



Research Network Annual Meeting Dinner and 2006 Research Forum

By Lisa Regehr, Conference Coordinator

Researchers from across Minnesota gathered at the Rush Creek Golf Club, in Maple Grove on Friday, March 24, 2006, for the Research Network Annual Meeting Dinner. **Kevin Peterson, M.D., MPH**, director of the MAFP Research Network, opened the evening by talking about projects the Research Network is working on and the results of completed studies.



Stuart Speedie, Ph.D., Patricia Fontaine, M.D. and Katie Guthrie, M.D., at the Research Network Annual Dinner.

The Network then welcomed **John Hickner, M.D., M.Sc.**, past Director of the AAFP National Research Network and a Professor of Family Medicine at the University of Chicago Pritzker School of Medicine who spoke on *Perspectives on Family Medicine Research*. The event provided an opportunity for researchers to network and share projects in progress.

The next day brought the 2006 Research Forum where researchers, at all levels, presented their work in family medicine research. 20 research projects were presented, including two by students who

Forum - Continued on page 2

Fontaine Named 2006 Researcher of the Year

Patricia Fontaine, M.D., Minneapolis, received the 2006 Researcher of the Year Award. The recipient of this award must, through the course of his/her career, have contributed in a major, outstanding manner to the development of family medicine research in Minnesota and/or nationally. Dr. Fontaine is a family physician at University Family Physicians-North Memorial Clinic and an Associate Professor with the U of M Department of Family Medicine and Community Health. She has served as chair of the MAFP Research Committee and has worked with the Research Network on many projects including implementing the National Children's Study and as the principal investigator for the electronic Primary Care Research Network's first randomized clinical trial. She also mentors students and residents who are interested in research.



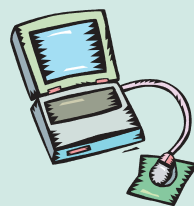
Patricia Fontaine, M.D., was given a bust of Hippocrates, the father of medicine, after being named the 2006 Researcher of the Year.

ePCRn

The electronic Primary Care Research Network (ePCRn), funded by an NIH contract to the University of Minnesota in collaboration with the FBPRN and the MAFPRN, makes it possible for practice-based research networks to participate in large randomized controlled trials. The ePCRn is designed to support primary care providers in conducting clinical research in their practices and to provide secure, cutting-edge technology along with training, support and technical assistance.

As of now, 12 practice-based research networks representing 11 state networks and one national network, have joined the ePCRn and from these more than 200 primary care providers have been enrolled. A simulated randomized controlled trial was conducted last December to test the

ePCRn. At that time, 100 primary care physicians completed the trial where they provided medical information about synthesized patients.



The ePCRn continues to be seen as a great mechanism for enhancing participation in clinical trials, identification and recruitment of eligible patients, providing quality improvement measurement tools, and promoting standards for exchanging patient data. Within the next year, actual clinical trials are expected to be run using the ePCRn along with the development of trial management and quality improvement tools.

Continued from page 1 - Forum

received the David A. Mersy Research Externship. Project topics included *Development of a Physician's Guide to Hmong Healthcare Beliefs*, *The electronic Primary Care Research Network: Mock Trial* and *What is the impact of an EMR on diabetes quality of care over a three year time period?*

Leif I. Solberg, M.D., Director for Care Improvement Research at HealthPartners Research Foundation and Associate Medical Director at HealthPartners Medical Group, opened the day speaking on *The Intersection of Quality Improvement and Research*. After lunch, John Hickner, M.D., past director of the AAFP National Research Network and a Professor of Family Medicine at the University of Chicago Pritzker School of Medicine, presented *Testing Practice Innovations: How do we know if they work?* Kevin Peterson, M.D., M.P.H. also presented on *How to Make Clinical Research Pay* and the *electronic Primary Care Research Network*.



John Hickner, M.D., was a speaker at both the Network Dinner and the Research Forum.

Pilot testing of an Enhanced Referral Strategy to Tobacco Quitlines, presented by **Donald Pine, M.D.**, was chosen as this year's Paper of Greatest Interest.

The Research Forum was co-chaired by Dr. Pine and **Diane Madlon-Kay, M.D.** **Barbara P. Yawn, M.D., M.Sc.**, Director of Research at Olmsted Medical Center, provided a scholarship that covered medical student registration for the Forum.

"Original research, great people, supports [an] important process," commented one attendee.

Thank you to our 2006 Research Forum educational grantors who made this event possible: **Allina Health System: United Family Medicine Residency Program; CentraCare Health Foundation; Fairview Health Services; HealthEast; HealthPartners Research Foundation; Mayo Clinic Rochester: Department of Family Medicine; Park Nicollet/Methodist - Family Medicine Residency Program; UCare Minnesota; United Hospital Foundation; and the U of M Department of Family Medicine and Community Health.**

2005 Paper of Greatest Interest

Are We Following the JNC 7 Guidelines?

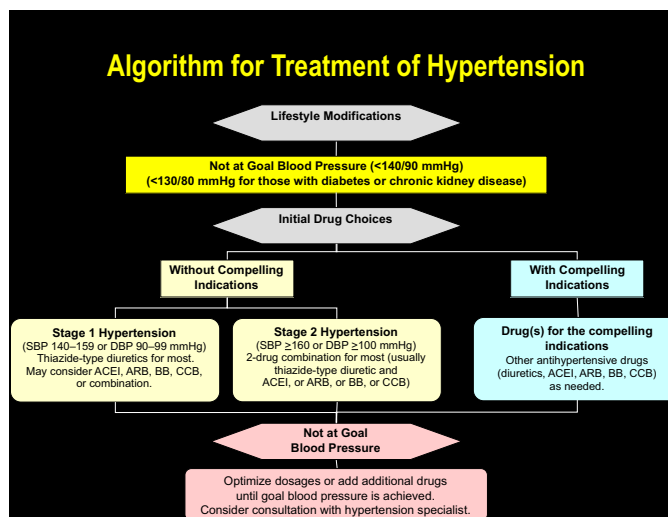
By Paul Spilseth, MD, MS

BACKGROUND:

I participated in the ALLHAT trial from 1996-2002 along with over 640 other sites around the country. This randomized, double blind trial enrolled 42,418 older, hypertensive patients and compared their outcomes using 4 antihypertensive medications. The trial was well organized, took 7 years to complete, cost millions of dollars, resulted in many publications, and formulated guidelines.

LITERATURE:

The JNC 7 Guidelines, based on ALLHAT, recommends diuretics as the drug of choice for initial therapy of high blood pressure, and diuretics should be included in multidrug regimens. Information from IMS Health, National Prescription Audit shows a decline in the national use of diuretics over the past 20 years, but since the publication of ALLHAT, diuretic use has increased.



RESEARCH QUESTION:

What is the current use of antihypertensive agents in my practice and how does that compare to national rates?

METHODS:

Using an electronic medical record, I searched 7,343 patient encounters over the last 3 years. Of these patients, I identified 979 patients with hypertension who were cared for by my partners and me. These patients were taking 3,562 medications of which 1,334 were antihypertensives. Fifty percent of hypertensive patients were taking a

diuretic, 34% were taking an ACEI, 14% were taking a CCB, 6% were taking an ARB, 28% were taking a beta blocker, and 3% were taking an alpha blocker.

CONCLUSIONS:

Data from my practice shows that more of our hypertensive patients are taking diuretics than national averages. Electronic records make this practice based research possible.

2006 Paper of Greatest Interest

Pilot Testing of an Enhanced Referral Strategy to Tobacco Quitlines

By Donald Pine, M.D., Karen Swenson, R.N., Diane Madlon-Kay, M.D., Deborah Henrikus, Ph.D.

Cessation counseling and pharmacotherapy for tobacco use in the medical office setting is effective, but not routinely carried out. Lack of time to address tobacco use is a significant barrier to delivery of these services. Tobacco quitlines are effective and available throughout the United States at no cost to the user. The strategy of combining clinician referral and quitline advice has the potential to increase cessation rates significantly if smokers follow-up after referral.

As a preliminary study, a referral intervention was carried out with one physician. During a 20-month period the physician referred users routinely to a quitline and recorded observations about the referral process and user reactions. The physician initiated the referral intervention by briefly describing the quitline and providing an informational brochure. He emphasized that quitline staff provided assistance that was empathetic and tailored to the needs of the individual. The referral intervention required significant time that could have been used to provide cessation counseling. It appeared that quitline referrals needed to be more elaborate than other referrals in the medical office setting. Patients frequently asked what they would talk about with the counselor and how counseling would be helpful. Patients often had questions about pharmacotherapy, and it appeared helpful to mention that quitline staff had expertise in this area. During the study period 41 smokers were ready to quit and were referred at least once to the quitline. These smokers were receptive to referral but only 2 smokers participated in a quitline-counseling program.

These results suggested that this referral strategy was not effective in promoting utilization of the quitline. The current study was planned to learn more about the response of smokers to quitline referrals and develop a referral strategy that was effective in the community-based practice setting.

METHODS: Eight experienced primary care clinicians (7 MDs and 1 nurse practitioner) in a community-based clinic were

recruited to refer smokers who were ready to quit to a quitline. They were encouraged to use the strategy tested in the preliminary study. The tobacco users who were referred were asked to complete a mailed survey about their response to the referral 1-month after the referral office visit. Patients who did not contact the quitline were asked about their reasons for not calling.



RESULTS: 142 tobacco users agreed to participate in the study (mean age, 46 years; female, 49%). Of this sample, 39 patients (27%) (mean age, 50 years; female, 51%) completed the survey, despite 2 mailings of the questionnaire. Readiness to quit stages at the time of completion of the survey were as follows: contemplation, 15, preparation, 16, action, 8. Three smokers participated in quitline counseling services: one in contemplation stage and 2 in preparation/action stage. The remaining smokers in contemplation stage did not call because they were not ready to quit. The remaining smokers in preparation/action stage did not call because they did not believe that they needed assistance. None of the respondents were concerned that the quitline staff might provide counseling in a non-supportive manner, or that the counseling program might be too elaborate for their needs. A record review demonstrated that clinicians carried out the referral intervention and that most referred patients were established patients in the practice. Four physicians made 127 of the referrals in this study and the survey response rate ranged from 19% to 30% among these physicians.

CONCLUSION: The low survey response rate and the small number of responders who contacted the quitline suggest that use of an enhanced referral strategy may not increase cessation services for smokers in a community-based practice. It may be more effective to focus on a counseling intervention rather than a referral intervention in the clinical setting. The importance of this conclusion suggests that it may be worthwhile to repeat this study with a shorter telephone survey to increase the response rate.

Asthma Apgar Study

By Barbara P. Yawn, M.D., M.Sc.

We have finished the pilot studies with the ASTHMA APGAR. The study was funded by AHRQ and was intended to help validate and improve a tool used by practices to assess their current asthma care and design new systems for collecting information from people with asthma about current asthma control.

The study led to a second pilot study funded by the AAFP. During the two studies, practices from the MAFPRN and then practices from around the country used the APGAR tools and helped us refine them by changing two of the domains of the APGAR, making it into a patient completed survey and helping

us develop an algorithm to guide care that is based on the APGAR score. This was truly participatory research between our central research team and the PBRN practices. We could not have succeeded without all working together. I thank all my co-investigators and collaborators from MAFPRN.

Our next step is a large grant from NIH. We have submitted and will resubmit the application in March 2006. We hope to work with many of the other MAFPRN practices in carrying out that randomized control trial of introduction of the ASTHMA APGAR into family medicine practices.

Minnesota Clinicians Motivating Health Improvement (MINIT) Study: Motivating Healthy Habits

By Tai J. Mendenhall, PhD, LMFT and Kevin A. Peterson, MD, MPH



The MINIT Study was designed to field test an interactive educational program that implemented a motivational approach to behavior change in order to enhance the utilization and success of established behavior-specific modification programs. The investigation targeted four risk behaviors that are strongly linked to a variety of negative health outcomes in the United States: 1) cigarette smoking 2) sedentary lifestyle 3) poor diet and 4) risky drinking.

Ten community-based primary care clinics in the Minnesota Academy of Family Physicians Research Network (MAFPRN) participated in this study, from which 114 patient subjects were recruited. Subjects were initially identified by a physician or site coordinator as: 1) having one or more of the four targeted risk behaviors and 2) not actively participating in any behavior change or behavioral intervention program. After introducing the investigation and attaining appropriate consent, researchers asked subjects to choose a risk behavior to focus on and then posed questions related to a variety of motivational processes and readiness-to-change. Follow-up measures were also assessed at 30-days and 180-days post-enrollment.

Subjects chose one of the following motivational intervention options: 1) a self-help guidebook; 2) the guidebook plus telephone counseling or 3) an internet-based course with telephone counseling. The motivational intervention was not intended to substitute for programs oriented to weight loss,

smoking cessation, exercise, or alcohol abuse/dependence. If, as a result of the intervention, subjects sought to address a specific unhealthy lifestyle, their physician or study coordinator connected them with existing community resources.

Equal numbers of participants selected three of the health-risk behaviors (smoking, sedentary lifestyle, poor diet). Only two subjects chose to focus on risky drinking, and they almost immediately dropped out. Participants who scored changing behavior as a high priority at baseline were more likely to achieve motivational change ($p < .05$).

We found that the research consent process was, itself, an important element in the initiation of successful readiness to change and risk specific behavior change. This brief patient-physician encounter appeared to influence the recruitment and the effectiveness of all subsequent interventions. The impact of a physician asking patients if they were interested in thinking about behavior change (not actually beginning any risk specific intervention) appears to begin the very process of changing stage of readiness. Additionally, regular and direct contact with a person (i.e., by telephone) appears to be a key element in successful behavioral change. Human interaction was the preferred method of promoting behavioral change in this study, insofar as it provided subjects with a sense of increased accountability and support.

Improving Diabetes through Primary Care Translation (IMPACT)

By Joyce Weinhandl, MBA, CDE, RD, LB IMPACT Study Program Coordinator

Improving Diabetes through Primary Care Translation (IMPACT), an NIDDK funded group-randomized controlled clinical trial, evaluated the effectiveness of the TRANSLATE intervention. This multifaceted diabetes intervention program promotes comprehensive diabetes management for 7,659 individuals with type 2 diabetes in 24 primary care clinics and is due to be completed on July 31, 2006.

Although optimal control of diabetes reduces complications, few clinical system interventions have reported effectiveness in improving outcomes in primary care. In 12 clinics, IMPACT introduced a registry-based decision support and reminder system integrating nine components promoting comprehensive chronic disease management designed for primary care called TRANSLATE. Control clinics improved diabetes care using conventional tools. The specific aims of the project were to rigorously evaluate the effectiveness of the TRANSLATE program by comparing intervention and control clinics on the following three clinical and economic outcomes: 1) the change

in A1c and systolic blood pressure values among all patients with diagnosed diabetes mellitus in participating primary care clinics over 12 months, 2) the quality of diabetes care delivery as measured by the distribution and prevalence of appropriate A1c, micro albumin, low density lipoprotein measurements, and foot exams over 12 months and 3) the economic impact on the health care delivery system as measured by the short- and long-term cost from the perspective of the health care system.

The TRANSLATE model was created to be particularly effective in producing sustainable changes in diabetes care. This evaluation will contribute to our knowledge of management strategies for other diseases as well, particularly chronic diseases which depend on extended patient support by a community primary care physician and team.



The Minnesota Academy of Family Physicians Research Network: Final Progress Report

By Tai J. Mendenhall, PhD, LMFT, Patricia Fontaine Conboy, MD, MS and Kevin A. Peterson, MD, MPH

The principal purposes of this project were to: 1) develop the infrastructure of the Minnesota Academy of Family Physicians Network (MAFPRN) and 2) to execute an exploratory investigation that focused on translating recommendations for diabetes care and colon cancer screening into primary care practices.

Standardized surveys were used to evaluate the MAFPRN's provider and patient demographics. Eight clinics engaged in a comprehensive intervention process guided by the TRANSLATE model. Four clinics participated in a diabetes-focused arm, which implemented the TRANSLATE intervention (Targeting high-risk patients; Reminder systems; Audit and feedback; Networking; Site coordinator; Local site champion; Aministrative review; Tracking; Education). A direct connection was made between MAFPRN and each clinic site with a Federal Public Key Infrastructure (PKI)-based encryption that is compliant with HIPPA regulations for security and privacy. Four clinics participated in a colon cancer arm, and received an electronic disease registry system similar to the diabetes registry. However, the registry was offered on stand-alone, on-site computer only. Clinic computers were not connected to the internet or any clinic systems' intranet, and were password protected. The registry system was capable of generating similar results as the diabetes reports including patient specific physician reminders and lists of patients overdue for recommended tests. Key informant interviews before the implementation of the intervention identified factors that impeded TRIP, and follow-up interviews (approximately 12 months later) secured providers' perceptions of the intervention's overall effectiveness and usability.

Efforts to develop the infrastructure of the MAFPRN were effective; 59 clinics and several hundred primary care physicians have participated in practice-based studies. Additionally, MAFPRN clinics now serve a patient population more diverse than the state as a whole.

The TRANSLATE methodology for clinical translation in diabetes was highly successful. In 1215 diabetes patients, microalbuminuria screening increased by 57% over 12 months ($p < .0001$); foot exams increased by 81% ($p < .0001$); and eye exams by 57% ($p < .0001$). Only one clinic established a colon cancer screening registry, entering 52 patients into a registry and documenting 12 who completed screening.

Key informant interviews with providers in both diabetes and colon cancer clinics ($n=25$) identified a variety of initial barriers to the provision of optimal care. Barriers within clinics included problematic charting and flow sheets, time pressures, and technical difficulties with computer-assisted registries and tracking systems. Provider-related barriers encompassed resistance to implementing new procedures, fatalistic viewpoints

regarding patient behavior, and staff-shortages. Patient-related barriers included issues of minimizing risk and poor self care. Fiscal barriers related to insurance not paying for preventative care and high costs of requisite medical supplies.



Follow-up interviews with providers in the diabetes clinics ($n=12$) recognized a variety of barriers that have been overcome, including an increase in return visits and follow-up, improvement in chart organization, enhanced provider awareness, and improved staff communication and teamwork. Barriers not overcome included commonplace difficulties with time constraints, some providers maintaining rigid work styles, and technical problems.

Follow-up interviews with providers in the colon cancer clinics ($n=10$) maintained that barriers related to patient resistance (e.g., being uncomfortable discussing the topic), technical problems, and time constraints continue to present considerable difficulty to the conduct of effective colon cancer screening. Follow-up interviews with providers in the clinic that was successful in implementing a registry ($n=3$), however, recognized how enhanced provider awareness and increased opportunities to provide patient education were helpful in flagging charts and patients for whom colon cancer screening was indicated.

This study demonstrates that effective clinical translation is possible and potentially generalizable. All four of the clinics that implemented the TRANSLATE intervention in diabetes experienced remarkable improvements in clinical measures generally used to determine quality of care. In addition, the study provides a close qualitative look at what provided the difference between effectiveness and ineffectiveness in very similar TRIP interventions. The clinics with the colon cancer intervention did not do as well as those in the diabetes intervention. The evaluation of key informants both before and after the interventions in both groups provides a rich source of contextual data from which to draw observations about why this happened.

Clearly important characteristics are emerging in analysis that focus on clinic level variables such as role assignment and chart organization, provider variables such as willingness to change and perceptions of futility, and patient variables such as denial and ability to pay for medications. In particular, the extent that the TRANSLATE intervention was able to promote clear roles for team members, increase awareness among the staff, and improve organization and communication without a loss of time was among the most cited reasons why the intervention was successful in the diabetes arm.

ACCORD

By Lea Seaquist, RN, BSN, CDE

Phalen Village Clinic is one of the few Family Medicine Clinics participating in the NIH sponsored ACCORD Study. ACCORD is an acronym for Action to Control Cardiovascular Risk in Diabetes. This study completed the recruitment phase in October, enrolling 10,251 patients at 70 sites in the US and Canada. Phalen Village Clinic has 174 participants enrolled. The study will be completed in 2009.

The aim of this study is to test whether intensive control of blood glucose (A1c less than 6) is more effective in reducing cardiovascular events than conventional control. The separate effects of two levels of blood pressure and two methods of lipid control are being tested as well. Sub-studies looking at the effect of blood glucose control, lipid management and blood pressure control on bone density, vision and memory are underway also.

Conducting research in the clinic setting is going very well. Patients were recruited from Phalen Clinic and targeted mailings obtained through data registries from neighboring clinics and networks were used. We did recruit from the general population although that was very labor intensive. The clinic shares 3 exam rooms on Monday, Wednesday and Friday mornings for ACCORD patients to be seen by study staff. Lab functions are shared

between clinic and study staff. Lab specimens are routinely shipped to a central lab at the University of Washington. A very extensive data set is maintained through web based reporting systems. Participant clinical information is kept separately from clinic patient medical records but study information, such as lab work and medication lists are routinely shared with the participants' primary care physician. A small office houses study medications, patient information, supplies and 2 work stations that 5 part-time staff members share. (Flexibility and cross training are a must!)

Our participants enjoy being a part of this historic study. The family medicine setting is comfortable for our seniors who may have felt intimidated by larger institutions conducting research. Several participants have changed their primary care to Phalen Clinic as a result of their exposure to the clinic setting and staff. The research staff enjoys the opportunity to treat people who are genuinely interested in being there. They take the time to teach the participants both sides of the research questions rather than simply repeating current guidelines. A prompt and service oriented staff motivate patients to remain active in the study.

Upcoming Research Events

2006 AAFP Scientific Assembly

September 27 - October 1, 2006
Washington DC

34th NAPCRG Annual Meeting

October 15 - 18, 2006 (Sunday-Wednesday pattern)
Tucson, AZ

HQ 21st Annual Primary Care Research Methods & Statistics Conference

December 1 - 3, 2006
San Antonio, Texas

Society of Teachers of Family Medicine 27th Annual Conference on Families and Health

February 28 - March 4, 2007
Austin, TX

2007 AAFP National Research Network Convocation of Practices

March 1 - 4, 2007
Virginia Beach, VA

Association of Clinical Research Professionals – Global Conference

April 20 - 24, 2007
Seattle, WA

Society of Teachers of Family Medicine 40th Annual Spring Conference

April 25 - 29, 2007
Chicago, IL

18th Wonca World Conference

July 24-27, 2007
Singapore

PRN is a publication of the MAFP Research Network, intended for health care providers with an interest in primary care research. Except for official reports and announcements, no material in *PRN* is to be construed as representing the policies or views of the MAFP.

If you wish to become a member of the Research Network or receive the *PRN*, please contact:

MAFP Research Network
600 So Hwy 169, Suite 1680
St. Louis Park, MN 55426
(952) 542-0130 or
(800) 999-8198
office@mafp.org
www.mafp.org

Editor:

Kevin Peterson, M.D., MPH

Research Coordinator:

Jacky Hanson

Managing Editor:

Lisa Regehr

Layout and Design:

Kristie Thorson

MAFPRN Steering Committee:

Kevin Peterson, M.D., Chair

Sheri Bergeron, M.D.

Patricia Fontaine, M.D.

Jacky Hanson

David Hunter, M.D.

Diane Madlon-Kay, M.D.

Tai Mendenhall, Ph.D.

Javaid Saleem, M.D.

George Smith, M.D.

Barbara Yawn, M.D.

