ calendars on a quarterly basis. Patients were instructed to call on that particular opening day to schedule ME appointments for their respective physicians. Due to extremely heavy call volume on those particular days, patients were placed on hold or were unable to get through to make their appointments. Patients were often frustrated and upset with their inability to access CIM appointment scheduling. Several physicians would have full calendars after the first few days of openings, which left no GME appointments until the next quarter. METHODOLOGY: The CIM division leadership assessed and implemented a new plan for physician calendar openings. The decision was made to open the calendars on a monthly basis to improve efficiency and to significantly decrease call volume on those days. This also allowed for schedulers to fill appointments consecutively within a month, increasing physician productivity. Utilization of the full capabilities of IDX’s Wait list allowed patients the flexibility to call ahead and request the Waitlist option, which features preferences such as day, time and special scheduling requests.

Representatives schedule appointments from the Waitlist two days prior to monthly calendar openings for patients who are due for their GME and mail the itinerary to the patient’s home. Patients’ appointments were customized to their needs without them having to make a second call to the CIM Call Center. RESULTS: Implementation and utilization of the Waitlist in addition to increased calendar openings helped meet our departmental goal of exceeding patient expectations. Patients were given more options and control in their scheduling, and they appreciated the efficiency and timeliness the new process provided them. Decreased call volume on calendar openings has also allowed representatives to better serve our acutely ill patients. We have just completed our October 15 calendar opening schedule for the month of January. Even with decreased staffing we were able to effectively assist all of our CIM Internal Medicine patients. Increased patient satisfaction helps build our department’s credibility.

Impact of Reminder Cards and Feedback Reports on In-Hospital Prescription of Preventive Medications in CABG Patients
Leader: Randal J. Thomas, M.D.
Location: Mayo Clinic Rochester
Team Members:
Randal J. Thomas, Lambert Wu, Brenda Kirby, Becky Hughes Borst, Charles Mullany

Background: Provider reminders and feedback can improve the provision of preventive services, but the impact of such measures in patients undergoing coronary artery bypass (CABG) surgery has not been reported. Provision of preventive medications to such patients is often deferred to the outpatient setting, resulting in a missed opportunity since in-patient provision of medications predicts outpatient use. The purpose of this project was to assess the impact of a simple in-patient system including pocket reminder card and feedback reports on the prescription of ABC therapies (Aspirin (ASA), ACE inhibitors (ACE), Beta blocker (BB), and Cholesterol lowering (CL) therapy) to patients undergoing CABG surgery.

Methods: Consenting patients undergoing CABG surgery in Olmsted County, MN between 1/2000 and 11/2001 were included. Records were reviewed for prescribed ABC therapies at hospital discharge. A random sample of 305 patients with CABG in 2000 was included as a comparison group. During Phase 1 of the project (April-July 2001) cardiovascular surgery teams were given a pocket reminder card containing guidelines for ABC preventive therapies. During Phase 2 of the project (Aug-Nov 2001) monthly feedback reports were also
given to each attending cardiovascular surgeon, showing the percentage of the surgeon’s patients who were discharged the previous month on appropriate ABC therapies, compared to figures for all CABG patients. The percentage discharged on ABC medications was compared at year 2000, in Phase 1, and in Phase 2.

Results: Prescription of ACE inhibitor and cholesterol lowering medication improved significantly in Phase 1 and Phase 2, but prescription of aspirin and beta blockers increased only modestly in Phase 1 only (see table).

<table>
<thead>
<tr>
<th></th>
<th>Year 2000 CABG Pts (n = 305)</th>
<th>Phase 1 (n = 213)</th>
<th>Phase 2 (n = 179)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin</td>
<td>93%</td>
<td>96%*</td>
<td>96%</td>
</tr>
<tr>
<td>ACE Inhibitor (if LVEF &lt;40%)</td>
<td>46%</td>
<td>55%**</td>
<td>68%**</td>
</tr>
<tr>
<td>Beta Blocker (if post MI)</td>
<td>65%</td>
<td>68%*</td>
<td>68%</td>
</tr>
<tr>
<td>Cholesterol Rx (if LDL &gt;100)</td>
<td>67%</td>
<td>75%**</td>
<td>81%**</td>
</tr>
</tbody>
</table>

*p < 0.05, **p < 0.01 for changes between phases

For further comparison, data on post-MI patients during the same time frame showed a decrease in the prescription of ASA, ACE, and BB, but an increase in CL therapy.

Conclusion: A reminder card was associated with an increase in the prescription of preventive therapies in CABG patients. Feedback performance reports were associated with additional improvements in the provision of some, but not all preventive therapies. Simple reminders and feedback can improve the in-patient provision of preventive care for CABG patients.

Improvements in DVT Prophylaxis
Leader: Dr. Kenneth Mishark
Location: Mayo Clinic Scottsdale
Team Members:
Kenneth Mishark, MD, Chair, Medical Records Subcommittee, Mayo Clinic Scottsdale Cheryl Phillips, RN, Manager, Perioperative Services, Mayo Clinic Scottsdale Anna Marie Hunsaker, RN, Quality Management Specialist, Mayo Clinic Scottsdale
Summary:
Deep Vein Thrombosis Prophylaxis was selected as one of the 2002 Failure Mode and Effects Analyses and focused on the preoperative patient groups. The best practices identified through this process have been expanded to include many more patient groups. The preprinted orders sets have been revised to include our DVT prophylaxis box on all medical and surgical preprinted order sets. This provides an immediate cue for prescribers to consider DVT prophylaxis for our new admissions and surgical patients.

Improving Delivery of Laboratory Results by Reducing Support Calls Through Implementation of New Technology
Leader: Wayne Demydowich
Location: Mayo Clinic Rochester
Team Members:
Groskreutz, Steven M.; Johnson, Scott J.; Kratky, Thomas L.; Martin, John J.; Rask, Dale R.; Ross, Jason L.; Semlow, George J.; Barth, Joan E.Hockert, Thomas J.; Scheetz, Kathleen J.; Wayne Demydowich - Mayo Clinic Rochester
Summary:
Electronic transmission of results (interface) from laboratory instruments to a laboratory information system (LIS) provides a rapid and effective mechanism to deliver laboratory results to the care provider utilizing the electronic medical record. Although communication of critical result values can be handled manually by the laboratory, electronic delivery of laboratory results to the electronic medical record is delayed whenever an interface is experiencing difficulty. Manual data entry of results, the laboratory’s only recourse in the event of an interface failure, can take as much as 3 to 5 minutes per sample. Whereas, an instrument interfaces can send result data to the LIS every 10 to 15 seconds. When you consider the volume of results coming from some of Mayo’s busiest laboratories, (over 900 results are generated per hour at peak times), it is easy to see that...
manual entry, which would take hours, is not in the best interest of patient care. In 1998, Data Innovations introduced a new product to Mayo-Instrument Manager. Instrument Manager provided Mayo with a standard way to provide instrument interfaces - i.e. it helped to eliminate the need for writing custom interfaces through the use of a vendor provided, instrument specific driver. This saved Mayo both time and money. Due to the ease in which instruments could now be interfaced, rapid development of instrument interfaces occurred; however, this came at a cost. Support calls for these interfaces skyrocketed. The number of support calls to the Hilton Data center regarding instrument interfaces exceeded 350 between 1999 and 2000. Upon investigation, we learned that Instrument Manager version 4.05 (utilizing the DOS operating system) was not adequate to handle the number of instruments and the large amount of data that Mayo’s laboratories were producing on a daily basis. While looking for solutions to help remedy the problems, we learned the Data Innovations was working on a new version of Instrument Manager (IM version 6.0) that would run using Microsoft Windows NT 4.0 as its operating system. We contacted the vendor and requested the upgrade. The NT based Instrument Managers allowed us to take advantage of newer and faster PCs thus eliminating the need for us to use the old turnkey systems (IM version 4.05 -166Mhz processor, 16 MB ram, and DOS 6.2 OS) that was originally offered by the vendor. During the conversion of our DOS based Instrument Managers to NT based Instrument Managers, which took place between 2000-2001, support calls had dropped from 350 to 149 calls. By the end of December 2001, all but two instruments were running on the new Instrument Managers. The total number of support calls during 2002-2003 had now been reduced to only 58. It is also important to note that during this time we were continually adding new interfaces. The number of instruments interfaced using Data Innovations Instrument Manager had grown from the original 11 interfaced instruments in 1998 to over 127 instrument interfaces being used today. Although the number of support calls had been greatly reduced, we still were looking for ways to improve. We started by looking for common occurrences in new support calls. Upon investigation, we found that many calls were linked to the use of terminal servers. So, when Communications Technology Services (CTS) suggested a possible solution, the use of Lantronix UDS-10 device servers, we once again were able to leverage technology to provide a solution to offer better service. The conversion to Lantronix UDS-10 servers was completed in September 2003. Our experience to date indicates that using the UDS-10s is once again helping to reduce the number of support calls for instrument interfaces and allows us to continue to improve rapid communication of laboratory results to Mayo’s caregivers.

Internal Collaborative on Improving Patient Access and Clinical Office Efficiencies

Team Contact:
Muriel Schornack, O.D. – Primary Eye Care Team, Mayo Clinic  
Daniel Goodwin – Family Practice, Albert Lea Medical Center  
Pauline Hogan – Physical Medicine and Rehabilitation, Franciscan-Skemp  
Tanner Holst – Family Practice, Franciscan-Skemp  
Carol Weis – Family Practice, Austin Medical Center  
Linda Witte – Immanuel St. Josephs  
Judy Hartwig – St. Peter Clinic & Le Sueur Clinic  
Sarah Beckmann, M.D. – Pediatrics, Cannon Valley Clinic

Nine teams participated in the 6th Internal Collaborative on Improving Patient Access and Clinical Office Efficiencies. These teams met in three one-day learning sessions from March 27 to September 12, 2003. The teams shared ideas on methods to improve access for their patients, reduce time spent waiting in the clinic, reduce cycle time on various office tasks, etc. At the last learning session the teams reported dramatic reductions in waiting for appointments, better utilization of clinic resources and improved patient satisfaction levels. For more details contact Jill A. Swanson, M.D., collaborative leader, Gene Dankbar, Continuous Improvement Office or any of the teams who participated in this year’s collaborative.

It's Worth the WAIT!!

Leader: Mary Ann Morris  
Location: Mayo Clinic Rochester  
Team Members:
Mary Ann Morris, Administrator, DPSS; Jill Buck, Access Management; Ann Greenameyer, GIM; Connie Johnsrud, Admissions and Business Services; Leah Swenson-Miller, OPA; Mike Schryver, Outpatient Practice Administrator; Patricia Dee; OPA, Robin Arendts, OPA; Sharri Kalgren, OPA; Mary Ann Healey, Dept of Nursing; Michelle Burton, Hypertension
Summary:
The walk-in improvement team was initiated following review of patient complaints. Office of Patient Affairs identified waiting as a significant issue for patients who arrive without an appointment. In review, the historical process was dissatisfying to patients, Mayo physicians, and Mayo desk staff. The project team reviewed all aspects of the current practice and developed a new, more patient-focused process with the intent of improving patient, physician and desk staff satisfaction (improvements were felt by all affected groups immediately!).

JAC and HIM: Working Together (Jacksonville Arts Community and Humanities in Medicine)
Leader: Jerald Pietan, M.D.
Location: Mayo Clinic Jacksonville
Team Members:
Mayo Jacksonville Humanities in Medicine subcommittee: Jerald Pietan, M.D., Department of Diagnostic Radiology, Chair; Mary Anderson, Division of Education Services; Ann Farrell, Bursak Biomedical Library; Robert Fontaine, Section of Facilities; Beth Knowles, Development; Leigh Palmer, Section of Facilities; Octavio Pajaro, M.D., Department of Surgery; Carl Rider, Section of Administration; Elliott Richelson, M.D., Department of Pharmacology; Nell Robinson, Division of Education Services; Madeline Scales-Taylor, Community Services; Nancy Skaran, Section of Marketing and Communications; Mark Stark, M.D., Division of Gastroenterology
Jacksonville Arts Community: John Ibach, Jr., M.D, Body & Soul; James Jenkins, Body & Soul; Frances Kinne, Ph.D., Chancellor Emerita, Jacksonville University; Hope McMath, Cummer Museum of Art and Gardens; Terry Netter, Ph.D., Dean, Collegeof Fine Arts, Jacksonville University; Dennis Vincent, Ph.D., Jacksonville University; Chrys Yates, Cummer Museum of Art and Gardens

Summary:
In 2002, the Humanities in Medicine Committee established a Community Advisory Committee, and invited participation from the Cummer Museum of Art and Gardens, Jacksonville University, and Body & Soul. The purpose of this committee was to provide direction, resources and contacts in order to bring the arts to the patients and staff in Jacksonville. This partnership led our committee to join the Society for the Arts in Healthcare, which is a national nonprofit organization working toward integration of the arts into health-care settings. Through these collaborations, and the generosity of our community partners, the HIM committee has been able to provide diverse arts programs at both the clinic and hospital. Evaluation of these events by our patients and staff indicates the need for ongoing opportunities to experience the arts in the health-care setting.

Keep It Supremely Simple
Leader: Dan Goodwin
Location: Albert Lea Medical Center, Mayo Health System
Team Members:
Tonia Lauer - Facilitator, Julie Stahl - Team Leader, Steve Fossey - Team Leader, Dan Goodwin - Team Leader, Dale Danneker, MD, Lisa Lobb-Schleisman, Wendy Bremer, Linda Rasmussen, Cathy Tovar, Susan Schaub, Doris Perschbacher, Barb Stahl, Shirly Ryan, Mary Sæverson, Heather Winkels, PA, Cindy Haugsdal, NP, Ginny Olson

Summary:
Aim statement: The team will focus on the registration and check-in process to perfect (most efficient and effective) a process for the patient and Albert Lea Medical Center. Objectives: To ensure appointment times begin as scheduled. Patient interaction with provider at time of appointment. To create a process that enables 100% accuracy of registration data. To create a patient-friendly process.

Lipid Clinic Secondary and High-Risk Primary Prevention
Leader: Ardyce Olson
Location: Owatonna Clinic, Mayo Health System
Team Members:
Ardyce Olson, NP, Internal Medicine, Owatonna Clinic, Louanne Kaupa, RD, Health Education, Owatonna Clinic, Ralph Wertwijn, MD, Internal Medicine, Owatonna Clinic.

Summary:
Project was started November 2002, and now has 25 - 30 patients. Patients are referred by MD, seen initially by NP, then attend a 4-week class conducted by NP and RD. Class focuses on lipid management through lifestyle modification to augment medication treatment. Patients have been very satisfied with close follow-up and group/individual help. Results: Total cholesterols have been reduced up to 51% and LDL-C reduced over 60%. HDL-C’s have improved, as have triglycerides.
Mayo Health Plan Arizona Health Improvement Team; Diabetic Retinal Exams - Education and Reminders

**Leader:** R. Scott Gorman, MD  
**Location:** Mayo Clinic Scottsdale  
**Team Members:**  
MCS/MHPA: Deb Stern, RN; Lisa Strickland; Nanette Penz-Reuter; Pam Gregorich, RN; Mary Gregoire, RN; Delia Inclan; Ofelia Martinez

**Summary:**  
Summary: Mayo Health Plan Arizona (MHPA) is committed to improving the health of our members. Since enrolling our first members in January 1998, MHPA has worked to develop a program to assist those with diabetes mellitus to improve self-management of this chronic condition. As part of an effort to improve overall diabetes care, MHPA focused on increasing the rate of screening for diabetic eye disease. Diabetes is a major cause of blindness in the United States and is the leading cause of new blindness in working-age Americans. Using pharmacy and claims data, MHPA determined that 4 percent of the MHPA member population has diabetes. Baseline performance, based on 1999 data, showed that 35 percent of members with diabetes had an eye exam within the preceding 12 months. MHPA had set a performance goal of 55 percent for this measure in order to move incrementally toward the national benchmark of 66 percent. Clinical staff, along with Provider Relations and Sales/Marketing staff, managed this project and worked as a team to identify potential barriers to members receiving this important screening. The leading barrier uncovered was member awareness of the need for this annual exam. The next step was to design interventions that would remove this barrier. The most important strategy was a reminder card program. The program targeted members who had not been seen by an ophthalmologist or optometrist in the preceding 12 months. Reminder cards were mailed every six months. Additionally, member education included articles in the member newsletter, “HealthQuest.” MHPA interventions also included communications with the physician network via the physician newsletter as well as quarterly reports to primary care physicians with utilization information and HgbA1C results for diabetic members assigned to their panel. Results By 2002: MHPA’s reminder program resulted in an increase in the rate of diabetic eye exams from baseline performance of 35 percent to 49 percent, a 40 percent change.

No Blue Team/Transport of Patients with Oxygen

**Leader:** Susan Berg-presenter/Lisa Jorgenson Team Leader  
**Location:** Mayo Clinic Rochester  
**Team Members:**  
Lisa Jorgenson-Team Leader, Dept of Radiology, Susan R. Berg-Facilitator, Dept of Radiology, Kathy Augustin, Dept of Radiology, Joan Miller, Dept of Radiology, Sherrie Prescott, Dept of Radiology, Shelly Rank, Dept of Radiology, Kevin Seisler, Dept of Radiology, Scott Copeman, Respiratory Care, Ken Fuller, General Service, Deb Mielke, General Service, Julie Brown, Dept of Nursing, Chris Chartrand, Dept of Nursing, Deb Lee, Dept of Nursing, Rita Miller, Dept of Nursing

**Summary:**  
Patients on oxygen have returned from Radiology with empty oxygen tanks or with inaccurate flow rates. Patients could potentially experience decreased oxygen saturation, shortness of breath, chest pain and/or respiratory distress if the prescribed flow rate of O2 is not maintained. Team Aim Statement: All emergency department and inpatients undergoing tests or procedures will maintain the prescribed oxygen flow rate/% during transport and exam. Mayo’s Four Phase CI Methodology was used, using continuous improvement tools: Flowcharting, Brainstorming, Affinity Diagram, Gap Analysis, and Prioritization Matrix/Decision Grid. Team Outcome’s include: New Oxygen Warning Card on every tank; Grab and Go O2 Tank; Duration Table to ensure adequate tank supply with attached instructions for every patient care provider who comes into contact with patient; Education of improved process-patient handoff and equipment, with demonstrated competency. *The team trained approximately 5,000 employees in 45 days: General Service 120+ Radiology 700+ Nursing 4,000+ **Stellar TEAMWORK brought the best solution forward with this initiative. *Poster Available *Contact Lisa Jorgenson-Radiology, or Scott Copeman-Respiratory Care, for additional information.

Organ Transplant Program - Patient Education Project

**Leader:** Tami Kipple, RN  
**Location:** Mayo Clinic Jacksonville  
**Team Members:**  
Gene Richie, RN; Diane Lepley, RN, MPH

**Summary:**  
This project was created to improve the quality and consistency of the post-transplant teaching program. A post-test was created to assess the patient’s level of knowledge and assess the effectiveness of the current
teaching materials. It was found that patients were having difficulty retaining the information presented, there were inconsistencies in the way the nurses did their teaching, and there was a low level of compliance of documentation of the teaching done. A post-transplant teaching pathway was created along with a flip chart for the nurse to use during teaching. This flip chart is an overview of all discharge instructions, medications, and follow-up information and is to be used during each teaching session. This poster details the project and the resulting flip chart, post-test, and teaching pathway.

Reducing Higher-Order Multiple Gestations in IVF While Maintaining Pregnancy Rates

**Leader:** Alan Thornhill, PhD  
**Location:** Mayo Clinic Rochester  
**Team Members:**  
Donna Session MD, Daniel Dumesic MD, Ian Tummon MD, Mark Damario MD, Alan Thornhill PhD, Kathrynne Barud, Terri Galanits, David Walker, Mark Wentworth, Renee Balloy, Judy Batterson, Jane Gillespie, Mary Jane Grosso, Nancy Johnson, Mary Tri, Sherry Stevens-Hall, Division of Reproductive Endocrinology, Mayo Clinic Rochester, Diane Hammitt PhD, Mayo Clinic Scottsdale

**Summary:**  
One major complication of IVF is multiple gestations and particularly higher-order multiples. The goal of the Mayo Clinic Assisted Reproductive Technologies (MCART) program is to provide the best chance for taking home a baby while reducing the risks of higher-order multiple pregnancy. In order to reduce the chance of higher-order multiple pregnancies fewer embryos are transferred back to the patient. The MCART team employed several strategies in order to maximize the pregnancy rate for each cycle while transferring fewer high quality embryos. Improvements were made in the areas of the culture system, embryo grading and clinical patient treatment protocols. The results over the last 8 years show a continual reduction in the average number of embryos transferred to each patient and corresponding decline of higher-order multiples, and a pregnancy rate that remained consistently above the national average.

**RRPs: Rapid Response Patient Surveys**  
**Leader:** Kim Wright RN, Nurse Manager Surgical Service  
**Location:** Mayo Clinic Jacksonville  
**Team Members:**  
Mary Yeomans RN, Team Leader, Surgical Service, Carla Long RN, Team Leader Surgical Service, Debra Hufstetler RN, Team Leader, Surgical Service, Tracey Barber RN, Team Leader, Surgical Service, Sadie Blanton RN, Team Leader, Surgical Service, Denise Canavan RN, Team Leader, Surgical Service, Amanda Chaney RN, Performance Improvement Chair, Surgical Service, Jill Schroeder RN, Team Leader, Surgical Service, Tammy McEntee RN, Team Leader, Surgical Service

**Summary:**  
In order to improve patient satisfaction with nursing care on the Surgical Service unit, leaders developed a project entitled Rapid Response Patient Surveys. The goal was to increase patient contact with unit leaders to provide immediate resolution to patient problems/concerns and to provide staff with prompt and meaningful feedback (positive or negative). To view the hospital experience from the PATIENT’S perspective.

**SCRIBE Focus on Service**  
**Leader:** Susan Fullerton  
**Location:** Mayo Clinic Scottsdale  
**Team Members:**  
Susan Fullerton, Team Lead; Annie Brannan, Patient Financial Services (PFS) Systems Services, Mayo Clinic Rochester; Katherine Cecala, PFS; Lynn Closway, Public Affairs; Linda Eichenberger, PFS; Darin Goss, PFS; Helen Henry, PFS; Kathryn Hirschorn, MD; Jenny Ho, PFS; Janice Kaplan, Operations Administration; Keri Kirby, PFS; Laurie Leaf, PFS Systems Services, Mayo Clinic Rochester; Katie Scheele, PFS; Diane Snyder, PFS Systems Services, Mayo Clinic Rochester

**Summary:**  
At Mayo Clinic Scottsdale (MCS) an inefficient billing system and confusing bills were detracting from our patients’ overall service experience. Knowing that a more efficient billing system and understandable bill format would improve patients’ service experience, MCS Administration supported a billing system conversion to a shared billing system with Rochester. The Scottsdale Rochester Integrated Billing Effort (SCRIBE) Project Team’s goal was to implement a highly technical project without sacrificing customer satisfaction. As part of the project, a Service Team was created to develop communication materials for patients, employees and the organization; coordinate training for staff; oversee the re-engineering; and plan
celebratory events to maintain Project Team momentum during this three-year project. The Service Team’s contribution to the success of the SCRIBE project is evident in satisfaction surveys, patient and staff feedback, and the number and type of patient calls received. In a letter to the Service Team, MCS Administration considered members to be “essential to our reputation for delivering outstanding service.”

**Surgical Infection Prevention: Failure Mode and Effects Analysis**

**Leader:** Dr. Richard Claridge  
**Location:** Mayo Clinic Scottsdale  
**Team Members:**  
- Richard Claridge, MD, Division of Orthopedics, Mayo Clinic Scottsdale  
- Kenneth Mishark, MD, Division of Internal Medicine, Mayo Clinic Scottsdale  
- Anna Marie Hunsaker, RN, Quality Management Specialist, Mayo Clinic Scottsdale  

**Summary:**  
The high-risk process identified for failure mode and effects analysis for 2003 was surgical infection prevention. Analysis revealed that improvement was needed in each of the three quality measures as defined by CMS. A pilot was designed in which the CRNAs and Anesthesia Residents took primary responsibility to administer pre-op antibiotic within 60 minutes of incision time with the exclusion of IV Vancomycin. The data collection revealed a significant improvement in the preoperative administration of prophylactic antibiotics. This improvement as well as the revision of surgical order sets to limit antibiotic duration and capture the recommended antibiotics is planned for rollout Nov. 1, 2003.

**Trauma Protocols**

**Leader:** Luanne William or Heidi Chua, M.D.  
**Location:** Mayo Clinic Jacksonville  
**Team Members:**  
- Luanne Williams, RN, Manager ED, Dr. Heidi Chua, surgeon, Mayo Clinic  
- Ken Soloman, staff RN, Dr. Gretchen Lipke, SLH-ED, Dr. Scott Silver, SLH-ED.  

**Summary:**  
To ensure delivery of high standard care to a high-risk low-volume population of our patients, a group was formulated to look at processes and flow, and a standard process was implemented.

**Project Relation: Safety**

**A Systematic Approach to Compliance with the CAP GEN. 70816 Ergonomics Standard for the Department of Laboratory Medicine and Pathology**

**Leader/Contact:** Eric Meittunen  
**Location:** Mayo Clinic Rochester  
**Team Members:**  

**Summary:**  
Preparing laboratories for compliance with College of American Pathologist (CAP) standards can be a challenge due to the scope and sheer number of laboratories involved in the process. The Department of Laboratory Medicine and Pathology Safety Committee developed a systematic approach to meet compliance with a new CAP standard that focuses on reducing musculoskeletal injuries for laboratory staff. The committee reviewed topic literature, evaluated laboratory incidents, and developed an indicator list and process that standardizes the review of laboratories for the CAP GEN. 70816. The results are presented in a format that assists with the prioritization of issues to enhance practices while reducing ergonomic exposures for laboratory staff.
Chemicals in the Closet: Identification and Reduction of Flammable Storage in the Laboratory Environment

Leader Contact: Eric Meittunen
Location: Mayo Clinic Rochester

Team Members:

Summary:
A Department of Laboratory Medicine and Pathology (DLMP) Safety Audit in 2002 identified that laboratories in the Hilton/Guggenheim buildings were storing flammable chemicals in Custodian Closets, and many of the chemicals were abandoned. A Multidisciplinary group developed a collaborative process to inventory, remove, and prevent the future storage of these chemicals. The project resulted in more than 500 Liters of material being removed from the closets - oldest was dated 1973. The twelve flammable cabinets were removed, and one lab installed an additional cabinet in its area to accommodate the storage from the closets. Finally, the chemical inventories were adjusted as best possible.

Correct Identification Always
Leader: Karen Sellner, Barbara Swenson
Location: Mayo Clinic Rochester

Team Members:
Debra Berg, Recorder, Joseph Klunder, RT(R), Sherrie Prescott, RN, M. Katherine Reller, Facilitator, Karen Sellner, Team Leader, Dorothy Schmidt, RN, Barbara Swenson, Janice Torkelson, RN

Summary:
“Correct Identification Always” (CIA) CI project started in late 2001 to: 1) heighten awareness of patient identification (ID) procedure 2) identify any barriers to patient ID; and; 3) obtain 100% compliance with the verification of ID policy. The CI team conducted a survey in September 2001 that indicated over 90% of employees were aware of the policy on verification of patient ID. Yet compliance with this policy was low. In February 2002, we enlisted the help of a “secret patient.” The secret patient had mock tests scheduled in vascular, CT, and US. We identified 14 key points where the secret patient should have been appropriately identified. Only one individual (or 1 of 14 key points-7%), a student, correctly identified the patient. Changes were made such as a tear-off portion on the RIMS sheets, a workplace-wide education program, and process improvements in workflow. Data from the second “secret patient” showed 71% of key points of patient ID identified and a significant increase in staff awareness in Patient ID process!

Development of An Educational Marketing Process to Facilitate Sharps Injury Reduction in the Operating Room
Leader/Contact: Eric Meittunen
Location: Mayo Clinic Rochester

Team Members:
The Department of Surgical Services Safety Committee Sharps Reduction Subgroup: Linda Berding, Marion Bland, Toni Burns, Carol Chase, Craig Gillett, Lisa Hogan, Patti Luker, Eric Meittunen, Sharon Mercill, Co-Chair, Al Ottjes, Co-Chair, Andy Rumpho, Terrie Zirbes

Summary:
National data indicates that Operating Room staff experience a high number of sharps injuries when compared to other health-care occupations. The Surgery Safety Committee developed an educational marketing process to promote an awareness of the issue and thus create a change-adaptive environment that facilitates the trial of new techniques and devices. The objective is collaboration to reduce the potential for exposures on a localized Operating Room basis to build upon present practices.
"Highly Empowered Anomaly Resolution Team"- HEART

**Leader:** Valerie Halling  
**Location:** Mayo Clinic Rochester  
**Team Members:** Mary Foss, Jeanne Derby, Jennifer Zmina, Michelle Rombough, Sherri Mowbray, Melissa Gillis, Georgette Benidt, Brian Rognholt, Christina Kindschy, Kenya Wingate-Valiente, Sheila Borene, Tamara Estes, Mary Jane Jones, Division of Transfusion Medicine, Mayo Clinic Rochester. Valerie Halling, Department of Finance, Mayo Clinic Rochester

**Summary:**  
A steady increase in errors was observed in 2002, compared to 2001, in the Transfusion Lab, Division of Transfusion Medicine. A team comprised of both management and frontline staff was formed to analyze the data from each (FDA reportable) event, identify root cause(s), and identify recommendations and action plans. The team used various continuous improvement tools (flowcharting, brainstorming, prioritization grid, tree diagram) in performing the root cause analysis. The team met weekly for six months and focused primarily on systems and processes, not individual performance. They identified causal factors and several potential improvements to decrease the likelihood of such events occurring in the future. They also identified responsible group(s) to address recommendations. As a result of this team, many improvements have been implemented, resulting in a decrease of errors in the Transfusion Lab. Because of this process there has also been a heightened awareness of the need to continuously manage quality.

**Implementation of a Subacute Bacterial Endocarditis Prevention Program**

**Leader:** Connie Schuh  
**Location:** Franciscan Skemp Healthcare, Mayo Health System  
**Team Members:** Dr. Mike Meyers, Cardiology Department, Dr. Jamie Mannion, Family Practice Department, Connie Schuh, RN, Cardiology, Ruth Berns, CNS, 7th Medical/Cardiology, Doris Doherty, RN, Patient/Family Education, Kim Dockham, MSN, Clinical Quality Management

**Summary:**  
Endocarditis is a life-threatening disease that causes substantial morbidity and significant mortality rates. A survey of at-risk patients presenting to the cardiology department was done. The majority of patients were found to have no knowledge or awareness of their need for prevention. Physicians also reported inconsistent practice in the prescribing of prophylactic antibiotics. The aim of the project was to clearly define which patients required Subacute Bacterial Endocarditis (SBE) prophylaxis, implement the AHA Guidelines for the prevention of Bacterial Endocarditis, and develop an alert system for the medical record that identifies at-risk patients. Strategies for change included: 1. Patient education: Development of a Patient Resource Manual. 2. Physician and Staff Education: The SBE Protocol was laminated and placed in the SBE Resource Manual. It is available on the FSH Intranet. Walt Wilson, M.D. from Mayo presented a noon conference. The physicians were also instructed how to load the protocol unto their PDA. Alert System: Because FSH does not have an electronic medical record, the team felt it was important to be able to identify patients at risk for SBE. A bright sticker was designed to be placed on both the inpatient and outpatient medical records to alert staff.

**Improving Patient Nutrition Database Accuracy and Nutrition Risk Assignment**

**Leader:** Sherry Mahoney and Ron Stone  
**Location:** Mayo Clinic Jacksonville  
**Team Members:** Ron Stone, RD Sherry Mahoney, RD Michelle Romano, RD Vilia Tarrosa, RD Danielle Stanley, RD Kim Florens, RD Amy Stivers, RD Andi Fulford, RD Mica Staker, RD Paula Homes All above from MCJ Nutrition Service

**Summary:**  
Problem: The Registered Dietitians (RD) identified inconsistency in nutrition risk assignment generated by the PND in comparison with their nutrition assessment.

Aim: PND data collection and risk assignment with 92% accuracy.

Actions taken to identify problem:
- Developed and utilized a monitoring tool to evaluate accuracy of the following data collected:
  - Anthropometrics and general nutrition status
  - Diagnosis applicable to nutrition status
  - Completeness of the PND
- Quarterly monitors by RD staff
  - Each RD’s initial nutrition assessment was compared to the PND over a one-week period.
- RD correction or modifications to PND were considered errors.
- Errors were differentiated if the error resulted in a change in nutrition risk assignment. Example: High-risk patients inaccurately identified at low risk present a patient safety concern, while low-risk patients inaccurately identified at moderate or high risk hinder RD efficiency.
- Data was reported as a percent accuracy of total assessments reviewed.

**Actions taken for improvement:**
- Diet Technician in-service included:
  - Medical record review
  - Patient interviewing techniques
  - Verifying admit weights with current daily weights
  - Clarifying time period of weight loss
  - Utilizing the “comment” section of PND to provide detail
- Provided reference packet to use during PND completion process
  - Medical abbreviations
  - Patient interview checklist revised and updated
  - RD pager numbers for questions

**Process Improvement:**
By implementing a PND monitor the Nutrition Service Department was able to identify discrepancies in diet technician data collection that lead to errors in PND risk assignment. PND accuracy is essential to ensure patients receive appropriate medical nutrition therapy and care by a Registered Dietitian in a timely manner. In the first three quarters of 2003 errors in PND were reduced from 19% to 14%. This 5% reduction was achieved by in-services and training sessions that focused on improving diet technician patient interview skills, improving translation and documentation from the medical record review to the PND and by streamlining data collection processes to improve accuracy and efficiency. Quarterly monitors will continue with a goal of 92% accuracy or 8% errors.

**Integrating Injury Prevention into a Department’s Normal Operations**
**Leader:** Martin Degenhardt, Joseph Klancher  
**Location:** Mayo Clinic Rochester  
**Team Members:** Jeanette Ackman, Dietetics, Kristine Arett, Dietetics, Shelley Arett, Dietetics, Bobbie Broadwater, Dietetics, Nancy Bremseth, Dietetics, Lynn Cole, Dietetics, Marty Degenhardt, Dietetics, Nathaniel Diedrich, Dietetics, Elsie Fox, Dietetics, Sue Gilbertson, Dietetics, Hai Ha, Dietetics, Lori Hollermann, Dietetics, Holly Jones, Dietetics, Joe Klancher, Safety, Ardyce Klingfus, Dietetics, Chad Peters, Dietetics, Jill Rabine, Dietetics, Lu Saminiago, Dietetics, Ali Delos Santos, Dietetics, Becky Schwager, Dietetics, Ben Sullivan, Dietetics, Twillie Tully, Dietetics, Sharon Winkels, Dietetics, Josh Young, Dietetics

**Summary:**
The Dietetics Department Safety Committees at Rochester Methodist and Saint Marys hospitals initiated a project to integrate injury prevention into their operations and management structure. The objective is to have safety improvement (i.e., injury prevention) be an ongoing performance expectation at all levels in the department. The Dietetics safety committee in conjunction with the safety department defined performance expectations for management, supervisors, and employees, and provided the department with data and work tools to fulfill these obligations. This presentation provides a brief overview of some tools and methods used to initiate this project.

**Operation Hand Hygiene**
**Leader:** Judy Ingham  
**Location:** Franciscan Skemp Healthcare, Mayo Health System  
**Team Members:** Carol Cantlon, BS, Infection Control Coordinator, La Crosse Campus Judy Ingham, RN, Infection Control Coordinator, Sparta Campus Mary Klonecki, RN, Infection Control Coordinator, Arcadia Campus

**Summary:**
The aim of this team was to improve hand hygiene compliance and comply with CDC and JCAHO recommendations systemwide. Strategies for improvement include department-specific hand washing surveillance pre and post-education endeavors. The team produced a Hand Hygiene Training Video that will be shown in each department. This education will also include a walk-through of the new hand washing policy, patient education materials, and demonstration of appropriate hand-washing technique. The team will continue surveillance with biannual feedback to departments.
Pediatric Safety: A Big Commitment, No Small Challenge
Leader: Saverna Stemper
Location: Franciscan Skemp Healthcare, Mayo Health System
Team Members:
Dr. David Capelli, Pediatrics Department, FSH Vicki Vien, LPN, Pediatric Clinic Julie Welch, RN, Pediatric Clinic Karen Olson, RN, Director of Pediatrics Doris Doherty, RN, Patient/Family Education Kevin Buelow, Marketing and Development Saverna Stemper, RN, Risk Management
Summary:
The aim of this project was to develop an informational brochure that will promote a healthier and safer environment for the pediatric population through safe practices. The team sent a survey to parents to determine the most common safety concerns. The team then prioritized the leading causes of pediatric accidents and injuries. These safety tips were prioritized and compiled into one informative tool. Next steps for this group include promoting leadership and knowledge of pediatric safety, incorporating Internet links to pediatric safety and implementing system changes to enhance environmental pediatric safety and security.

Perioperative Cardioprotection Using Beta-Blockers: the LUB-DUB project
Leader: Dennis M. Manning, MD
Location: Mayo Clinic Rochester
Team Members:
Dan R. Brown MD - CCS; Margaret Beliveau-Ficalora MD - GIM; Deborah Fischer - CI; William Freeman, MD - CV; Raymond Gibbons MD - CV; Deak Bauman CNP - IIM; Akbar Khan MD - IM Resident; Scott Litin MD - AGIM; Dennis Manning MD - AGIM/IIM; Brad Narr MD - Anesthesiology; Nairt Ou, PharmD - Pharmacology; Michael Phy DO - AGIM/IIM; Sue Stirn, MS, RN - Nursing Director; David O. Warner MD - Anesthesiology Research; Jennifer L. St. Sauver, PhD - Health Services Research - all Mayo Clinic Rochester.
Summary:
The American College of Cardiology guidelines (2002) identify sub-groups of major surgery patients beta-blockade reduces the risk of perioperative myocardial infarction. The LUB-DUB (Learning Usage of Beta-blockers: Do You Believe?) Continuous Improvement Team has created an educational program and tools to assure (even across geographical, specialty, and multi-disciplinary lines) cardioprotection.

"Redundant" Ordering Systems Can Prevent Erroneous Blood Orders - A Previously Unreported Type of Transfusion Error
Leader: Mary Foss
Location: Mayo Clinic Rochester
Team Members:
S.B. Moore, MD, Division of Transfusion Medicine
Summary:
The blood transfusion request paper form contained both machine-imprinted patient identification and the physician's handwritten version of the same patient identifiers. In early 1997, at the request of busy physicians, the form was modified to eliminate the requirement for the handwritten information. Almost immediately the number of blood orders for the wrong patient began to increase. In 1999, there was an all-time high of 47 blood orders for the wrong patient (6:10,000 administrations). In 2000, the requirement for handwritten patient information on the blood order form was reinstated. The error rate immediately went down to, and has remained at, former low levels (1.5:10,000 administrations). This "second thought" concept has also been applied to the recently implemented electronic orders. In that system, we retain a requirement that the ordering physician electronically enter the patient name and Clinic number so that they can be compared with the computer-generated demographics. In the first seven months after implementation of electronic orders, 8 of the 14 patient identification discrepancies discovered on blood orders were found on electronic orders. This data about a hitherto unreported type of blood transfusion error suggests that providing busy ordering physicians with a redundant "second thought" process, whether electronic or handwritten, does reduce opportunities for initiating the process of ordering blood for an unintended recipient.
"Survivors of Surgical Nursing"
Leader: Amanda Chaney, RN
Location: Mayo Clinic Jacksonville
Team Members:
Amanda Chaney, RN, Performance Improvement Chair, Surgical Services Department; Cynthia Fardella, RN, Education Committee Chair, Surgical Services Department
Summary:
As a result of a large number of new graduate RNs on the Surgical Services unit, some inconsistencies in patient care were observed. In order to give consistent and appropriate patient care, the "Survivors of Surgical Nursing" class was created. The class, lasting one eight-hour day, includes the subjects of pain management, various surgical patients and care plans for those patients, and nutrition. Staff development of experienced nurses was enhanced by speaking and teaching information in the class. The class is now held one to two times a year depending on how many new nurses are hired. As a result of this class, consistency in patient care and staff growth have increased.

Utilizing Metrics to Improve an Environment of Care Auditing Process
Leader/Contact: Eric Meittunen
Location: Mayo Clinic Rochester
Team Members:
The Radiology Safety Committee: Ken Aakre, Radiology, John Priniski, Radiology, Kathy DeBoer, Radiology, Becki Beck, Radiology, Mark Gebhard, Radiology, Jaime Hanson, Radiology, Melody Hudson, Radiology, Tim Kodet, Radiology, Jan Manahan, Infection Control, Eric Meittunen, Safety, Bill Oswald, Radiology, Debbie Raygor, Radiology, Jamie Schmitgen, Radiology, Beth Schueler, Ph.D., Radiology, Kevin Seisler, Radiology, Su Spafford, Materials Management, Dan Spence, Radiology, Tim Stafford, Radiology, Ken Stock, Radiology, Glenn Sturchio, Safety, Doug Svestka, Radiology
Summary:
To prepare for accreditation surveys, the Radiology EOC/Safety Committee evaluated compliance/accreditation standards and developed an indicator list. The list was utilized to audit departmental work areas. The committee desired to streamline the process that enabled a more efficient means of identifying priority audit issues. The more formal process included data categorization, random full-length audits, and priority-issue typical audits. The improved process should offer a better gauge of the departmental level of preparedness while enhancing the identification of improvement issues.

Project Relation: Timeliness

Implementation of a Clinical Algorithm for Community Acquired Pneumonia in the Emergency Department
Leader: Cynthia Stemper-Bartkus, R.N. and Christopher Stewart, M.D.
Location: Mayo Clinic Scottsdale
Team Members:
Deb Saari, Staff Nurse, Emergency Dept., Kelly Heimbecker, Staff Nurse, E.D., Linda Zell, Staff Nurse, E.D., Bill Neal, Staff Nurse, E.D., Joseph Wood, M.D., Emergency Medicine, Ricky Arnold, M.D., Emergency Medicine, Adam Field, M.D., Emergency Medicine
Summary:
Prompted by Medicare, hospitals are being required to monitor and report quality data on three primary diagnoses: Acute Myocardial Infarction, Congestive Heart Failure and Community Acquired Pneumonia (CAP). The results provide a comparison between institutions and may also influence a patient's choice of health-care provider. The indicators for CAP include: blood cultures prior to antibiotic administration, antibiotic administration within four hours of arrival, assessment of oxygen saturation, pneumococcal vaccine administration and smoking cessation counseling. The first three indicators directly relate to the care provided in the Emergency Department (ED) setting. Initial chart audits revealed 100% compliance with the oxygen saturation assessment; 83% with obtaining blood cultures and a range of 65-74% with the administration of antibiotics within the four-hour time limit. Thus, the department's QI committee chose to focus its efforts on improving the compliance rates with the last two indicators. A flow diagram identified the steps in caring for patients with CAP. Secondly, a retrospective chart audit identified the time intervals for each of these steps. For example, the mean time for ordering a chest X-ray from the time of arrival was 88 minutes. Based on these results, an algorithm was created to expedite care which included the use of standing orders for the nursing staff to order the chest X-ray and appropriate labs, including the blood cultures. Prior to implementation of the
algorithm, the mean time for antibiotic administration was 3 hours and 24 minutes, from the time of arrival. Post-implementation the time was reduced to 1 hour and 46 minutes with 100% compliance for the antibiotic administration within four hours of arrival. The compliance rate for obtaining the blood cultures prior to antibiotics is above 90%. Overall, the post implementation data reflects a decrease in time for each step of the process. The challenge now will be to "hold the gain" as we experience an increase in patient volume.

**Lab Letter Turnaround**

**Leader:** Heidi Cummings  
**Location:** Bloomer Medical Center, Mayo Health System  
**Team Members:** Mary Kerg - Administrator  
Heidi Cummings and Sara Hoffman - Transcription  
Pam Gehrig- Clinic RN  
Director Lisa Steinmetz- Lab Director  

**Summary:** We had complaints regarding the lab turn around to our patients. By reviewing the process, we took the time that the lab test was done till the results were sent, from 9 days down to 3.5.
Notes
The Way We Work: Keeping the Service Promise

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Member, Mayo Clinic Board of Trustees

Horst H. Schulze
Chairman, President and CEO
The West Paces Hotel Group

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