

Cultivating QUALITY



*Growing and nurturing
clinical quality improvement
in health care*

**INSTITUTE FOR CLINICAL SYSTEMS IMPROVEMENT
1999 ANNUAL REPORT**



ICSI MISSION

The mission of our collaboration is to champion the cause of health care quality and to accelerate improvement in the value of the health care we deliver.

ICSI VISION

ICSI will be a collaboration that is deemed essential by its members for their improvement of health care and deemed essential by our community as a trusted voice for quality in health care.

Dear Colleagues and Friends,

The Institute for Clinical Systems Integration (ICSI) entered a new era in 1999 with the announcement of our new name – Institute for Clinical Systems Improvement (ICSI).

The updated name reflects the newly focused mission of our collaboration: to accelerate improvement in the value of the health care we deliver and to champion the cause of health care quality.

For more than seven years, ICSI has been quietly focused on helping our members, 18 competing medical groups, improve health care for their patients.

Many other medical groups and hospitals are engaged in improving their care. What makes ICSI unique is that the improvement efforts of each of these medical groups, who voluntarily choose to join ICSI, are done in full

view of the others, who are their competitors in the marketplace.

ICSI's early efforts focused on helping members develop health care guidelines based on the best scientific evidence for the prevention and treatment of specific health conditions. This work continues today.

There are now more than 45 guidelines in the ICSI library. Each is updated every 12-18 months and two or three new ones are developed each year.

The ICSI program shifted focus two years ago, however, to accelerate implementation of these guidelines and other best clinical practices in the medical groups. This past year, we further refined our program to assist with these efforts.

Today, each ICSI participating medical group chooses four or more topics for intensive improvement effort annually and reports the results of its efforts to the rest of the collaborative at the end of the year. In addition, they share with each other what's working and what isn't, and they support each other in these efforts.

More than 760 physicians, clinicians and other ICSI medical group staff members participate in collaborative groups and on various ICSI committees. Many others are involved in implementation and health care improvement projects at clinic sites. ICSI's role is

to support their efforts through education, facilitation, consultation and distribution of information. We expanded that role in 1999 to include championing the notion of health care

quality because we know it is important, we know it can be improved, and we know it can be measured.

To that end, we began sharing ICSI guidelines and technology assessment reports on our Internet site in 1999. We sponsored a national colloquium featuring some of the foremost professionals in clinical quality improvement from the United States and Canada. We brought in speakers from around the country to share improvement success stories. We began an outreach program to inform the media and thought leaders about the work of ICSI and its members to improve health care quality. And more.

ICSI has developed a national reputation for health care improvement and the means to achieve it. We're proud to review our efforts in 1999 and share our plans for the coming year in this annual report.

Sincerely,

David J. Abelson, M.D.
Chair, Board of Directors (2000-2001)

Brian H. Rank, M.D.
Chair, Board of Directors (1999)

Gordon Mosser, M.D.
ICSI Executive Director



David J. Abelson, M.D., Brian H. Rank, M.D.
and Gordon Mosser, M.D.



The ICSI Program

Cultivating Quality

Health care quality improvement doesn't just happen. It must be carefully cultivated and nurtured if it is to take root... and grow.

In 1999, ICSI reached a new level of maturity, one symbolized by the changing of its name from the Institute for Clinical Systems Integration (ICSI) to the Institute for Clinical Systems Improvement (ICSI).

Its new name reflects ICSI's evolution from merely laying the scientific groundwork for health care quality to providing the support, the nourishment and the tools needed by

its member medical groups to more rapidly improve clinical care. The fruits of their labor are becoming evident, and their patients are beginning to reap the benefits.

ICSI's program elements were also refined in 1999 to support its new mission: to accelerate improvement in the value of the health care we deliver and to champion the cause of health care quality. There are four ICSI program elements: the core commitment cycle, scientific groundwork for health care, support for improvement, and advocacy for health care quality.

CORE COMMITMENT CYCLE

The commitment cycle has become central to the ICSI program. A requirement for ICSI membership, it provides participating medical groups with a disciplined structure for pursuing their improvement initiatives.

Each ICSI medical group chooses four or more topics for intensive improvement effort every year. At least three topics are related to ICSI guidelines; one may be service related. Medical groups set their own aims and measures for each of their chosen topics and commit to accomplish them in a year. They report informally at mid-year, and they share their year-end report with the rest of the collaborative.

The medical groups can choose to work on their improvement projects independently or collaborate in action

groups (see page 5). And while each competes with each other in the marketplace, they share, support and learn from each other as they go about improving health care in their clinics.

In 1999, ICSI:

- Conducted action groups on the following clinical improvement topics: preventive services, diabetes, asthma, cardiovascular disease and attention deficit hyperactivity disorder. A service-related action group on improving access to health care practitioners also was established.
- Gathered written reports from the medical groups about their progress in achieving their aims for topics chosen in 1998 and circulated them among ICSI members.
- Held an annual forum in February to review medical group improvement initiatives conducted in 1998.

In 2000, ICSI will:

- Obtain commitments from participating medical groups to devote intensive effort to improvement initiatives. Each medical group will choose four or more topics and submit statements of aims and measures of attainment of these aims.
- Gather written reports from the medical groups about their progress in achieving their aims for topics chosen in 1999. The reports will be circulated among ICSI members and reviewed by ICSI's Health Care Program Committee (HCPC).
- Hold an annual forum meeting in March to review medical group improvement initiatives conducted in 1999.

SCIENTIFIC GROUNDWORK FOR HEALTH CARE

ICSI health care guidelines and technology assessment reports are the scientific groundwork for health care improvement.

Health Care Guidelines

Health care guidelines are evidence-based and represent the most appropriate practice for the prevention and treatment of specific health conditions. Physicians and other health care professionals from ICSI medical groups collaborate in work groups to develop and continually improve each guideline. ICSI manages the processes of guideline development and revision.

Since ICSI's inception in 1993, ICSI members have developed a library of 46 health care guidelines (see page 9 for a list and information about guideline development).

In its early years, guideline development was the heart of the ICSI program, and ICSI members created at least six new guidelines a year. In 1998, ICSI slowed the pace of guideline development, allowing medical groups to concentrate intensively on putting the existing guidelines into practice to improve health care for their patients.

ICSI also began involving patients in guideline development. Patient focus groups help guideline work group members identify potential obstacles to successful guideline implementation and specific areas within the guideline that may require patient education.

Today, health care guidelines are an important part of the solid scientific base for improvement work by ICSI medical groups.

In 1999, ICSI:

- Developed two health care guidelines – Atrial fibrillation, and Assessment and management of acute pain.
- Conducted patient focus groups about the two new guideline topics to be developed in 2000 – Chronic obstructive pulmonary disease, and Diagnosis and initial treatment of stroke.
- Added a supplement on cardiac stress test to three guidelines – Stable coronary artery disease, Diagnosis of chest pain, and Treatment of acute myocardial infarction.
- Maintained its strong commitment to keeping previously developed guidelines current. ICSI work groups reviewed all guidelines and updated them as necessary.
- Rated the strength of evidence offered by studies cited in each guideline and applied conclusion grading methodology to key conclusions in five guidelines. Conclusion grading methodology defines criteria for evaluating the strength of the evidence cited by the guideline work group to support its conclusions. The use of conclusion grading encourages work groups to seek out the best available evidence for the conclusions being put forth.

In 2000, ICSI will:

- Develop two new guidelines – Stroke, and Chronic obstructive pulmonary disease – and expand the scope of the Deep vein thrombosis guideline to include pulmonary embolism.
- Update and maintain 46 guidelines and one guideline supplement developed through 1999.
- Continue to rate the strength of evidence offered by studies cited in each guideline and apply conclusion grading methodology to key conclusions in at least four of them.

- Obtain patient input on new guideline topics to inform work groups of the attitudes and perceptions that could affect successful implementation.
- List recommendations of suitable patient-oriented Internet sites in the guidelines and make this information available on ICSI's Web site.
- Improve the guideline revision schedule to provide for variable review periods for appropriate guidelines.

Technology Assessment Reports

Technology assessment reports inform clinicians about the efficacy and safety of emerging and controversial medical technologies. They are provided as a service to clinicians who wish to stay up-to-date on new and emerging technologies but who lack the time to locate and synthesize recently published scientific evidence. The reports occasionally provide background information that is pertinent to guideline development.

ICSI has developed 48 technology assessments since its inception (see page 10).

In 1999, ICSI:

- Developed four new technology assessments —Lymphatic mapping with sentinel lymph node biopsy (SLNB) for breast cancer, Bilateral prophylactic mastectomy for the prevention of breast cancer, Fetal fibronectin for the prediction of preterm labor, and Deep brain stimulation for essential tremor and Parkinson's disease.
- Revised or updated four technology assessments – Densitometry as a diagnostic tool for the identification and treatment of osteoporosis in women, Image directed biopsies of breast lesions, EEG monitoring during carotid artery surgery, and Prostate specific antigen as a screening test for prostate cancer.

- Increased awareness of report conclusions through briefings with medical group guideline managers, publication of report briefs in *ICSI Bridges* and posting of all reports issued since 1998 on ICSI's Internet site.

In 2000, ICSI will:

- Develop six to eight new or substantially revised medical technology assessment reports.
- Review half of the 48 technology assessment reports developed through 1999 and update those requested by the Technology Assessment Committee.
- Apply conclusion grading methodology to new, revised and updated technology assessment reports. Conclusion grading methodology defines criteria for evaluating the strength of the evidence cited by the technology assessment work group to support its conclusions. The use of conclusion grading encourages work groups to seek out the best available evidence for the conclusions being put forth.

SUPPORT FOR IMPROVEMENT

ICSI supports the improvement efforts of its participating medical groups by offering them education and training, consulting, structured improvement collaboratives, and knowledge products.

Education and Training

ICSI provides several opportunities for staff of participating medical groups to advance their knowledge of improvement concepts and methods. The offerings range from basic education on improvement for medical groups that are new to ICSI, to topical seminars intended for medical groups that are at advanced stages of development.

Typically, health care professionals receive little or no formal training in continual improvement theory and methods. ICSI's educational and training offerings are designed so medical group staff can apply the knowledge they've gained to their organization's active improvement initiatives. Providing courses locally makes it possible for more people to participate.

In 1999, ICSI:

- Conducted an educational needs assessment of participating medical groups.
- Offered ten half-day courses on topics that include dispersion, aims and measures, rapid cycle improvement, evidence grading, advanced measurement skills, Excel, strategic planning, project management, change management, and systems theory. The courses were attended by 161 staff members from 16 participating medical groups.
- Offered tailored, on-site courses requested by six participating medical groups.
- Began an extensive educational series on organizational change for participating medical groups.
- Provided new participating medical groups with a program that included individual needs assessments, a series of courses on program development, and consultation with each group.
- Continued to provide continuing medical education (CME) credit for ICSI guidelines and courses by arrangement with the HealthPartners Institute for Medical Education.
- Sponsored the second annual "Colloquium on Clinical Quality Improvement" in May with the Institute for Healthcare Improvement (IHI), Boston. More than 200 people attended the three-day event, which featured some of the foremost professionals in clinical

quality improvement from the United States and Canada. ICSI also prepared a recap of the conference that was published in the December 1999 issue of *The Joint Commission Journal on Quality Improvement*.

- Hosted the second annual James L. Reinertsen Lecture, which featured Bruce E. Bradley, director of Managed Care Plans, General Motors Health Care Initiatives, speaking on "What Purchasers Can and Should Do to Improve the Quality of Health Care."

In 2000, ICSI will:

- Offer eight courses based on the results of the fall 1999 educational needs assessment, including aims and measures, advanced rapid cycle improvement, basic and advanced change management, basic and advanced Excel, cost modeling and systems thinking. Outside experts will be recruited to lead or participate in most of them.
- Provide on-site customized training on continual quality improvement (CQI) and measurement methods for participating medical groups as needed.
- Assess the educational needs of participating medical groups in the fall and develop a schedule of training classes to be delivered in 2001.
- Offer continuing medical education (CME) credit for selected ICSI guidelines and technology assessment reports to physicians in all interested participating medical groups by arrangement with the HealthPartners Institute for Medical Education.
- Sponsor the third annual "Colloquium on Clinical Quality Improvement" to be held May 11-12, 2000 in St. Paul, Minnesota. This colloquium will feature three of the outstanding professionals in

clinical quality improvement – David M. Lawrence, M.D., Kaiser Foundation Health Plan, Inc. and Kaiser Foundation Hospitals; Martin P. Eccles, M.D., University of Newcastle upon Tyne (England); and Maureen A. Bisognano, Institute for Healthcare Improvement.

- Host the third annual James L. Reinertsen Lecture.

Consulting

ICSI's consulting program is designed to help participating medical groups identify barriers to progress in their improvement initiatives and to develop strategies and techniques for overcoming them.

Working closely with physicians and guideline managers from interested participating medical groups, ICSI provides information, advice and consultation. ICSI also challenges the medical groups to set and meet aggressive improvement goals. Specific ICSI staff contacts (one physician and one other staff person) are provided for each participating medical group.

In 1999, ICSI:

- Offered consulting assistance to all participating medical groups and provided ten with significant consulting support for their improvement initiatives.
- Supported two participating medical groups who collected data from patients through patient surveys about a diabetes education program and a tobacco cessation program.
- Hired a manager of quality resources to coordinate ICSI's consulting activities.

In 2000, ICSI will:

- Establish, enhance and maintain solid consulting relationships with interested participating medical groups and deliver consulting services they regard as valuable to their clinical continual improvement efforts.
- Provide expert statistical consulting resources to assist participating medical groups with development of measurement plans.
- Work with participating medical groups to increase their understanding of the cost-effectiveness of guideline implementation.

Structured Improvement Collaboratives

ICSI staff members organize and facilitate a series of "action groups" focused on the topics participating medical groups choose for intensive effort. Action groups provide opportunities for medical groups working on a given topic to collaborate in a structured fashion as they seek to improve care for their patients. Participants share their experience and their data, and action groups host visiting speakers to learn about work that has been done elsewhere.

In 1999, action groups invited numerous outside speakers to share their clinical improvement experience (see sidebar).

Clinicians and staff from all participating medical groups were invited to attend these presentations.

1999 ACTION GROUP SPEAKERS

Cardiovascular Disease Action Group

Lowell Dale, M.D., Mayo Clinic, tobacco cessation

Jeff Borenstein, M.D., Cedars-Sinai, hypertension disease management

Ira Ockene, M.D., University of Massachusetts-Worcester, methods for lowering lipid levels

Deborah Hennrikus, Ph.D., University of Minnesota, how to use motivational interviewing for heart disease prevention

Diabetes Action Group

Jeremy Gleeson, M.D., Lovelace Health System, developing a care system for patients with diabetes

Martha Funnell, C.D.E., University of Michigan, team care and education for the patient with diabetes

Chronic Disease Study Group

Connie Davis, M.N., A.R.N.P., Group Health Cooperative-Seattle, support for self-management in improving care for chronic illness

Access Action Group

Mark Murray, M.D., and Catherine Tantau, B.S.N., M.P.A., consultants (formerly with Kaiser-Northern California), same-day access for patients

Preventive Services Action Group

Michael Maciosek, Ph.D., HealthPartners Research Foundation, targeting primary care preventive services

Patrick McBride, M.D., University of Wisconsin, primary care improvement of cardiac risk factors

Rajeev Chaudry, M.D., Mayo Clinic, the relationship between physician productivity and the delivery of preventive services

Paul Frame, M.D., U. S. Preventive Services Task Force, updates on preventive services

Benjamin Crabtree, Ph.D., University of New Jersey-Robert Wood Johnson Medical School, direct observation of primary care (DOPC) study

A 1998 survey showed ICSI participating medical groups found collaboration on improvement to be one of the most valued aspects of ICSI. Close collaboration accelerates improvement by energizing participants and speeding the transfer of information across medical groups. Action groups have become ICSI's primary vehicles for medical group collaboration, supplemented with other types of collaboratives that focus on the issues faced by medical group physicians and staff in their organizations' improvement initiatives.

In 1999, ICSI:

- Organized and facilitated action groups on six topics – access, attention deficit hyperactivity disorder, asthma, diabetes, cardiovascular disease and preventive services.
- Established a chronic disease study group.
- Sponsored other collaboratives for members, including bimonthly discussions on clinical quality topics for physician leaders and quarterly forums for guideline managers.
- Held semi-annual meetings of the ICSI Measurement Council, which advises ICSI's Health Care Program Committee (HCPC) and ICSI staff on the role of measurement in ICSI's overall program.

In 2000, ICSI will:

- Facilitate action groups on six to eight topics, including guidelines and care delivery issues, as selected by medical groups.
- Identify and recruit speakers from organizations noted for their success in improving care to address the action groups.

- Obtain available information on benchmark performance.
- Hold bimonthly discussions on clinical quality topics for physician leaders and four forums for guideline managers of the participating medical groups.

Knowledge Products

Knowledge products include written documents, audiotapes and videotapes – lasting sources of information helpful for clinical quality improvement. They are generally derived from ICSI activities, such as action groups, education and training courses, lectures and presentations, guidelines, technology assessment reports, and results of studies commissioned by ICSI.

A central role for ICSI is to distill knowledge and information shared at its activities and to make it available to participating medical groups. This allows all medical groups to take advantage of strategies and methods that have been shown to accelerate improvement, as well as avoid those that do not work well.

In 1999, ICSI:

- Developed the Process Improvement Report Series. Initial reports highlighted improvement efforts by Quello Clinic and Central Minnesota Group Health in diabetes; the success of HealthPartners in Preventive Services; HealthEast's improvement in asthma care; and Mayo Clinic's continual improvement collaborative within its disease management strategy program.
- Made videotapes of the James L. Reinertsen Lecture, most action group guest speakers, and education courses available to participating medical groups. ICSI also provided each medical group with a selection

of audiotapes of presentations made at the Colloquium on Clinical Quality Improvement.

- Published and distributed more than 3,000 copies of *ICSI Pocket Guidelines*, a portable volume that includes guideline algorithms, and key annotations and tables.

In 2000, ICSI will:

- Develop a variety of knowledge products, including descriptions of structures and methods that participating medical groups have found useful for improving quality, and videotapes of presentations by invited speakers to action groups and education courses.
- Compile a catalog of knowledge products, and make it available to participating medical groups. Distribute materials to guideline work groups, action groups and medical group staff as appropriate.
- Conduct two or three projects to determine if data useful for process improvement can be collected directly from patients in a manner that is feasible, practical, inexpensive and timely.
- Publish a new edition of *ICSI Pocket Guidelines*.

ADVOCACY FOR HEALTH CARE QUALITY

ICSI staff members seek opportunities to meet with physicians and staff in participating medical groups to promote clinical improvement. ICSI is also striving to heighten public awareness about the importance and value of improvement work and to affect the health care environment so that quality in health care is more strongly encouraged and rewarded.

In 1999, ICSI:

- Made ICSI guidelines and recent technology assessment reports available to the medical community on the Internet at www.icsi.org.
- Prepared written information about ICSI and its members and sent it to key local and national media to introduce them to the work of ICSI participating medical groups and to offer them as resources for health related stories.
- ICSI staff members made presentations about ICSI's work to the Pittsburgh Working Together Consortium; Medical Alley, Minneapolis; International Society of Technology Assessment in Health Care, Edinburgh, Scotland; Buyer's Health Care Action Group (BHCAG), Sioux Falls; SSM Health Care, St. Louis; MCAP Oak Group, Chicago; Dental Summit Group, Chicago; Mayo Rochester Department of Family Medicine Annual Forum; Institute for Healthcare Improvement National Forum, New Orleans; Boston Medical Center; CareGroup, Boston.
- Five ICSI guidelines were published in *Postgraduate Medicine: Management of type 2 diabetes mellitus*;

Diagnosis and management of asthma; Uncomplicated urinary tract infection in women; Diagnosis and treatment of adult degenerative joint disease of the knee; and Treatment of acute myocardial infarction. Five articles about ICSI-sponsored activities also were published:

"Impact of a new cervical Pap smear screening guideline on member perceptions and comfort levels," *Preventive Medicine*.

"Physicians taking the lead to improve patient care," *The Joint Commission Journal on Quality Improvement*.

"Impact of hypertension guideline implementation on blood pressure control and drug use in primary care clinics," *The Joint Commission Journal on Quality Improvement*.

"Performance failure of an evidence-based upper respiratory infection clinical guideline," *Journal of Family Practice*.

"The 1999 ICSI/IHI Colloquium on Clinical Quality Improvement – Quality: Settling the Frontier," *The Joint Commission Journal on Quality Improvement*.

- Published two issues of *ICSI Bridges*, a newsletter for clinicians at participating medical groups.
- Participated in the National Guideline Clearinghouse sponsored by the Agency for Healthcare Research and Quality (AHRQ), an on-line compendium of evidence-based guidelines (www.guideline.gov).

In 2000, ICSI will:

- Publicize quality improvement work being done by participating medical groups, conduct public awareness campaigns on health care issues that have a bearing on clinical quality improvement, and build relationships with state and community leaders who influence health care policy.
- Make selected knowledge products available on ICSI's Web site, including health care guidelines, recent technology assessment reports, summaries of guideline impact studies, and others.
- List all ICSI guidelines in the National Guideline Clearinghouse sponsored by the Agency for Healthcare Research and Quality (AHRQ).
- Publicize the availability of education and training courses offered by ICSI.
- Publish two issues of *ICSI Bridges*.
- Share information about ICSI activities at conferences and meetings and through articles in health care journals.

GROWING THE TREE: ELEMENTS FOR SUCCESS

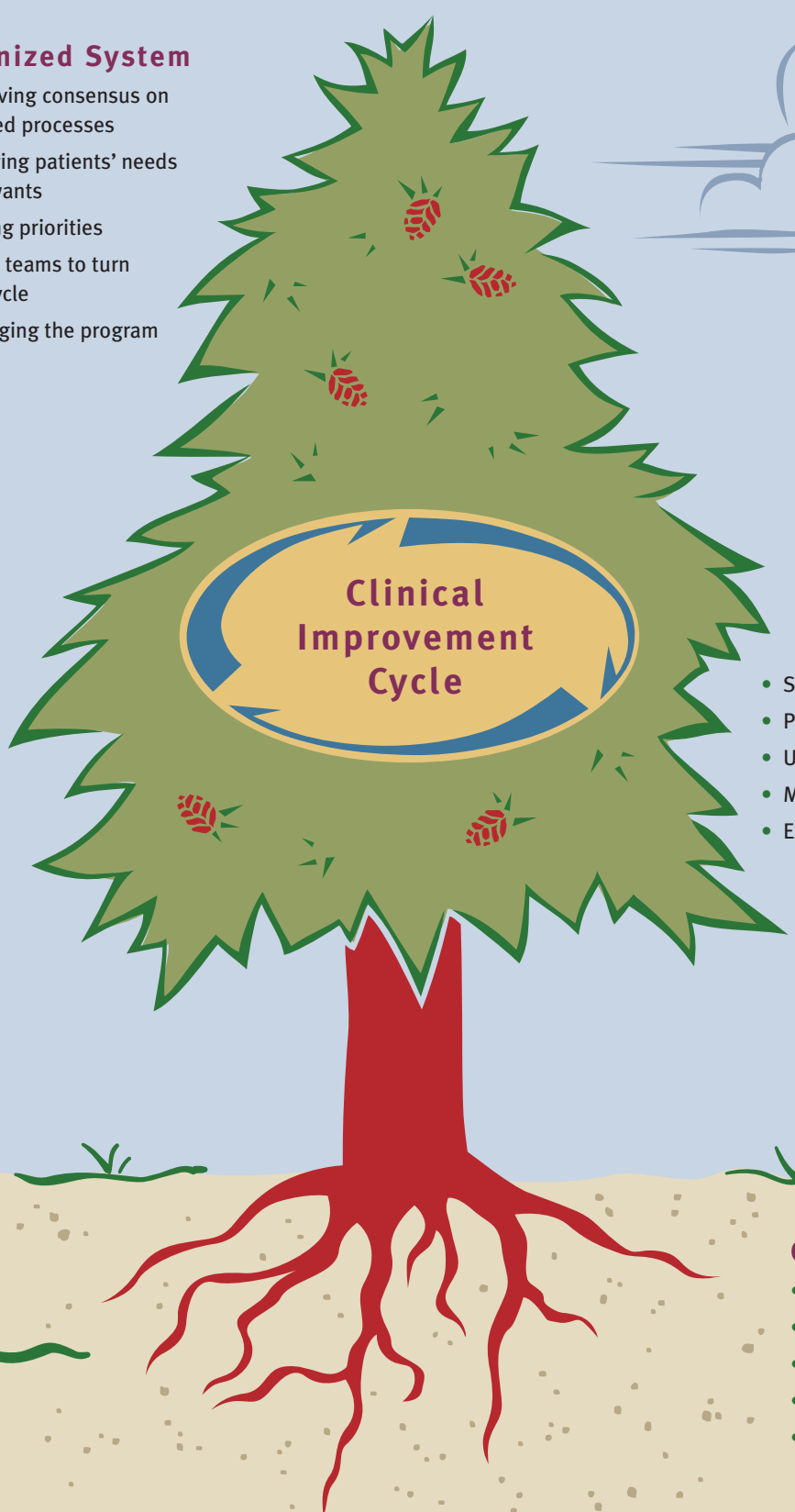
The Institute for Clinical Systems Improvement (ICSI) has developed a model for cultivating quality. Called “Growing the Tree,” it includes four program elements. “These are the requisites for achieving improvement in a health care organization,” said Gordon Mosser, M.D., ICSI executive director. The program elements are:

Organized System

- Achieving consensus on desired processes
- Studying patients’ needs and wants
- Setting priorities
- Using teams to turn the cycle
- Managing the program

Nurturing Environment

- Community recognition
- Public accountability
- Marketplace advantage
- Supportive purchaser requirements
- Supportive accreditation and regulatory requirements



Clinical Improvement Cycle

- Setting aims and measures
- Planning changes
- Using small tests of change
- Measuring for improvement
- Extending and adapting

Organizational Nourishment

- Committed leadership
- Engaged clinicians and staff
- Education and training
- Change management
- Cultural consistency

ICSI HEALTH CARE GUIDELINE DEVELOPMENT

A health care guideline identifies best practice for preventing, diagnosing or treating a health condition. It is intended to improve the effectiveness, efficiency and consistency of patient care.

Since its inception in 1993, the Institute for Clinical Systems Improvement (ICSI) collaborative has developed 46 health care guidelines. They have been shared widely with organizations throughout the country and around the world. They are available on the ICSI Web site (www.icsi.org).

Development Process

- ICSI's Guideline Oversight Group targets specific health conditions for improvement after evaluating which are most common in a population, the potential impact guidelines could have on those conditions, and the feasibility of developing and implementing guidelines.
- For each condition, a cross-disciplinary team of experts, including a lead physician, a facilitator, other health care providers, and occasionally a purchaser representative, forms a work

group. A patient representative has been added to newer work groups. The work group drafts a guideline based on studies and evidence of the various treatment approaches for that condition.

- Health care providers in ICSI's participating organizations review the draft guideline. The guideline work group examines their feedback and revises the original guideline as appropriate.
- Some of the ICSI participating medical groups pilot the guideline at select sites. The work group considers the experiences from these sites, revising the guideline as necessary. The Guideline Oversight Group or a steering committee approves the guideline for general implementation.
- Following the pilot period, the guideline work group convenes regularly – every 12 to 18 months depending on the topic – to reevaluate all aspects of the guideline. It surveys scientific literature and reviews feedback provided by the medical groups. The work group revises the guideline to incorporate the improvements needed to ensure the best possible quality of care.

ICSI Health Care Guidelines

Preventive Services

- Preventive services
- Preventive counseling and education
- Cervical cancer screening
- Colorectal cancer screening
- Hormone replacement therapy: Collaborative decision making and management
- Immunizations
- Lipid screening
- Tobacco use, prevention and cessation

Cardiovascular Disease

- Deep vein thrombosis
- Hypertension diagnosis and treatment
- Treatment of acute myocardial infarction
- Atrial fibrillation*
- Congestive heart failure in adults
- Diagnosis of chest pain
- Stable coronary artery disease
- Treatment of lipid disorder in adults

Obstetrical and Gynecologic Care

- Diagnosis and management of infertility
- Management of initial abnormal Pap smear

- Intrapartum fetal heart rate management
- Preterm birth prevention
- Prevention, diagnosis and treatment of failure to progress in obstetrical labor
- Routine prenatal care
- Vaginal birth after Cesarean

Respiratory Disease

- Acute pharyngitis
- Acute sinusitis in adults
- Community-acquired pneumonia
- Diagnosis and management of asthma
- Diagnosis and treatment of otitis media in children
- Rhinitis
- Viral upper respiratory infection (VURI) in children and adults

Mental and Behavioral Health

- Diagnosis and management of attention deficit hyperactivity disorder in primary care
- Domestic violence
- Major depression in specialty care in adults
- Major depression, panic disorder and generalized anxiety disorder in adults in primary care

Musculo-Skeletal Disorders

- Adult low back pain
- Ankle sprain
- Diagnosis and treatment of adult degenerative joint disease of the knee

Other Health Care Conditions

- Assessment and management of acute pain*
- Breast cancer diagnosis
- Breast cancer treatment
- Dyspepsia
- Migraine headache
- Preoperative evaluation
- Uncomplicated urinary tract infection in women
- Management of type 2 diabetes mellitus

Worksite Guideline

- Worksite hypertension

*Guidelines under development

ICSI TECHNOLOGY ASSESSMENT REPORT DEVELOPMENT

Institute for Clinical Systems Improvement (ICSI) technology assessment reports present health care providers with a scientific assessment, through review and analysis of the medical literature, of the safety and efficacy of a medical technology. ICSI has created 48 technology assessment reports to date.

Due to the rapid introduction of new medical technologies into the health care market and the expanding applications of existing technologies, ICSI has established a formal process to review new medical technologies on an ongoing basis. This process provides a mechanism for ICSI medical groups to become informed about the safety and efficacy of emerging technologies. The Technology Assessment Committee serves as the principal mechanism for evaluating new medical procedures, devices, and treatments, as well as new applications of existing technologies. Each year, the committee approves six to eight new technology assessment reports and updates four to six existing reports. The reports are available on ICSI's Web site at www.icsi.org.

Development process

- The Technology Assessment Committee (TAC) chooses a technology assessment topic. Work group members are identified; an ICSI staff member researches the topic and prepares a draft report for the work group.
- Work group members review the draft and revise it until they reach consensus. The work group leader presents the report to the TAC.
- After the TAC approves the report, it is distributed to ICSI medical groups for review and comment. The review and comment suggestions are incorporated into the report.
- The work group and TAC approve the report, and it is distributed to all participating medical groups.
- The work group reviews the technology assessment within two years to determine if an update is needed.

Technology Assessment Reports

- Acupuncture for chronic osteoarthritis pain, headache, and low back pain
- Acupuncture for treatment of chemical dependency
- Antiviral therapy for chronic hepatitis C
- Assisted reproductive technologies
- Bilateral prophylactic mastectomy for the prevention of breast cancer
- Botulinum toxin therapy
- Cardiac rehabilitation
- Case management for chronic illness, the frail elderly, and acute myocardial infarction
- Cochlear implants
- Computed tomography for the diagnosis of pulmonary embolism
- Deep brain stimulation for essential tremor and Parkinson's disease
- Densitometry as a diagnostic tool for the identification and treatment of osteoporosis in women
- Dorsal rhizotomy for spasticity
- Electrical stimulation for non-union of a fracture
- EEG monitoring during carotid artery surgery
- Electron-beam computed tomography for coronary artery disease
- Excimer laser use in ophthalmology
- Fetal fibronectin for the prediction of preterm labor
- Gastric restrictive surgery for morbid obesity
- Genetic screening for breast cancer
- High-dose chemotherapy with autologous stem cell support for the treatment of breast cancer
- High-dose chemotherapy with hematopoietic stem cell transplantation for treatment of multiple myeloma
- High-frequency chest compression devices for cystic fibrosis patients
- Home uterine activity monitoring for detection of preterm labor
- Image directed biopsies of breast lesions
- Interferon Beta-1B for treatment of multiple sclerosis
- Intrathecal baclofen infusion for controlling spasticity and spasms
- Intravenous immune gamma globulin (IVIG) for treatment of neurological conditions
- Lung transplants
- Lung volume reduction surgery for emphysema
- Lymphatic mapping with sentinel lymph node biopsy for breast cancer
- Magnetic resonance angiography for venous sinus thrombosis, intracranial atherosclerosis, intracranial aneurysms, carotid artery atherosclerosis, and carotid or vertebral artery dissection
- Microwave thermotherapy for benign prostatic hypertrophy
- Minimally invasive direct vision coronary artery bypass grafting (MIDCABG)
- Oral devices for treatment of obstructive sleep apnea syndrome
- Pancreas transplants
- PET and SPECT scans for the evaluation of epileptic patients
- Photodynamic therapy for head and neck, tracheobronchial, and esophageal cancer
- Prenatal ultrasound as a screening test
- Prostate-specific antigen (PSA) as a screening test for prostate cancer
- Pulmonary rehabilitation for chronic obstructive pulmonary disease
- Screening for the factor V R506Q (Leiden) mutation prior to oral contraceptive prescription
- Screening tests
- Small bowel transplantation
- Stereotactic radioneurosurgery for brain lesions
- Tissue-type plasminogen activator for acute ischemic stroke
- Transjugular intrahepatic porto-systemic shunts
- Tympanic membrane thermometry



Diabetes Action Group: *Improving Health Care for Patients*

“Even though we’re talking about systems and guidelines and implementation, the whole focus is this: are we improving the care that patients are getting?”

Richard Bergenstal, M.D.
ICSI Diabetes Action Group Leader,
1997-1999

Medical groups participating in the Institute for Clinical Systems Improvement (ICSI) are committed to making meaningful improvements in patient care. They commit to each other that they will focus significant attention and resources on improving patient care in four or more areas based on ICSI health care guidelines or service issues.

When several medical groups choose the same area, ICSI organizes and facilitates a structured improvement collaborative called an action group. Participation in an action group is optional, but a 1998 survey showed member medical groups found collaboration on improvement to be one of the most valued aspects of ICSI membership.

In 1999, there were six ICSI action groups, including the Diabetes Action Group. More than 35 physicians, nurses, guideline managers and others from 13 of the 18 ICSI participating medical groups are active in this group (see list, page 12).

And no wonder. Diabetes is both a common and complicated medical condition with frequent and undesirable consequences.

Consider: One out of every 20 adults in the United States lives with diabetes. Although it’s considered a

common condition, unchecked, it can cause disability or premature death, mainly due to heart, kidney or eye disease. The frequency of diabetes is rising for reasons unknown.

“Diabetes is a complicated illness,” said Richard Bergenstal, M.D., Park Nicollet Clinic/HealthSystem Minnesota, and executive director of the International Diabetes Center in Minneapolis.

Dr. Bergenstal was the ICSI Diabetes Action Group Leader from its inception in 1997 to 1999. He also was part of the ICSI work group that developed the ICSI diabetes guideline – Management of type 2 diabetes mellitus.

“An action group puts a guideline into practice,” said Dr. Bergenstal, who now serves as the Diabetes Action Group content expert. “It helps clinics implement a guideline and gets them together to share processes and systems.”

Diabetes Action Group members meet every three or four months to discuss the topic, exchange ideas to accelerate improvement, learn from experts from around the country, and share the results of their improvement efforts.

"It's pretty remarkable to have competing medical groups sharing data," said Dr. Bergenstal. "There's not a lot of this kind of collaborative improvement work going on in other parts of the country."

He noted that in 1999, the action group heard various speakers on the topic of diabetes, including Jeremy Gleeson, M.D., a diabetes expert from the Lovelace Health System, Albuquerque, New Mexico, who spoke

to the action group about developing a system of care for diabetes; and Martha Funnell, a certified diabetes educator from the University of Michigan, who discussed team care and education for patients with diabetes.

"Even though we're talking about systems and guidelines and implementation, the whole focus is this: are we improving the care that patients are getting?" said Dr. Bergenstal.



Richard Bergenstal, M.D.

From 1997 to 1999, many of the medical groups participating in the ICSI Diabetes Action Group showed significant improvements in the treatment of patients with diabetes, with some medical groups reaching an 80 percent level of blood sugar control. "Several of the medical groups are performing at excellent levels – levels that are unsurpassed elsewhere," said Gordon Mosser, M.D., ICSI executive director, and the Diabetes Action Group facilitator. "All thirteen of the medical groups are performing well above the national average of 40 percent."

To illustrate this innovative improvement work, three of the medical groups in the Diabetes Action Group are featured in this report.

ALLINA MEDICAL CLINIC

"What we're really doing is trying to redesign how we deliver care."

Ted Loftness, M.D.
ICSI Diabetes Action Group Member

The four west central Minnesota clinics of Allina Medical Clinic – Annandale Clinic, Cokato Medical Clinic, Litchfield Clinic, and Wright Clinic in Buffalo – are participating in the ICSI Diabetes Action Group.

Allina, which has a total of 50 clinics, began its Diabetes Action Group work with the premise that diabetes care needs to be planned, according to Ted Loftness, M.D., Allina Medical Clinic medical director, and a Diabetes Action Group member.

To achieve that, he said, each of the participating clinics developed a registry of patients with diabetes to track the critical processes they were trying to improve. A registry tracks the frequency and value of screening tests for blood sugar control, eye and foot exams. The registry also serves as the clinic's reminder system.

"If we can help a patient control blood sugar, we can have dramatic effects on prevention of blindness, loss of limbs, or kidney failure," Dr. Loftness said.

Also critical to improving care for patients with diabetes was to agree on standards of care; to engage and train staff, from providers to receptionists; to form interdisciplinary teams; and to institute a pre-visit planning process.

The four clinics began collecting data and sharing results on a quarterly basis. They also focused on involving patients in their own care through rigorous education led by diabetes educators. In addition, clinic staff acknowledged and rewarded patients for managing their own care.

"In any chronic disease, the patient must take control," Dr. Loftness said. "I can't measure blood sugar for patients. I can't do their meal planning. I can't exercise for them or get them to stop smoking. But there is excellent science to show that we can make a difference in outcomes if we do a good job of helping the patient control these processes."

There are about 1,300 patients with diabetes in the west central clinics, and clinic staff members have produced excellent results, said Dr. Loftness.

For example, the 1999 fourth quarter pilot summary showed:

- the number of patients who were tested for blood sugar levels increased from 50 percent in 1998 to nearly 100 percent;
- the number of patients who achieved good blood sugar control rose from about 50 percent to about 80 percent, and;
- the number of patients receiving regular dilated eye exams and foot exams climbed from about 30 percent to about 80 percent.

“What we’re really doing is trying to redesign how we deliver care,” Dr. Loftness said. “When people think of health care, they think of sensational things like *ER* or *Chicago Hope*. In reality, there’s not a lot of glamour in examining somebody’s eyes or feet. But there certainly are medical benefits if a patient with diabetes is prevented from blindness or the loss of a limb.”

HEALTHPARTNERS

“Part of diabetes is making lifestyle changes. It’s very hard for people to do what it takes to live with the disease.”

JoAnn Sperl-Hillen, M.D.
ICSI Diabetes Action Group
Member and 2000 Leader

A HealthPartners Foundation study showed that the cost of patient care was higher for patients with diabetes who had poor blood sugar control. For HealthPartners, the ICSI Diabetes Action Group was an opportunity to improve patient care in this critical area.

“We wanted to implement the ICSI diabetes guideline and do more improvement work in the area of diabetes care,” said JoAnn Sperl-Hillen, M.D., HealthPartners, and the new Diabetes Action Group leader.

DIABETES ACTION GROUP PARTICIPANTS

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Julie Vanderboom, R.N., M.S.N.

Aspen Medical Group

Lorraine Cummings, L.P.N.
Michael Gonzalez-Campoy, M.D.
Diane Schweizer, R.N.

Central Minnesota Group Health

Les Lofgren, M.D.
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Fairview Red Wing Clinic

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HealthEast Clinics

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Kevin Peterson, M.D., M.P.H.

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Patrick O’Connor, M.D.
JoAnn Sperl-Hillen, M.D.

HealthSystem Minnesota

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Jan Pearson

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Jane Bach
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Bonnie Rehmann

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North Clinic

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Karen Pagliarello, L.P.N.

Quello Clinic, Ltd.

Stacey Jorgenson, L.P.N.
Terry Murray
Steve Sobel, M.D.

Stillwater Medical Group

Terri Pomeroy
Martha Sanford, M.D.

Diabetes Action Group Staff

JoAnn Sperl-Hillen, M.D., Leader 2000
Richard Bergenstal, M.D., Content Expert
(Leader 1997-1999)
Gordon Mosser, M.D., ICSI, Facilitator
Jane Gendron, ICSI, Measurement Advisor

The Diabetes Action Group, which HealthPartners joined in 1997, provided a forum for sharing ideas with other groups in the community, and for learning about the disease and ways to improve patient care, she said. It also offered a structure for submitting ongoing measurements on how the work was progressing.

To begin its improvement efforts, HealthPartners first identified all of its members with diabetes and stratified risk for that population, which included 7,000 patients. A patient registry called a "Risk List" was developed, identifying patients with heart disease or other health problems, poorly controlled blood sugar levels, or missing tests. This information was scheduled to be sent quarterly to physicians, diabetes nurses and managers.

"The list gave us a way to be proactive with patients," Dr. Sperl-Hillen said. "Instead of waiting for patients to come in, a nurse can call a patient who is at high risk for complications. The nurse can work with the patient and the doctor to develop a care plan to lower that risk."

In addition, HealthPartners promotes a "Care Team" approach. Dr. Sperl-Hillen said, "I was frustrated follow-

ing patients individually over the years and feeling like I wasn't getting anywhere with them. Part of diabetes is making lifestyle changes. It's very hard for people to do what it takes to live with the disease."

Several providers at HealthPartners began inviting groups of patients to come in for quarterly visits that included education about a given diabetes topic, such as eye problems, foot problems or depression. These sessions would be followed

by a support group run by a social worker or behavioral health professional and brief appointments with a nurse for a foot exam, a diabetes nurse for nutrition and self-management issues, a pharmacist for medication surveillance, and the patient's personal doctor to oversee the process. For its efforts in developing these group visits and promoting team care, the Bloomington Clinic won the HealthPartners Presidential Team Award.

"It's hard for a physician, in 15 minutes, to provide everything a patient needs to live with the disease," she said. "People responded to the group approach. Patients were happier and really felt good about what they were doing for themselves. Some started walking together, some became friends and were supporting each other."

Patients can also call the HealthPartners "Partners for Better Health Care" phone line 24 hours a day. The phone line is staffed with dietitians who are also certified diabetes educators. HealthPartners has also mailed wallet cards to patients with diabetes to empower them and help them keep track of their care.

Care has improved. The number of patients with good blood sugar control increased from 47 percent in 1998 to 68 percent in the fourth quarter of 1999. HealthPartners Medical Group is one of the few groups in Minnesota to achieve American Diabetes Association Provider Recognition. To achieve this, HealthPartners submitted data about its performance on 11 key diabetes measures including glucose control, blood pressure, eye exams, self-management support, and patient satisfaction.

STILLWATER MEDICAL GROUP

"A big piece of implementation is how you communicate with people."

Terri Pomeroy, R.N.
ICSI Diabetes Action Group Member

Stillwater Medical Group has been a part of the ICSI Diabetes Action Group since 1998.

"One of our goals is to increase the rate of services for our patients with diabetes," said Martha Sanford, M.D., Stillwater Medical Group, who along with Terri Pomeroy, R.N., leads a self-directed team that conducts the clinic's Diabetes Action Group work.

These services include screening for nephropathy (kidney disease), eye and foot exams, and five other areas. The medical group, which has two sites and plans to add a third clinic in the spring of 2000, also wanted to decrease by 10 percent the average test results for blood sugar by patients with diabetes.

Stillwater Medical Group formed a multidisciplinary team, headed by Dr. Sanford, with physicians and nurses from both sites, a dietitian, an insurance processor, a



JoAnn Sperl-Hillen, M.D.

radiologist, a measurement specialist, a business manager and a coding specialist. The team uses a seven-step continual quality improvement (CQI) process to gather information, share data, and move forward.

“When you’re so steeped in medical care, you forget that most patients don’t understand what the disease is, its history, and what needs to be done,” Ms. Pomeroy said. “That’s why we involve the staff who do the daily work. They provide perspective. And when we implement a guideline, these are the people who help do it. A big piece of implementation is how you communicate with people.”

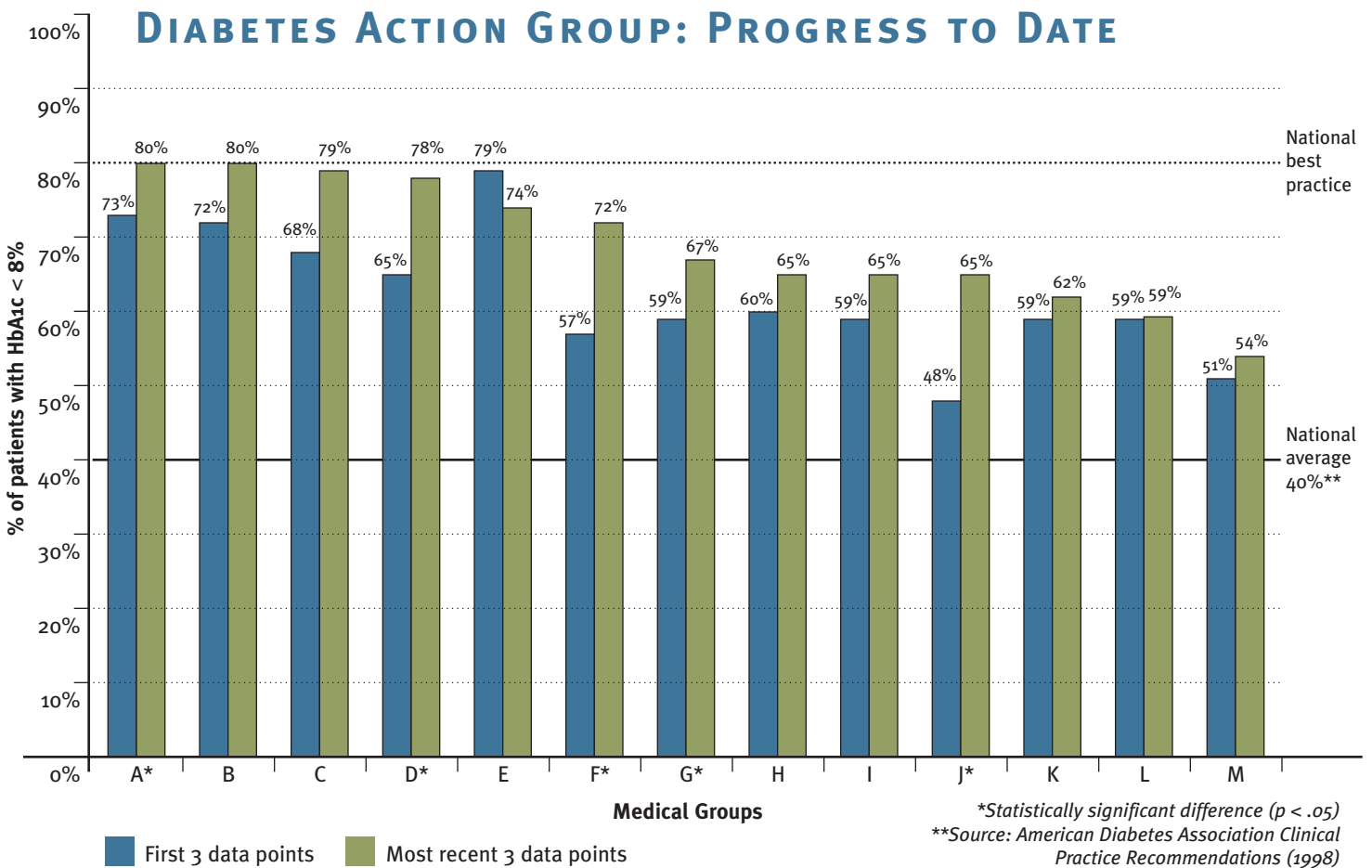
To increase the rate of services, the team developed a registry, which lists screening tests that should be done when a patient with diabetes has an office visit. When a

patient calls for an appointment, a document is produced indicating the date of the last exams or testing.

“It’s a nice way to remind the doctor and the team about what the patient needs,” Ms. Pomeroy said.

Dr. Sanford added, “Patients with diabetes need reminders. Some patient services are needed frequently – every six months, for example. It’s helpful to have this during an office visit so we can remind patients when to have testing done in the future.”

And, from January 1998 to July 1999, the number of Stillwater Medical Group patients with diabetes who had controlled blood sugar improved from 67 percent when it first was measured to 80 percent.



From 1997 to 1999, many of the medical groups participating in the ICSI Diabetes Action Group showed significant improvements in the treatment of patients with diabetes, with some medical groups reaching an 80 percent level of blood sugar control. “Several of the medical groups are performing at excellent levels – levels that are unsurpassed elsewhere,” said Gordon Mosser, M.D., ICSI executive director, and the Diabetes Action Group facilitator. “All thirteen of the medical groups are performing well above the national average of 40 percent.”

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**Institute for
Clinical Systems
Improvement**

An independent, non-profit organization, the Institute for Clinical Systems Improvement (ICSI) provides health care quality improvement services to 18 medical groups affiliated with the HealthPartners health plan in central and southern Minnesota, and western Wisconsin. Most of the medical groups are multi-specialty practices and range in size from 14 practitioners in Shoreview, Minnesota, to more than 1,000 physicians and medical scientists at Mayo Clinic in Rochester. The combined medical groups represent nearly 2,500 physicians.

In January 1993, HealthPartners, Mayo Clinic and HealthSystem Minnesota founded ICSI in cooperation with the Buyers Health Care Action Group (BHCAG), a coalition that includes several Minnesota-based Fortune 500 corporations.

Funded by HealthPartners, a Minnesota-based HMO with 800,000 members, ICSI has 19 staff members and is guided by a 13-member board of directors with representatives from HealthPartners, Mayo Clinic, HealthSystem Minnesota, BHCAG, two additional medical groups and two additional purchasers.

ICSI is dedicated to championing health care quality and to helping its members identify and accelerate the implementation of best clinical practices for their patients. The ICSI program has four elements: improvement commitment, scientific groundwork for health care, support for improvement, and advocacy for health care quality.

ICSI PARTICIPATING MEDICAL GROUPS

Allina Medical Clinic
Minnetonka, Minn.

Aspen Medical Group
St. Paul, Minn.

Camden Physicians, Ltd.
Maple Grove, Minn.

CentraCare
St. Cloud, Minn.

Central Minnesota Group Health
Waite Park, Minn.

Fairview Red Wing Clinic
Red Wing, Minn.

Family HealthServices Minnesota
Maplewood, Minn.

HealthEast Clinics
St. Paul, Minn.

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North Suburban Family Physicians, P.A.
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Quello Clinic, Ltd.
Bloomington, Minn.

River Falls Medical Clinic
River Falls, Wis.

RiverWay Clinics
Anoka, Minn.

Stillwater Medical Group
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