Patient-Centered, Value-Driven Gastroenterology Care

A Publication of

MINNESOTA GASTROENTEROLOGY, P.A.

Creating Value:
2006-2007 Quality & Outcomes
Welcome

Minnesota Gastroenterology, P.A. is pleased
to present Creating Value: 2006 - 2007 Quality & Outcomes,
a publication which details our extensive clinical experience
and highlights the results of our most recent quality initiatives.

By sharing this information with patients,
referring physicians, employers and payers,
we hope to illustrate the depth and breadth of our practice
as well as our ongoing commitment to high quality,
evidence-based medical care.

We welcome the opportunity to work with you,
your patients and your employees.
Contents

Who We Are
Minnesota Gastroenterology, P.A. .................... 4

The Patients We Care For .................... 9

What We Do
Emergency Care ................................................ 10
Inpatient Coverage ............................................. 10
MNGI Endoscopy Centers ................................. 11
Outpatient Clinics .............................................. 13
Pediatric Care ..................................................... 14

Our Commitment to Quality
Practice Improvement Initiatives ...................... 16
2006 Patient Satisfaction Survey Results .......... 17

2006 Outcomes and Innovations
Colonoscopy and Colon Cancer Prevention ...... 18
Esophageal Disorders ........................................ 21
Biliary and Pancreatic Disorders ....................... 24
Inflammatory Bowel Disease ............................. 28
Liver Disease ..................................................... 30
Gastric Diseases ................................................ 33
Small Bowel Diseases ....................................... 35

Physician Publications ........................... 37

Physicians and Medical Staff ........... 38

Locations ..................................................... 40

Contact Information ....................................... 42
Who We Are

Minnesota Gastroenterology (MNGI) is one of the oldest and most respected independent specialty practices in the upper Midwest.

Minnesota Gastroenterology, P.A. specializes in the diagnosis, treatment and preventative care of adults and children with gastrointestinal conditions. Our physicians, nurse practitioners, physician assistants, allied health professionals and administrative staff are committed to working together to improve the health of our patients.

Our 51 gastroenterologists see outpatients at clinic and endoscopy centers in Coon Rapids, Eagan, Maplewood, Plymouth and St. Paul. We also provide a full range of cognitive, diagnostic and therapeutic services to hospitalized patients at thirteen area hospitals, including on-call and emergency coverage. In 2006, MNGI logged more than 192,400 routine and emergency gastroenterology (GI) patient visits.

All of our physicians are Board-certified or Board-eligible gastroenterologists, many of whom have developed extensive clinical subspecialization in fields such as colon cancer prevention, inflammatory bowel disease, esophageal disorders, liver and biliary tract disease, and pancreatic disease.

Our Mission
We are committed to improving patient health by providing premier gastrointestinal care.

Our Vision
We will accomplish our mission by:

• Caring for our patients by providing evidence-based medicine in a safe, compassionate manner
• Providing leadership by defining clinical standards through available scientific knowledge, best practice and innovative treatment
• Collaborating with employers, care systems and insurance plans, using performance and outcome measurements to demonstrate accountability and improvement in our care delivery
• Attracting and retaining great talent by actively promoting a professionally satisfying work environment
• Recognizing each other as a valuable member of our health care team and treating one another with loyalty, respect and dignity
Research
We firmly believe that research is the foundation for health care excellence and an important investment in the future of our patients. Through our research division — The Minnesota Clinical Research Center — eligible MNGI patients have access to new devices and emerging therapies, such as blue light treatment of the stomach for eradication of H. pylori and trial medications to treat inflammatory bowel disease and Hepatitis B and C.

The Minnesota Clinical Research Center is the only private practice in the United States selected to participate in clinical trials for pill camera examination of the colon. Because of our expertise, we have become one of the top four sites in the nation for gastric pacer placement, used to treat gastroparesis. We also participate in cancer prevention studies, such as the National Colonoscopy Screening Trial and polyp prevention studies in partnership with the University of Minnesota.

All of our studies are conducted under the supervision of a dedicated gastroenterology research team, led by Jeffrey Rank, M.D. In 2006, 413 of our patients participated in clinical trials for colon cancer prevention, inflammatory bowel disease, gastroesophageal reflux disease, hepatitis, Barrett’s syndrome and liver disease.

Leading Edge Technology
In addition to the trial medications and devices available through The Minnesota Clinical Research Center, MNGI physicians have access to other emerging technologies, primarily due to our large patient base, highly trained personnel and well-equipped GI facilities. Examples of the technology available to MNGI patients include the BRAVO pH capsule, the HALO for ablation of Barrett’s esophagus and the pill camera for small bowel examination.
Who We Are

Education

Minnesota Gastroenterology physicians are educators, who are actively engaged in teaching medical students, residents and gastroenterology fellows. Teaching sites include Abbott Northwestern Hospital, St. John’s Hospital, Children’s Hospitals and Clinics of Minnesota, and MNGI outpatient clinics.

Clinical faculty appointments at the University of Minnesota School of Medicine are held by:

- John I. Allen, M.D., Adjunct Associate Professor
- Arnold M. Brier, M.D., Adjunct Associate Professor
- Cecil H. Chally, M.D., Adjunct Associate Professor
- Paul B. Dickinson, M.D., Adjunct Professor
- David A. Ferenci, M.D., Instructor
- Robert A. Ganz, M.D., Associate Professor
- Stephen J. Gilberstadt, M.D., Adjunct Assistant Professor
- David S. Hanson, M.D., Adjunct Associate Professor
- Arnold P. Kaplan, M.D., Adjunct Professor
- Samuel H. Leon, M.D., Adjunct Associate Professor
- Robert P. McCabe, M.D., Adjunct Assistant Professor
- Patrick M. O’Reilly, M.D., Adjunct Associate Professor
- Coleman I. Smith, M.D., Adjunct Associate Professor
- Richard J. Stafford, M.D., Associate Professor
- David I. Weinberg, M.D., Adjunct Instructor
- James R. Wood, M.D., Adjunct Instructor

Our gastroenterologists participate in formal post-graduate programs sponsored by the University of Minnesota and are active in the medical community, regularly organizing educational meetings which are open to all physicians.
Minnesota Gastroenterology certified nurse practitioners and physician assistants are also educators. The following staff members present gastroenterology and hepatology lectures to nurse practitioner students at the College of St. Catherine in St. Paul and to students in the physician assistant program at Augsburg College in Minneapolis:

Mark D. Boldt, R.N., C.N.P.
Gina M. Storrs, R.N., C.N.P.
Polly A. Nesset, R.N., C.N.P.

Physician Leadership
Three MNGI gastroenterologists held national leadership positions in 2006:

Cecil H. Chally, M.D. Councilor, Governing Board of the American Gastroenterological Association (AGA)

John I. Allen, M.D. Chair, AGA Clinical Practice and Quality Management Committee
Chair, Board of Directors of the Institute for Clinical Systems Improvement (ICSI)

Robert A. Ganz, M.D. Member, Governing Board of the American Society of Gastrointestinal Endoscopy (ASGE)
Who We Are

Physician Awards
Minnesota Gastroenterology physicians regularly receive recognition of their contributions to medicine by local and national organizations. Recent highlights include:

Cecil H. Chally, M.D.  Distinguished Clinician Award:
                        American Gastroenterology Association, 2004

Coleman I. Smith, M.D. Distinguished Service Award:
                        American Liver Foundation, 2007

                        Teacher of the Year: University of Minnesota,
                        Division of Gastroenterology, 2006

David I. Weinberg, M.D. Physician of the Year: Minnesota/Dakotas
                        Chapter of the Crohn’s and Colitis Foundation of America, 2006

Dr. Coleman Smith (right) receives the American Liver Foundation’s 2007 Distinguished Service Award from Dr. Jack Lake of the University of Minnesota.
In 2006, MNGI provided inpatient and outpatient gastroenterology care to 76,817 adult patients and 6,177 pediatric patients.

Patient Demographics
Our adult and pediatric patients primarily originate from the Upper Midwest: Minnesota, North and South Dakota, Wisconsin and Iowa. Approximately 50% of our patients live in Hennepin and Ramsey counties.

Insurance and Health Plans
Minnesota Gastroenterology holds contracts with numerous health plans and insurance carriers, from health maintenance and preferred provider organizations to government and private payers.

2006 Patient Visits by Insurer
Some patients may have more than one payer.

<table>
<thead>
<tr>
<th>Insurer</th>
<th>Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Cross</td>
<td>37,041</td>
</tr>
<tr>
<td>Medica</td>
<td>29,910</td>
</tr>
<tr>
<td>Medicare</td>
<td>26,578</td>
</tr>
<tr>
<td>HealthPartners</td>
<td>20,345</td>
</tr>
<tr>
<td>Preferred One</td>
<td>8,963</td>
</tr>
<tr>
<td>UCare</td>
<td>7,281</td>
</tr>
<tr>
<td>Blue Plus</td>
<td>5,269</td>
</tr>
<tr>
<td>Medical Assistance</td>
<td>5,156</td>
</tr>
<tr>
<td>United Healthcare</td>
<td>3,450</td>
</tr>
<tr>
<td>SelectCare</td>
<td>2,495</td>
</tr>
</tbody>
</table>
**Emergency Care**

On-call gastroenterologists are assigned to 13 area hospitals, where they field urgent and emergency requests for care. In addition, MNGI designates an on-call gastroenterologist trained in ERCP and EUS to provide emergency coverage for patients who require these procedures.

Our electronic medical record (EMR) allows for seamless patient care from the emergency room to our office. Using EMR, our physicians routinely order outpatient tests and appointments that will be needed after discharge.

**Inpatient Coverage**

Minnesota Gastroenterology physicians are available 24 hours a day, 365 days a year at 12 Twin Cities’ area hospitals, where we provide a full range of cognitive, diagnostic and therapeutic services to hospitalized patients.

- Abbott Northwestern Hospital, Minneapolis
- Children’s Hospitals and Clinics of Minnesota
  - Minneapolis Campus
  - St. Paul Campus
- Fairview Ridges Hospital, Burnsville
- Fairview Southdale Hospital, Edina
- Mercy Hospital, Coon Rapids
- St. Francis Regional Medical Center, Shakopee
- St. John’s Hospital, Maplewood
- St. Joseph’s Hospital, St. Paul
- Unity Hospital, Fridley
- United Hospital, St. Paul
- Woodwinds Health Campus, Woodbury

**2006 MNGI Inpatients by Health Care System**

<table>
<thead>
<tr>
<th>Health Care System</th>
<th>Patients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allina Health System</td>
<td>10,370</td>
<td>55%</td>
</tr>
<tr>
<td>HealthEast Care System</td>
<td>3,070</td>
<td>16%</td>
</tr>
<tr>
<td>Fairview Health Services</td>
<td>2,444</td>
<td>13%</td>
</tr>
<tr>
<td>Children’s Hospital and Clinics of Minnesota</td>
<td>2,103</td>
<td>11%</td>
</tr>
<tr>
<td>Queen of Peace Hospital (New Prague)</td>
<td>614</td>
<td>3%</td>
</tr>
<tr>
<td>Park Nicollet Health Services</td>
<td>292</td>
<td>2%</td>
</tr>
</tbody>
</table>
MNGI Endoscopy Centers
Minnesota Gastroenterology, P.A. owns and operates four outpatient endoscopy centers in Coon Rapids, Eagan, Maplewood and Plymouth. All MNGI endoscopy centers are licensed by the Minnesota Department of Health. We also operate three infusion centers for the treatment of patients with inflammatory bowel disease.

Our endoscopy centers offer efficient, comfortable, patient-centered care delivered via state-of-the-art equipment and techniques, including argon plasma coagulation for specialized treatment of polyps and GI bleeding. We also provide leading edge technology that is unavailable elsewhere in the Twin Cities, such as the BRAVO capsule for esophageal pH studies and the video capsule (pill camera) for wireless, tubeless examination of the entire small bowel.

Minnesota Gastroenterology-owned endoscopy centers are consistently ranked by area health plans as some of the most cost-effective — and least expensive — facilities in the Twin Cities, providing value to the community. Our facility fees are one-third to one-half the cost for the same procedures performed at hospital-based endoscopic facilities.

Our endoscopy centers routinely set new community standards for efficiency. For example, pathology (tissue) results are sent to our physicians electronically, often the same day the endoscopic procedures are performed.

Minnesota Gastroenterology maintains an accurate recall system for patients who have had endoscopic procedures. These important follow-up contacts ensure that patients return for surveillance exams, which are essential for the prevention of colon and esophageal cancers.

At MNGI, our care is patient-centered and value-driven.
2006 Endoscopy Center Complications
In 2006, we performed a total of 57,163 procedures at our MNGI endoscopy centers. Of those, 38,015 were colonoscopies; 17,150 were upper endoscopies (EGD); and 1,998 were a variety of other specialized procedures.

We recorded 82 endoscopy complications for a total complication rate of only 0.14%. Thirty-five of these patients required treatment in other health care facilities, and 13 of these were transferred directly to area hospitals for further management. There were no deaths.

2006 MNGI Endoscopy Center Complications
Total Procedures: 57,163

<table>
<thead>
<tr>
<th>COMPLICATIONS</th>
<th>NUMBER</th>
<th>% OF TOTAL PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total complications</td>
<td>82</td>
<td>0.15%</td>
</tr>
<tr>
<td>Perforation, colon</td>
<td>16</td>
<td>0.05%</td>
</tr>
<tr>
<td>Requiring surgery</td>
<td>10</td>
<td>0.03%</td>
</tr>
<tr>
<td>Perforation, esophagus</td>
<td>2</td>
<td>0.01%</td>
</tr>
<tr>
<td>Requiring surgery</td>
<td>1</td>
<td>0.006%</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>45</td>
<td>0.08%</td>
</tr>
<tr>
<td>Requiring transfusion</td>
<td>12</td>
<td>0.02%</td>
</tr>
<tr>
<td>Missed colon cancers</td>
<td>4</td>
<td>0.01%</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>0.04%</td>
</tr>
</tbody>
</table>
Outpatient Clinics

Minnesota Gastroenterology has five outpatient clinics strategically located across the Twin Cities metropolitan area for the convenience of our patients. We had a total of 55,399 patient visits to our offices in 2006.

### 2006 Adult Outpatient Clinic Visits

<table>
<thead>
<tr>
<th></th>
<th>Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office consultation and new patient visits</td>
<td>12,423</td>
</tr>
<tr>
<td>Office visits of established patients</td>
<td>23,931</td>
</tr>
<tr>
<td>Other (e.g., lab visits)</td>
<td>19,045</td>
</tr>
</tbody>
</table>

### 2006 Most Common Adult Clinic Diagnoses

A patient may receive more than one diagnosis.

- Esophageal disorders (e.g., heartburn, Barrett’s, swallowing disorders) 5,513
- Diarrhea and constipation 5,185
- Liver disease 4,838
- Abdominal pain 4,824
- Inflammatory bowel disease (Crohn’s and ulcerative colitis) 4,804
- Biliary or pancreatic disorders 2,587

In addition to our regular outpatient clinics, MNGI also offers specialty clinics for patients with inflammatory bowel disease (IBD) and liver disease (hepatology). These specialty clinics are designed to provide coordinated, focused care to people with chronic GI diseases; team conferencing among physicians and other providers; and efficient referral to clinical research studies and emerging therapies.

The Hepatology Clinic is located at our Plymouth office; the IBD Specialty Clinics, in Plymouth and Maplewood.
Pediatric Care
We provide inpatient and outpatient gastroenterology services to children of all ages, including newborns and infants. All MNGI physicians who treat children are Board-certified in pediatric gastroenterology, making them uniquely qualified to meet the special GI needs of pediatric patients and their families.

Our **pediatric gastroenterologists** are experts in managing children’s GI disorders, such as Crohn’s disease and ulcerative colitis. Almost 250 of our pediatric IBD patients currently receive and thrive on immunomodulator therapy.

Last year, MNGI physicians diagnosed and treated 113 children with celiac sprue disease, a small bowel inflammatory disorder associated with malabsorption and growth failure. Over the past three years, we have treated a total of 398 children with celiac sprue.

### 2006 Pediatric Patient Visits
<table>
<thead>
<tr>
<th>Service</th>
<th>Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office consultation and new patient visits</td>
<td>3,061</td>
</tr>
<tr>
<td>Office visits of established patients</td>
<td>2,743</td>
</tr>
<tr>
<td>Hospital consultations</td>
<td>843</td>
</tr>
<tr>
<td>Endoscopy</td>
<td>1,812</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>462</td>
</tr>
<tr>
<td>Feeding tube placement or conversion</td>
<td>445</td>
</tr>
</tbody>
</table>
Our pediatric outpatient clinic in St. Paul is specially designed for young children and adolescents.

**2006 Most Common Pediatric Clinic Diagnoses**

*A patient may receive more than one diagnosis.*

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain</td>
<td>1,245</td>
</tr>
<tr>
<td>Esophageal disorders</td>
<td>1,107</td>
</tr>
<tr>
<td>Constipation</td>
<td>926</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>603</td>
</tr>
<tr>
<td>Feeding disorders/failure to thrive</td>
<td>567</td>
</tr>
<tr>
<td>Nausea/vomiting</td>
<td>471</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
<td>425</td>
</tr>
<tr>
<td>Stomach/small bowel disorders</td>
<td>309</td>
</tr>
<tr>
<td>Indication of blood loss</td>
<td>292</td>
</tr>
<tr>
<td>Abnormal findings/abnormal labs</td>
<td>130</td>
</tr>
<tr>
<td>Congenital abnormalities</td>
<td>75</td>
</tr>
</tbody>
</table>
Our Commitment to Quality

Minnesota Gastroenterology fosters a culture which emphasizes quality in every aspect of our work. We are committed to measuring outcomes in all areas to continually improve our performance.

Practice Improvement Initiatives
All MNGI providers pledge to practice evidence-based medicine. We incorporate national guidelines and best practices into our patient management decisions, making them a part of our electronic medical record and intranet for quick reference. For example, we have implemented formal protocols for treatment of liver diseases, including Hepatitis C, chronic autoimmune hepatitis and hemochromatosis, hereditary colon cancer and colon cancer surveillance.

Organized task forces in MNGI specialty areas provide ongoing provider education, forums for case discussion and the introduction of new technologies to the practice. Task forces currently in place include esophageal, biliary-pancreatic, small bowel capsule endoscopy, colon cancer and colonoscopy, hepatology and inflammatory bowel disease. All MNGI task forces report to the Clinical Practice Committee and to the Chief Medical Director.

Physician Peer Review
Minnesota Gastroenterology has a formal process in place to review patient complaints, adverse events, resolve issues and provide timely feedback to our physicians. We believe that formal peer review is a learning opportunity that helps us achieve our mission of providing premier patient care.

The Cornerstone of Efficient Care: EMR
We have successfully integrated all aspects of patient care into a single electronic medical record (EMR). Our EMR is highly secure, promotes communication among all of our personnel, allows us to directly fax prescriptions and can be fully accessed by our providers from any location.

A key feature of our EMR is that we are able to design specific components to enter and extract outcomes data. As of 2007, our EMR includes the results of all MNGI office visits with lab data; our own unique, outcomes-oriented endoscopy reports; pathology reports from our endoscopy centers; and scanned records from outside facilities. Any new input, such as lab results or a call from a patient, is dispatched instantly to a provider for review and response.

Efficient reporting of results leads to better medical care. Our EMR design allows us to set goals that are revolutionary in patient care, yet realistic and attainable. Since January 2007, we have been able to track physician response time for reporting results and diagnoses to patients and referring physicians.
Timeliness of Sign-Off: First Quarter 2007*

<table>
<thead>
<tr>
<th>INFORMATION</th>
<th>RESPONSE GOAL</th>
<th>RESPONSE TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathology reports</td>
<td>4 business days</td>
<td>1.6 days</td>
</tr>
<tr>
<td>Radiology reports</td>
<td>4 business days</td>
<td>2.4 days</td>
</tr>
<tr>
<td>Lab results</td>
<td>4 business days</td>
<td>4.4 days</td>
</tr>
</tbody>
</table>

*Response time for provider to acknowledge results, send letters to the patient and referring MD, and initiate next steps.

2006 Patient Satisfaction Survey Results

As part of our ongoing commitment to quality and service, our patients complete a patient care experience survey. This survey, originally developed by MNGI to assess patient satisfaction, is now used nationally by the American Gastroenterological Association Institute.

The survey rates the following factors:

- Wait times
- Physician and staff courtesy, respect and sensitivity
- Physician thoroughness, carefulness and skill
- Time spent with the physician
- Quality of educational materials
- Understanding next steps

Patients can participate by completing a paper survey or by accessing the survey online. In 2006, 32,935 surveys were distributed to MNGI clinic and endoscopy patients, with a response rate of 20%, or 6,647 completed surveys. Ratings of “good or excellent” ranged from 94% to 98% on all measures.

2006 Patient Survey Highlights

<table>
<thead>
<tr>
<th>I would recommend MNGI to family or friends</th>
<th>98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe the service was valuable to improve my health</td>
<td>94%</td>
</tr>
<tr>
<td>I would return to see my MNGI physician</td>
<td>98%</td>
</tr>
</tbody>
</table>

Our Commitment to Quality
Colonoscopy and Colon Cancer Prevention

Colonoscopy is the most commonly performed gastrointestinal procedure. More than 14 million colonoscopies are performed in the United States each year.

The American Society of Gastrointestinal Endoscopy (ASGE) recommends endoscopy be performed by physicians who have completed formal training in endoscopy and who have completed a residency or fellowship in gastroenterology, colorectal surgery, general surgery or pediatric surgery (ASGE Policy and Procedure Manual; Feb 2002). All MNGI physicians are Board-certified or Board-eligible gastroenterologists.

During colonoscopy, a flexible video endoscope is advanced through the colon to find and remove precancerous polyps. Systematic removal of polyps can reduce the risk of developing colon cancer by 75 to 90%. Wide availability of colonoscopy has led to a decrease in the incidence of colon cancer in recent years.

Quality Measures

The effectiveness of colonoscopy to prevent colon cancer depends on the quality of the examination. There is good national consensus on important quality measures, such as quality of preparation (colon cleanliness), completeness of the exam and patient comfort. Minnesota Gastroenterology consistently meets or exceeds national benchmarks in all measures of colonoscopy quality.

Since 2003, MNGI has tracked and published quality data for the colonoscopy exams performed in our endoscopy centers. Results are regularly shared with our gastroenterologists to improve performance and patient outcomes.

Recently, much attention has been paid to polyp detection rates, which depend on the skill and thoroughness of the colonoscopist (N Engl J Med 2006;355:2533-41). In 2005, MNGI gastroenterologist John Allen, M.D. published our polyp detection rates and presented the data at meetings of the American College of Gastroenterology and at Plenary Sessions at an American Gastroenterology Association symposium.
MNGI Colonoscopy Outcomes: 2004 - 2006

Results are based on 97,855 adult colonoscopy exams (performed at MNGI endoscopy centers) and 4,133 patient survey responses.

<table>
<thead>
<tr>
<th>MEASURE</th>
<th>NATIONAL BENCHMARK</th>
<th>MNGI AVERAGE PER PHYSICIAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of colonoscopies by MD/year</td>
<td>&gt;200</td>
<td>685 801 806</td>
</tr>
<tr>
<td>Exam complete to end of colon*</td>
<td>90% - all colonoscopies</td>
<td>97% 97% 98%</td>
</tr>
<tr>
<td>Colon preparation rated excellent or very good*</td>
<td>Unknown</td>
<td>N/A 93% 92%</td>
</tr>
<tr>
<td>Patient comfort rated excellent or very good</td>
<td>Unknown</td>
<td>N/A 90% 92%</td>
</tr>
<tr>
<td>% times pathology sent</td>
<td>N/A</td>
<td>39% 41% 35%</td>
</tr>
<tr>
<td>Pre-cancerous polyp find rate**</td>
<td></td>
<td>25% 28% 32% 26%</td>
</tr>
<tr>
<td>Males &gt;age 50</td>
<td>15%</td>
<td>18% 21% 17%</td>
</tr>
<tr>
<td>Females &gt;age 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next exam scheduled per national guidelines</td>
<td>60%</td>
<td>N/A 95% 95%</td>
</tr>
</tbody>
</table>

* When colonoscopies are not completed to the end of the colon, or colon preparation is poor, patients must be sent for additional procedures, such as X-rays. This adds to patient expense, discomfort and missed work time.

**The percent of procedures in which pre-cancerous polyps were found and removed

Minnesota Gastroenterology has collected data on adverse patient colonoscopy outcomes since 1993. All significant complications are reviewed by our Peer Review committee, with feedback provided to the physician who cared for the patient.

2006 MNGI Colonoscopy Complication Rates

Results are based on 34,648 exams performed at MNGI endoscopy centers.

<table>
<thead>
<tr>
<th>COMPLICATION</th>
<th>MILD</th>
<th>MODERATE/SEVERE</th>
<th>MNGI</th>
<th>NATIONAL %*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perforation</td>
<td>2</td>
<td>13</td>
<td>0.04%</td>
<td>0.1-0.2%</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>27</td>
<td>12</td>
<td>0.11%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Infection</td>
<td>1</td>
<td>0</td>
<td>0.003%</td>
<td>&lt;1 per 1.8 million</td>
</tr>
<tr>
<td>Death</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>&lt;1 per 20,000</td>
</tr>
</tbody>
</table>

Colon Cancer Prevention in Our Community

Our success in reducing colon cancer incidence rates in our community lies in our ability to reach more at-risk patients for colonoscopy exams. Many of our patients come from primary care providers, so we have implemented an electronic referral system to create a more efficient process for referring clinics. We have a detailed phone triage system to identify those patients who may need special pre-procedure evaluation or management.

Because prospective patients may be embarrassed about the procedure, we promote the diversity of MNGI physicians who are available to perform colonoscopy exams, especially the availability of female gastroenterologists. In addition, we regularly reach out with community awareness events and public education seminars, maintaining a particularly high profile during Colon Cancer Prevention Month every March.

Nine MNGI gastroenterologists are women. Pictured here (left to right) are Drs. Michelle Kennedy, Caryn Fine, Karin Rettig, Sandra Denman, Cynthia Sherman and Dorothy Whitmer.
Esophageal Disorders

Gastroesophageal reflux disease (GERD) is a common disorder with a wide range of symptoms and potential complications, which include bleeding, dysphagia and Barrett’s esophagus, a pre-malignant condition. Minnesota Gastroenterology cared for 8,443 GERD patients in 2006.

With GERD, acid or bile refluxes from the stomach into the esophagus. This can be caused by motility disorders of the esophagus or stomach, anatomical problems (e.g., hiatus hernia) and functional or mechanical obstruction of the GI tract.

Based on national guidelines, MNGI has developed an evaluation and treatment plan for patients with routine and complicated GERD. At the time of initial office evaluation or initial upper endoscopy (EGD), we stratify patients according to symptoms, severity and complications. While some patients with heartburn respond to medications that block acid secretion, others may experience chest pain, regurgitation, asthma or cough that is resistant to medical treatment.

For these resistant patients, MNGI offers specialized testing and treatment that is not widely available in the Twin Cities, such as the BRAVO capsule. The BRAVO capsule provides a comfortable way to measure patient acid reflux over a 48-hour period without the use of external catheters. Esophageal manometry is another valuable tool used to diagnose specific motility disorders, such as achalasia, scleroderma or diffuse esophageal spasm.

In early 2008, MNGI will open a specialty outpatient clinic at our new Bloomington office for patients with esophageal diseases, including those with GERD. New investigational lines of treatment for GERD are being explored and will be available to eligible patients through the specialty clinic.
Barrett’s esophagus is an abnormal, precancerous lining of the lower esophagus caused by repeated acid exposure from reflux of stomach contents and is considered a complication of GERD. Barrett’s esophagus is thought to be the precursor to most esophageal cancers, which are on the increase in the United States. In 2006, MNGI cared for 1,221 patients with Barrett’s esophagus.

Minnesota Gastroenterology follows national guidelines, which recommend that all GERD patients over 40 years of age with persistent symptoms and all GERD patients with symptoms for greater than one year have an upper endoscopy (EGD) exam so that suspicious areas can be biopsied for Barrett’s esophagus.

If biopsies are positive for Barrett’s esophagus, patients are treated with rigorous acid blockade and undergo endoscopic surveillance for low-grade and high-grade dysplasia and cancer. We use an extensive and accurate recall system to ensure that those at risk receive timely and appropriate follow-up testing and treatment.

New Treatment for Barrett’s Esophagus

The standard of care for low-grade dysplasia in Barrett’s esophagus is intensive monitoring. For high-grade dysplasia, surgical resection (removal) of the esophagus has been recommended. Under the leadership of Robert Ganz, M.D., a new, non-surgical, endoscopic therapy is now available for MNGI patients with Barrett’s esophagus.

This non-surgical procedure, called HALO by BARRX Medical, uses radio frequency energy to remove abnormal esophageal cells. A small catheter containing a circumferential electrode array is advanced into the esophagus and a short burst of energy (less than three seconds) is delivered to treat the abnormal tissue to a depth of less than one millimeter. During the two-month healing process, proton pump therapy is used to control acid reflux. To date, MNGI has treated more than 100 patients with HALO, thirty of whom had high-grade dysplasia.

In a recent clinical study conducted six months after HALO treatment, 98% of patients no longer had Barrett’s esophagus. In the remaining cases, more than 90% of abnormal Barrett’s tissue had been eliminated (Digestive Disease Week International Conference, May 20, 2007).
Dysphagia is characterized by uncomfortable pressure in the chest and the feeling that something is “sticking.” During 2006, MNGI cared for 3,579 patients with dysphagia; in the last three years we have seen a total of 14,743 patients.

Dysphagia is considered an alarm symptom, a possible indication of serious disease. Almost all patients with dysphagia should have an upper endoscopy (EGD) for evaluation and treatment according to guidelines published by the American Gastroenterological Association (www.gastro.org).

The most common cause of dysphagia is a stricture due to injury from acid reflux. These patients respond well to dilation using calibrated balloons or dilators. For patients with esophageal tumors, we offer diagnosis by endoscopy and biopsy; local staging using endoscopic ultrasound (EUS); ablation of early cancers with HALO; tumor debulking with LASER; and stent placement for palliation.

Patients may develop sudden, complete inability to swallow, forcing them to spit out their saliva and prompting an emergency room visit. In these cases, MNGI gastroenterologists provide urgent, on-call endoscopy, foreign body removal or dilation as needed.

Biliary and Pancreatic Disorders
Minnesota Gastroenterology is a leader in treating pancreatic and biliary disorders. Our biliary subspecialists treat a full range of liver and bile duct diseases, including gallstones, bile duct cancers, primary sclerosing cholangitis, sphincter of Oddi dysfunction and surgical complications. We also treat pancreatic diseases, such as acute and chronic pancreatitis, pancreatic cysts and pancreatic cancers.

Endoscopic retrograde cholangiopancreatography (ERCP)
is a highly specialized procedure in which X-ray contrast dye is injected retrograde, or upstream, into the bile or pancreatic ducts. This procedure allows the physician to visualize the drainage system of the liver and pancreas and to carry out treatments, such as removing impacted gallstones or placing stents to keep the ducts open. Because of the need for radiology services during this exam, all ERCP procedures are done in a hospital setting.

Nationally published complication rates for ERCP range from 4 to 15%. Patient complications can include pancreatitis, infection, bleeding and perforation of the duodenum. However, when performed by physicians with extensive experience, ERCP is successful in over 95% of cases.
ERCP Outcomes

Under the leadership of Joshua Colton, M.D., we completed a prospective evaluation of all ERCP procedures performed by our gastroenterologists from December 1, 2005 through July 31, 2006. The objectives of this initiative were to compare our patient outcomes to those from the available published data and to measure the effectiveness of our procedural skills.

Over the course of eight months, 805 ERCPs were performed at eight area hospitals. We measured patient satisfaction, technical success of the procedure and complication rates. Complications were identified by post-procedure follow-up phone calls and physician chart review.

Our technical success rate was 95.3%, which matched nationally published rates of 95%. We encountered only 40 complications (38 patients) for a complication rate of 5.0%. Patient satisfaction rates were excellent, with 95% of our patients stating that they would return to their MNGI biliary physician.

The results of this study support our conviction that the key to ERCP success is to concentrate the procedure in the hands of the most qualified physicians: at MNGI only 30% of our gastroenterologists perform ERCP.

**2006 MNGI ERCP Outcomes**

**Total Cases: 805**

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>MNGI</th>
<th>NATIONAL DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannulation Success: Bile Duct</td>
<td>95.3%</td>
<td>95%</td>
</tr>
<tr>
<td>Complications: Total</td>
<td>5.0%</td>
<td>4 to 15%</td>
</tr>
<tr>
<td>Pancreatitis</td>
<td>3.97%</td>
<td>4.1 to 5.2%</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>0.74%</td>
<td>1 to 5%</td>
</tr>
<tr>
<td>Perforation</td>
<td>0.12%</td>
<td>1%</td>
</tr>
<tr>
<td>Infection</td>
<td>0.74%</td>
<td>2%</td>
</tr>
<tr>
<td>Patient Satisfaction Survey</td>
<td>95%</td>
<td>N/A</td>
</tr>
<tr>
<td>Patient visit rated excellent or very good*</td>
<td>95%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* Results are based on 484 completed patient surveys (60% response rate).
Endoscopic ultrasound (EUS) is one of the most important breakthroughs in digestive diseases in recent years. During this procedure, an ultrasound probe on the tip of an endoscope can be placed in close proximity to a tumor or cyst in the wall of the gut or in an adjacent organ, such as the pancreas.

Through the projection of high-frequency sound waves, superb, high-resolution images are obtained, allowing for more accurate diagnosis and staging of esophageal, gastric, pancreatic and rectal cancers. Endoscopic ultrasound also permits safer diagnostic needle sampling of benign and malignant tumors.

Joshua Colton, M.D. authored Minnesota Gastroenterology’s 2006 ERCP outcomes study.
Endoscopic ultrasound should be considered for all patients with pancreatic tumors or cysts who are being considered for surgery and who need tissue diagnosis. In addition, EUS is useful in the diagnosis of complicated gallbladder disease and for detailed imaging of lesions in the walls of the upper gastrointestinal tract.

Minnesota Gastroenterology currently has two gastroenterologists with special interest in pancreatic disease as well as specific training and expertise in endoscopic ultrasound (EUS). Timothy Potter, M.D. performs EUS at United Hospital in St. Paul; Federico Rossi, M.D. performs EUS at the Virginia Piper Cancer Institute at Abbott Northwestern Hospital in Minneapolis.

Dr. Potter and Dr. Rossi each complete 30 to 40 EUS procedures per month. About 50% of these procedures involve fine needle aspiration (FNA) for fluid or tissue diagnosis; a definitive diagnosis is obtained in over 85% of FNA cases.
Inflammatory Bowel Disease
Minnesota Gastroenterology is an acknowledged leader in the diagnosis, treatment and long-term management of patients with inflammatory bowel disease (IBD), a group of disorders that includes ulcerative colitis and Crohn’s disease. In 2006, MNGI had 13,590 combined patient visits for either ulcerative colitis or Crohn’s disease; 1,215 (8.9%) were children seen in our pediatric clinic.

Traditional treatments for IBD have been steroids and surgery, both of which are effective short-term, but are unsuccessful in maintaining remission. Significant side effects are also associated with these treatments. At MNGI, we specialize in providing effective, leading edge alternatives for our IBD patients.

Minnesota Gastroenterology maintains one of the largest regional registries of IBD patients who are receiving immunomodulator therapy (mercaptopurine and azathioprine). These medications induce remission and maintain good health, without steroids and with minimal side effects. In 2006, our registry included 1,634 patients, 248 (15.2%) of which were children treated by our pediatric gastroenterologists.

For more advanced treatment, we maintain three infusion centers for the administration of infliximab (Remicade®), a relatively new biological anti-inflammatory treatment used to induce and maintain IBD remission.
Crohn’s Disease: Long-Term Follow-Up Study
Robert McCabe, M.D., David Weinberg, M.D. and Stephen Rudolph, M.D. have recently completed a follow-up study of almost 200 Crohn’s disease patients to determine the long-term benefits of treatment with infliximab, an intravenous biological agent.

After six years of treatment, more than 60% of the initial responders and more than 50% of all patients were still responding well to Remicade®. The use of immunomodulators enhanced response maintenance, whereas smoking decreased it. Detailed results will be released on our web site (www.mngastro.com) following journal publication and in our next Quality & Outcomes report.

2007 IBD Outcomes Initiative
In 2007, we will be launching an initiative to measure IBD clinical outcomes. At every office visit, patient responses to specific questions will be recorded in our EMR and used to generate a numerical index of their IBD status. We will then use the information to follow patient progress on and off treatment. We expect to report preliminary IBD clinical outcomes data in our next Quality & Outcomes report.
Liver Disease
Minnesota Gastroenterology has one of the largest hepatology practices in the Upper Midwest, treating patients with a wide variety of liver problems.

2006 Liver Disease Patients

<table>
<thead>
<tr>
<th>Condition</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis C</td>
<td>1,435</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>396</td>
</tr>
<tr>
<td>Cirrhosis, non-viral</td>
<td>803</td>
</tr>
<tr>
<td>Fatty liver and steatohepatitis</td>
<td>306</td>
</tr>
<tr>
<td>Primary biliary cirrhosis</td>
<td>157</td>
</tr>
<tr>
<td>Primary sclerosing cholangitis</td>
<td>187</td>
</tr>
<tr>
<td>Hemochromatosis</td>
<td>62</td>
</tr>
<tr>
<td>Primary liver cancer</td>
<td>31</td>
</tr>
</tbody>
</table>

Viral Hepatitis
Under the leadership of Coleman Smith, M.D. and Amy Mulvahill, M.D., we are currently involved in registration trials for new medications to treat primary biliary cirrhosis and chronic Hepatitis B and C. We recently participated in a large study to determine the effectiveness of pegylated interferon, a long-acting antiviral medication for Hepatitis C (*New Engl J Med* 2002;347:975-82).

Chronic Hepatitis C infection affects an estimated 3 to 4 million people in the United States and is the leading cause of liver transplantation in this country. Sophisticated treatment regimens to eradicate the virus are the only effective means to avoid long-term complications, such as cirrhosis and liver cancer (i.e., hepatocellular carcinoma).
Hepatitis C Outcomes
Since 1999, MNGI has maintained a registry of patients who have received treatment for Hepatitis C in order to assess outcomes. To date, our registry consists of almost 1,300 patients stratified by treatment regimen.

Using the best regimens currently available, national standards for virus eradication (sustained viral response, or SVR) are 50% or greater. However, these results are usually achieved in major research institutions with pre-determined patient selection criteria. Our goal is to continuously improve patient SVR rates in a clinical practice setting by increasing the percentage of patients who complete their therapy and who follow through with post-treatment visits to ensure virus eradication.

MNGI Hepatitis C Patient Outcomes by Treatment Type
Total Patients: 1,289

<table>
<thead>
<tr>
<th>Sustained Viral Response (SVR, or “Cure”)</th>
<th>455 (35.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pegylated interferon plus ribavirin</td>
<td>296 (22.9%)</td>
</tr>
<tr>
<td>Non-pegylated interferon plus ribavirin</td>
<td>156 (12.1%)</td>
</tr>
<tr>
<td>Pegylated interferon alone</td>
<td>2 (0.15%)</td>
</tr>
<tr>
<td>Non-pegylated interferon alone</td>
<td>1 (0.08%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>End of Treatment Response (ETR): Failed Return for SVR*</th>
<th>60 (4.6%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pegylated interferon plus ribavirin</td>
<td>56 (4.3%)</td>
</tr>
<tr>
<td>Non-pegylated interferon plus ribavirin</td>
<td>4 (0.3%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relapse After Treatment Ended</th>
<th>138 (10.7%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pegylated interferon plus ribavirin</td>
<td>85 (6.6%)</td>
</tr>
<tr>
<td>Non-pegylated interferon plus ribavirin</td>
<td>53 (4.1%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment Failure</th>
<th>636 (49.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonresponder</td>
<td>339 (26.2%)</td>
</tr>
<tr>
<td>Intolerant</td>
<td>159 (12.3%)</td>
</tr>
<tr>
<td>Failed follow-up, or terminated</td>
<td>138 (10.7%)</td>
</tr>
</tbody>
</table>

*ETR patients are potential SVR, but did not return for six-month follow-up testing to determine virus eradication.
Liver Failure and Liver Cancer
Chronic liver disease that continues to progress will inevitably lead to cirrhosis and liver failure, also known as end-stage liver disease (ESLD). Patients with ESLD often need to be medically managed through many complications, such as bleeding esophageal varices, ascites, peritonitis and hepatic encephalopathy. The only effective treatment is liver transplantation.

Our specialty Hepatology Clinic works closely with the University of Minnesota Liver Transplant Program to evaluate, manage and refer these challenging patients. During 2006, the University of Minnesota performed 59 adult liver transplants; of these patients, 26 were referred by MNGI physicians. (University of Minnesota Medical Center – Fairview Transplant Center data, 2006).

Cirrhosis of the liver — in addition to progressing to liver failure — is a risk factor for liver cancer, or primary hepatocellular carcinoma. In 2006, MNGI cared for 31 patients with hepatocellular carcinoma.

Our approach to these patients has been multidisciplinary. Some patients, based on the size and number of cancers in the liver, can be referred for surgical resection for potential cure. Others are candidates for ablation therapy, which is performed at the Virginia Piper Cancer Institute/Radiology Department at Abbott Northwestern Hospital in Minneapolis and at United Hospital in St. Paul.
Gastric Diseases
Minnesota Gastroenterology has extensive experience with gastrointestinal bleeding, ranging from obscure or occult cases to massive bleeding episodes, which require emergency endoscopy.

Most gastrointestinal bleeding originates from the esophagus, the stomach or the duodenum, all of which are within reach of upper endoscopy (EGD). Although establishing a diagnosis is helpful, MNGI has found that the real power of EGD in emergencies is therapeutic endoscopy to stop the bleeding.

The success of therapeutic endoscopy is supported by a three-year outcomes study of more than 300 MNGI patients, who were treated by our physicians for severe upper GI bleeding. Results were published in Whitmer DI, Allen JI, Kaplan AP, et al. Emergency upper gastrointestinal bleeding. Management and outcomes in specialty private practice. Minn Med 1998;8(7):21-27.

We have been early adopters of new endoscopic technology, such as metal clips, which mechanically seal off actively bleeding blood vessels, thereby avoiding thermal injury that may result from older treatment methods. Our hepatology patients benefit from band ligation of bleeding esophageal varices.

A relatively new technology, argon plasma coagulation, which is available at hospitals and at MNGI endoscopy centers, has proven essential for the treatment of vascular ectasias of the distal stomach, which are poorly amenable to metal clips and thermal probes. One or more treatments may permanently stop all bleeding.
Gastroparesis is a condition in which the muscles in the stomach wall work poorly, preventing the stomach from emptying normally. Patients with gastroparesis cannot eat regular meals and typically experience nausea, vomiting and weight loss. There is currently no cure, although dietary changes and medications may help to control symptoms.

For patients with the most severe symptoms who do not respond to other treatment options, the FDA has approved an electric gastric stimulator, or pacer device. Minnesota Gastroenterology, in conjunction with Medtronic, was the first group in Minnesota to offer this implantable stomach wall stimulator to patients.

Minnesota Gastroenterology maintains a registry of patients from a five-state area who have received gastric pacer implants. Since 2005, 51 MNGI patients have received gastric pacemakers. Approximately 60% had a primary diagnosis of diabetes; 40% had no identified (idiopathic) cause for their symptoms.

Eighty percent of gastric pacer patients have reported improvement in their symptoms. In some cases, the gastric pacer may allow patients to have feeding tubes removed and to enjoy a more normal diet.
Small Bowel Diseases

Celiac sprue is an inflammatory disease of the small bowel, which is caused by an allergy to gluten, one of the proteins in wheat.

Although severe cases result in malabsorption, characterized by diarrhea and weight loss, most cases are occult and come to medical attention because of family history, iron-deficiency anemia, elevated liver function tests, osteopenia or unusual abdominal pain. A new blood test, specific for sprue, helps screen patients, but a definitive diagnosis is made by small bowel biopsy done during upper endoscopy (EGD).

Minnesota Gastroenterology saw 425 patients with celiac sprue in 2006, for a total of 1,181 patients in the past three years. Many patients are diagnosed in childhood because of growth failure; 113 children with celiac sprue were seen by MNGI pediatric gastroenterologists in 2006.

Video Capsule Endoscopy

Historically, 15 to 20 feet of small bowel have been difficult to visualize between the reach of upper and lower bowel endoscopes. A breakthrough occurred with the introduction of video capsule endoscopy.

With this procedure, the patient swallows a vitamin-sized capsule which contains a camera, light, batteries and transmitter. As the capsule passes through the small bowel, the camera takes two video images per second and transmits the images to a receiver carried by the patient.
Minnesota Gastroenterology introduced video capsule endoscopy in the Twin Cities in February 2002. We were one of the first GI groups in the Upper Midwest to use capsule endoscopy and are currently recognized as a national leader in the use of this technology. Under the leadership of Scott Ketover, M.D. and Patrick O’Reilly, M.D., five MNGI gastroenterologists are now expert in using this technique.

Over the past three years, our doctors have performed a total of 1,477 video capsule endoscopy studies.

**Capsule Endoscopy Outcomes**

The video capsule has been impressively effective in determining the cause of obscure gastrointestinal bleeding and for diagnosing and evaluating Crohn’s disease. We maintain a database of positive findings to compare with national benchmarks.

Some capsule endoscopy studies are performed to assess the activity of Crohn’s disease so as to tailor treatment to the individual patient. The table below reflects video capsule outcomes for patients with **blood loss or iron deficiency anemia**.

**2002 - 2006 Capsule Endoscopy Studies: Indication of Blood Loss**

*Total Studies: 269*

<table>
<thead>
<tr>
<th>POSITIVE FINDINGS</th>
<th>NUMBER</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Loss Studies with Positive Findings</td>
<td>138</td>
<td>100%</td>
</tr>
<tr>
<td>Angioectasia</td>
<td>66</td>
<td>48%</td>
</tr>
<tr>
<td>Active bleed</td>
<td>35</td>
<td>25%</td>
</tr>
<tr>
<td>Ulcer</td>
<td>28</td>
<td>20%</td>
</tr>
<tr>
<td>Tumor</td>
<td>8</td>
<td>6%</td>
</tr>
<tr>
<td>Celiac sprue (new diagnosis)</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Occult bleeding, obscure bleeding or iron-deficiency anemia*
Minnesota Gastroenterology physicians are active clinical investigators, authoring nineteen papers and presenting at more than thirty national and international meetings over the past three years. Some of our physicians’ most notable recent work is highlighted below.


Presentations:


Physicians and Medical Staff

Minnesota Gastroenterology has more than 70 adult and pediatric gastroenterologists, nurse practitioners and physician assistants on staff.

Gastroenterologists
All MNGI physicians are Board-certified or Board-eligible gastroenterologists, who have successfully completed formal endoscopy training.

John I. Allen, M.D., M.B.A.
Neville Basman, M.D.
Arnold M. Brier, M.D. (retired)
Cecil H. Chally, M.D.
Z. John Chen, M.D.
Joshua B. Colton, M.D.
Lucinda J. Conroy, M.D.
Sandra L. Denman, M.D.
Paul B. Dickinson, M.D., J.D.
S. David Feldshon, M.D.
Caryn Fine, M.D.
Robert A. Ganz, M.D.
Stephen J. Gilberstadt, M.D.
Stanley C. Go, M.D.
David S. Hanson, M.D.
Denise A. Hunninghake, M.D.
Arnold P. Kaplan, M.D.
Scott Keeley, M.D.
Scott R. Ketover, M.D.
Samuel H. Leon, M.D.
James S. Levine, M.D.
Aaron Link, M.D.
Jeffrey J. Lisko, M.D.
Philip W. Lowry, M.D.
Robert D. Mackie, M.D.
Robert P. McCabe, M.D.
Amy S. Mulvahill, M.D.
James B. Nelson, M.D.
Patrick M. O’Reilly, M.D.
Neil P. Phelan, M.D.
Timothy J. Potter, M.D.
James M. Pries, M.D.
Jeffrey M. Rank, M.D.
Karin M. Rettig, M.D.
Federico T. Rossi, M.D.
Stephen Rudolph, M.D.
Irfan K. Sandozi, M.D.
Ronald M. Schwartz, M.D.
Cynthia A. Sherman, M.D.
Coleman I. Smith, M.D.
Phillip H. Stoltenberg, M.D.
Bradford G. Stone, M.D.
Joseph M. Tombers, M.D.
Paul M. Vargo, M.D.
David I. Weinberg, M.D.
Dorothy I. Whitmer, M.D.
James R. Wood, M.D.
Pediatric Gastroenterologists
All of our physicians who treat children are Board-certified in pediatric gastroenterology.

Sundeep Arora, M.D.
R. Arumugam, M.D.
David A. Ferenci, M.D.
Michelle S. Kennedy, M.D.
Richard J. Stafford, M.D.
David A. Wiechmann, M.D.

Nurse Practitioners and Physician Assistants
Our certified nurse practitioners and physician assistants all have specialized training in gastroenterology.

Heather N. Andersen, P.A.-C.
Mark D. Boldt, R.N., C.N.P.
Mikki Bjork, R.N., C.N.P.
Colleen Caspers, R.N., C.N.P.
Stephanie Elko, P.A.-C.
Michelle A. Finke, P.A.-C.
Amy C. Heilman, P.A.-C.
Melinda Lampert, P.A.-C.
Aimee M. Lawson, P.A.-C.
Amy Lindgren, R.N., C.P.N.P.
Eric Meyer, C.N.P.
Polly A. Nesset, R.N., C.N.P.
Faith M. Nyberg, P.A.-C.
Christopher Romine, P.A.-C.
Virginia A. Schuster, R.N., C.N.P.
Kristin Sellnow, P.A.-C.
Gina M. Storrs, R.N., C.N.P.
Catherine Wolfgang, P.A.-C.
In addition to its five Twin Cities’ outpatient clinics, MNGI currently owns and operates four outpatient endoscopy centers or ambulatory surgery centers (ASC). A new location in Bloomington will open in late 2007.

All Minnesota Gastroenterology, P.A. clinics and endoscopy centers can be reached at 612-871-1145.

**Coon Rapids**
9145 Springbrook Drive
Coon Rapids, MN 55433

**Eagan**
1185 Town Centre Drive
Eagan, MN 55123

**Maplewood**
*Clinic:*
1973 Sloan Place
St. Paul, MN 55117

*Endoscopy Center:*
1997 Sloan Place
St. Paul, MN 55117

**Plymouth**
15700 37th Avenue North
Plymouth, MN 55446

**St. Paul – Pediatric Clinic**
2200 University Avenue West
St. Paul, MN 55114

*New location — opening late 2007*

**Bloomington**
5705 West Old Shakopee Road
Bloomington, MN 55438
**Contact Information**

We welcome your inquiries about our practice. For patient consultation, or to reach a MNGI physician, please call us at 612-871-1145.

If you have questions or comments about the 2006-2007 Quality & Outcomes report or any of our quality initiatives, please contact Mary Igo, Chief Executive Officer, or John Allen, M.D., Chief Medical Director, Minnesota Gastroenterology, P.A.

Minnesota Gastroenterology, P.A. administrative offices are located at:

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St. Paul, Minnesota 55114  
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