

From the Staff of ACPNet:

Welcome to ACPNet's second quarterly newsletter. This publication will update you on the latest research and infrastructure developments and accomplishments. We've come a long way since our first newsletter - and your dedication to primary care research has paved the way.

Inside you will find:

- ❖ A "Featured Investigator" column that will single out a network physician-investigator who has dedicated himself or herself to the network's success;
- ❖ An article review relevant to the research being conducted;
- ❖ A discussion of the practice and importance of chart abstraction;
- ❖ An update on the pilot study to the diabetes management study; and
- ❖ An update on the state of practice-based research and the challenges it faces.

As we move forward into our diabetes study, there will be even more opportunity to become involved in the life of the network. Remember, this is your network! ACPNet exists to provide the support and infrastructure to help you answer questions from your practice. We welcome any questions or comments.

Featured Investigator



Stephen E. Hippler, MD, FACP

As we begin the ACPNet Practice Based Network project on diabetes care, I have the opportunity to reflect on our medical group's 9 year journey to improve the care we give to patients with diabetes.

OSF Medical Group - Peoria is a group of 54 physician providers located in small single specialty group practices through the Peoria area. The diabetes QI project focused on the 31 adult care physicians in the disciplines of family medicine, internal medicine and med-peds. In 1995, we decided to begin a quality improvement project in diabetes. The environment was very different then - there were no consensus on clinical guidelines; physicians were still very leery of chart reviews, quality initiatives and "provider report cards." Cognizant of this, we took an educational, non-punitive approach by initially reviewing charts and then focusing on physician education. We firmly believed that when physicians were given the appropriate evidence-based information about clinical care they would make the right decisions for

their patients. The yearly chart reviews evolved over the years to incorporate changes in the guidelines and physician attitudes but remains an educational tool and feedback mechanism to the physicians.

With this program we have successfully attained - as an entire primary care group - the Provider Recognition Certificate from the ADA/NCQA in the years 2000 and 2003. Our last survey of 578 charts from 31 doctors demonstrated the following:

*You could be the next featured Investigator! We encourage you to share your practice experience with us.
Submit to pbrn@acponline.org*

This project is supported by an exploratory grant from the Agency For Healthcare Research and Quality (AHRQ: 1 R21 HS13508) to develop practice-based research networks.

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Have you participated in practice-based research or conducted clinical research in your own office?

What are your expectations from participating in ACPNet?

What issues would you like to study in your practice?

Share your experience and insights with other ACPNet members.

PBRN@acponline.org

	1996	2003
A1c within the past year	77.7%	96.0%
Mean A1c	9.7	7.26
A1c < 7%	8.8	37.0
A1c < 9.5%	70.1	93.0
FLP within 1 year	32.2	89.0
LDL < 130	19.5	64.0
U Alb/Cr ratio	25.4	56.0
Eye exam	23.5	62.0
Foot exam	28.3	81.0

Although it can be successfully argued that there are many factors that could have led to the changes, such as improvements in medications, greater public awareness, etc. many other sites have not been able to make these dramatic changes. With our addition of an educational component and chart review/feedback system we have shown that multiple providers at disparate sites can indeed demonstrate improvement in diabetes care.

Questions or comments?
Send an email to: pbrn@acponline.org
Or call us at 800.523.1546, ext. 2603

Classic Article Reviews:

Practice-Based Research Networks: The View from the Office.

Niebauer L and Nutting PA.
J Fam Pract. 1994 Apr; 38(4):409-14. [PMID: 8163967]

This review article surveyed practicing primary care clinicians who were actively involved in practice-based research, and asked them to "comment about their commitment to and involvement in practice-based research". Below are direct quotations from these clinicians in response to several topic areas:

- ❖ Why Participate in Practice-Based Research? What are the Personal and Professional Rewards?

- /// "Research gives us an opportunity to be a part of the bigger picture...It is being able to ask a question about a medical problem and arriving at a conclusion by doing a study with our peers"
- /// "[I had the] opportunity to network with other practices and look at how we handle common problems"
- /// "Participation...puts me in contact with people who have similar interests and mindsets."
- /// "Through our research we can get feedback that we can actually use in our practice."
- /// "When I try to do research projects on my own, I frequently become distracted by the overwhelming volume of work in private practice."

- ❖ How Do Your Patients and Your Practice Staff React to Participation in Research?

- /// "[My practice staff] feel they are a part of something bigger, describing and promoting what we do in our practice. Our patients are made aware of what studies we participate in through our practice newsletter. I feel my reputation with my patients is enhanced by my involvement"

- ❖ What is the Role of the Practicing Clinician in Network Research?

- /// "Practice-based research is 'learner-centered learning'. Physicians seeing patients on a daily basis are the ones asking and answering the questions that are raised through the course of that patient care."
- /// "Ideas are easy to come by. It is the commitment that is critical. I see the biggest roles in studies to be to assist with planning and collect data."

- ❖ What Has Been the Effect of Your Research on the Way You Practice?

- /// "[network] studies have reinforced and supported my practice patterns."

- ❖ Why is Practice-Based Research Important?

- /// "Practice-based research provides physicians with an opportunity to share their observations and ideas about patient management and disease processes in a laboratory that cannot be duplicated."

- ❖ What Role Do Practice-Based Research Networks Play in Bridging the Gap Between Practice and Academics?

- /// "Practice-based research lends credibility to the 'local medical doctor,' the physician working every day in his or her own personal clinical laboratory."
- /// "In many ways, participating in [the network] makes me feel like both a practicing physician and an academician."

Evidence-based Medicine: Ten Hard Facts (2004)

Paul H. Keckley, Ph.D.
Executive Director
Vanderbilt Center for Evidence-based Medicine

1. The gap between knowing "what works best, for whom and why" and the day-to-day provision of health services is wide (and expanding).

Crossing the Quality Chasm: A New Health System for the 21st Century. The Institute of Medicine, National Academy Press, Washington, DC. (www.iom.org)

2. Most physicians believe they practice evidence-based medicine (and it actually occurs about half the time).

McGlynn, Elizabeth A, Asch, Steven M., et al "The Quality of Health Care to Adults in the United States." The New England Journal of Medicine 2003;348(26):2635-2645.

Eisenberg, John M., Quality Research for Quality Healthcare: The Data Connection. Health Services Research 2000;35:12-17. (www.ahrq.gov)

3. Most patients believe they receive "evidence-based care" (but they don't understand what that means).

Consumer Demand for Clinical Quality: The Giant Awakens, VHA: Dallas, Texas, 2000. (www.vha.org)

4. Most health plans encourage clinicians to practice evidence-based medicine (but they don't reward those who actually do so).

Vanderbilt Center for Evidence-based Medicine Evidence-based Medicine and Managed Care: A Survey of Emerging Trends and Strategies White Paper, December 2003. (www.ebm.vanderbilt.edu)

5. Scientific evidence is strong and consistent (for about 40% of the most prevalent medical conditions).

Barton, Stuart, Clinical Editor, Clinical Evidence London: BMJ Publishing Group, 2003 (www.bmjpg.com)

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6. Consistent clinician adherence to evidence-based guidelines results in quality care and lower costs (though the cost-effectiveness of some evidence-based interventions is delayed).

Brown GC, Brown MM, Sharma S. Health care in the 21st century: evidence-based medicine, patient preference-based quality, and cost effectiveness. Qual Manag Health Care 2000;9(1):23-31.

7. Many consumers independently investigate treatment options when they are newly diagnosed (but for only a handful of common conditions).

Baker L, Wagner TH, Singer S, Bundorf MK. Use of the Internet and e-mail for health care information: results from a national survey. JAMA 2003;289(18):2400-6.

8. Most consumers adhere to evidence-based treatment directives (when clearly presented by their clinician in an understandable manner at a teachable moment with perceived consequences).

Plocher, David W., "Disease Management Innovations and Barriers" presentation. Accelerating Quality Improvement in Health Care: Strategies to Speed the Diffusion of Evidence-based Innovations. Sponsored by National Committee for Quality Health Care, Washington, DC. January 27, 2003.

9. Most physicians pay attention for new evidence in their specialty (but often fall behind in staying abreast).

Straus SE, Sackett DL. Using research findings in clinical practice. BMJ 1998;317(7154):339-42.

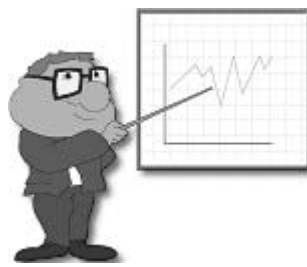
10. The practice of evidence-based medicine is premised on shared decision-making between physicians and patients (but physicians do a poor job of engaging patients in decision-making).

University of Toronto, Centre for Evidence-Based Medicine (www.cebm.utoronto.ca). Oxford-Centre for Evidence Based Medicine. (www.cebm.net/index.asp)

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on how to conduct these reviews and expound on the pitfalls of a poor review (Jt Comm J Qual Improv. 2000 Mar; 26(3):115-36).



The bottom line of the article is that, "In general, chart review is more difficult than it appears on the surface." Chart review data is generally the result of office clinicians examining a patient, taking and recording observations over time, having notes transcribed into the record, and

then abstracting that data retrospectively. At each step, there is another opportunity to misplace or misinterpret the data, or compound mistakes. The crux of this task will be to ensure reliable abstraction and monitor data quality.

In this ACPNet study, we will be collecting nationally recognized quality indicators for diabetes, including HbA1c, annual lipid profile, blood pressure, urine protein, and vaccination status. Everyone will use a standard form, or "abstraction instrument," to query values from each of 25 randomly selected patients with diabetes. Using a standard procedure and a delimited form is called explicit chart review, and dramatically reduces variation in reported data.

Abstraction can be done in several ways. For example, it is equally reliable to read the entire chart and highlight key information before entering it on a form as it is to enter data as it is encountered, skipping from item to item. However, no matter which method you choose, be careful to avoid building in assumptions and interpretations into your review. This is called implicit chart review, and it produces "unacceptably high disagreement rates" between different abstractions of the same file.

Allison reports that "on occasion, prior medical training interferes with abstraction quality by leading to over-interpretation." He found that clinicians frequently made assumptions about past patient care based on knowledge of the condition. You can avoid this by sticking to the questions on the standard form, and using the form instructions when necessary. Each item on the form will contain only one unit of information, and will be in a clearly defined time-frame, such as "in the last 12 months." Do not assume that patient "must have had" a test conducted, unless you can find the actual date and/or value of that test. If a test did not take place or an answer is unavailable in the chart, please check the either the "no" or "not-documented" box for that question. *Keep in mind that we are not grading you on your responses, and we are interested only in helping you analyze your practice and making it better, no matter how your practice is performing.*

You may choose any number of people within your practice to be your abstractor (including yourself), but remember that the role of the abstractors is critical. The abstractor will find and pull charts and lab results, comprehend handwriting and notations, and ensure data quality and reliability. Through experience from our pilot study, we expect that those of you without an electronic medical record system should leave 10 minutes to abstract one chart; those with an EMR may be able to complete a chart in less time. Allison's report showed that abstractors unfamiliar with the charts and recording 140 variables averaged 10 minutes per chart, with most charts taking 30 minutes or less. Because you or your staff will be intimately familiar with your charts and we are only asking 25 questions (containing 43 chart variables), we feel that 10-15 minutes is a very conservative estimate in a standard setting. Of course, be aware that some complex charts may take preparation time, including pre-pulling and organizing the materials. No matter where you begin, Allison notes that abstractors almost uniformly "improve in efficiency over time."

There are some pitfalls to be wary of when conducting an abstraction. First, be careful when distinguishing between *symptoms* of a condition and *diagnosis* of a condition. Because this is an exercise for you in analyzing your office system, make sure to only answer what your charts report. If you attempt to over-interpret symptoms, you may be putting words in the chart's mouth, and casting your skills and areas of need in an artificial light. Also, beware of tests, like the foot and eye exams, that may not be properly documented, or may have several providers. In this case, check the "not documented" box or call us for directions. Finally, as always, please keep your normal high level of confidentiality when abstracting this data. This data is part of your patients' protected health information, and all efforts should be taken to ensure privacy and security throughout the process.



The process of abstraction may seem tedious at first, but as you become comfortable with the process, your efficiency will improve. Keep in mind that, without measuring your data directly from your office, you'll never know how to improve your management of diabetes. Ultimately, the aim of practice-based research is to harness the power of many primary care providers to answer questions about how to eliminate the inefficiencies and disseminate benefits in each practice's system. Abstraction is the first step.

PBRN News Update

By Jolene Chou, MPH

In this article, we would like to place practice-based research networks (PBRNs) in the context of the larger enterprise of clinical research, provide brief updates on the current state of practice-based research, and identify major challenges that PBRNs face.

PBRNs as a Framework for Translational Research

As was brought into the spotlight by the 2001 Institute of Medicine report "Crossing the Quality Chasm," clinical research findings do not always make it to routine clinical practice. The recent State of Health Care Quality report, published by NCQA, estimates that more than 1,000 Americans die each week because the care they received was inconsistent with evidence-based standards. These deaths do not include those caused by medical errors. Even when research findings make it to the bedside, the lag time may be years or even decades. For example, the 2000 HEDIS data suggested that almost half of adult diabetic patients under managed-care plans did not receive the recommended annual dilated eye exam.

The most important components of this "translational block" are the lack of communication between academic researchers and community-based practitioners, and the failure of clinical research studies to address clinical questions most relevant to community-based physicians and their patients.

PBRNs have been increasingly recognized as playing a critical role in translating research into practice. Since PBRNs strive for close collaboration between clinicians and researchers, as well as for building the research capacity among network members, they provide a unique environment in which both research studies and implementation of study results take place. Mature PBRNs incorporate mechanisms to adopt priority research questions identified and raised by their members, thus ensure the relevance of research efforts.

PBRNs Today

PBRNs first appeared in the US in the mid-1970s. Since then, the number and sophistication have increased substantially, particularly over the past decade. Currently, there are over 100 PBRNs in the U.S.; the majority of existing PBRNs are local or regional, and only a handful are national in scale. Among participating clinicians, family physicians make up roughly 65%, pediatricians 25%, and general internists, OB/Gyns, nurse practitioners, and physician assistants make up the remaining 10%.

Recent initiatives to promote practice-based research have

emerged from both public and private sectors, most notably the AHRQ, NCI, and the Robert Wood Johnson Foundation. Research areas of the greatest interest include applying information technology in practices, reducing health disparity, and promoting healthy behavior. Increasing emphasis has been placed on methodological rigor, and this is evidenced by the high quality of presentations and methodology workshops in national and international conferences.

Outlooks and Challenges

The benefits of practice-based research are indisputable; however, the fact remains that participating in clinical research can add stress on the practice. Primary care doctors are increasingly absorbed into integrated health care systems, and efficiency and cost-saving have become integral part of measuring patient care quality. Competing influences that practitioners face daily from media, patients, payers, and government can diminish the appeal of implementing new clinical advance. On the other hand, the impact of the changing practice environment on care quality deserves care evaluation, and PBRNs are precisely the environment most suited for this purpose.

Shortage of funding, understandably, has been a chief rate-limiting factor to the development of PBRNs. Despite the increasing attention that primary care research generates, a great deal of energy and time are still spent on seeking funding for research endeavors, particularly for supporting and sustaining network infrastructure.

Breaking its traditional role as the leader of biomedical research, NIH began in 2002 to facilitate a series of intensive discussions among top researchers from academia, industries, government, and public, to chart an ambitious roadmap for more efficient, productive, and integrated clinical research. One of the three themes in this roadmap--by far the most challenging--is "re-engineering the clinical research enterprise." This theme addresses the issue of translating evidence into practice, and formally acknowledges PBRNs as the potential solution to bridging the translational gap.

Despite its relative youth, practice-based research has gained much attention and respect in the realm of clinical research. With NIH being the newest advocate for PBRNs, there is no better time for internal medicine to join force with other primary care specialties, and for the College to provide a venue for internists like you to transform the wisdom gained through daily patient care into generalizable knowledge.

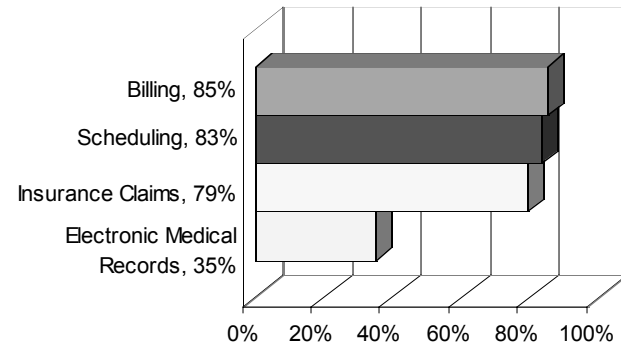
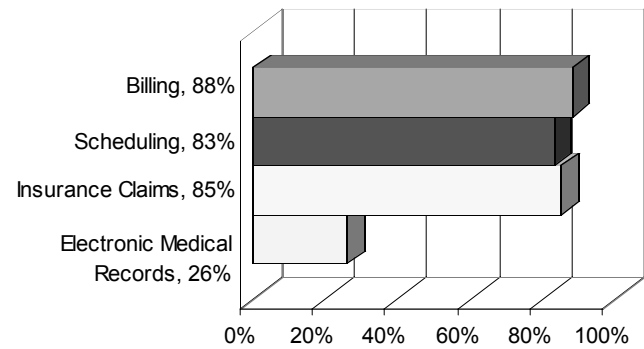
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The Average ACPNet Practice

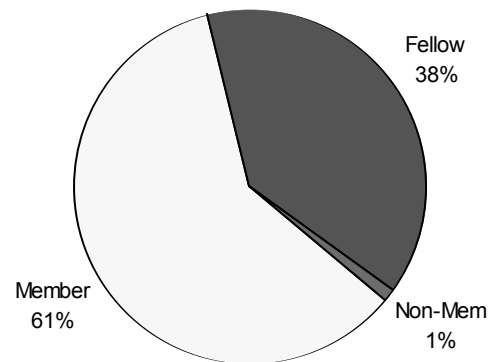
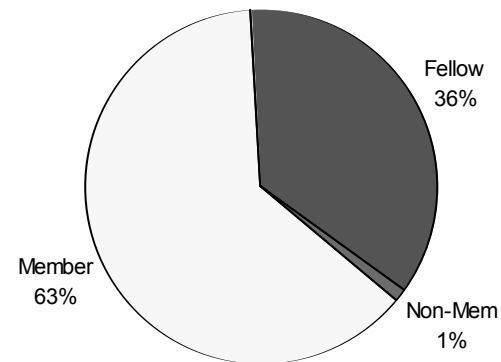
Compiled from your responses

Diabetes Study Participants (n=87)

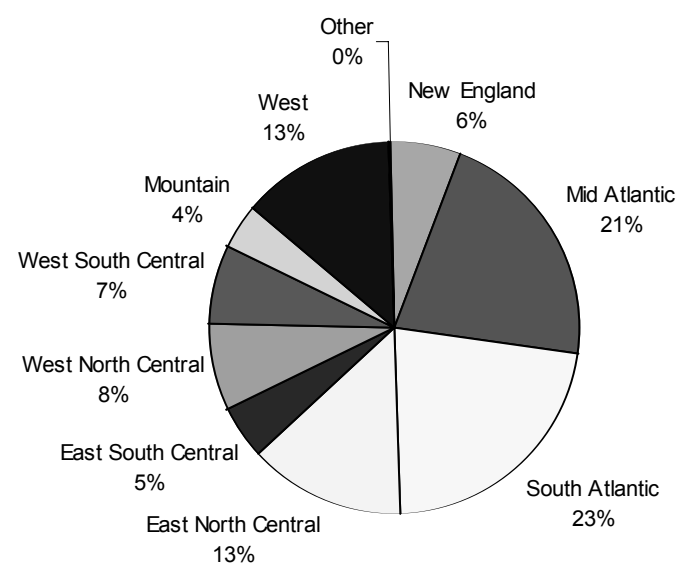
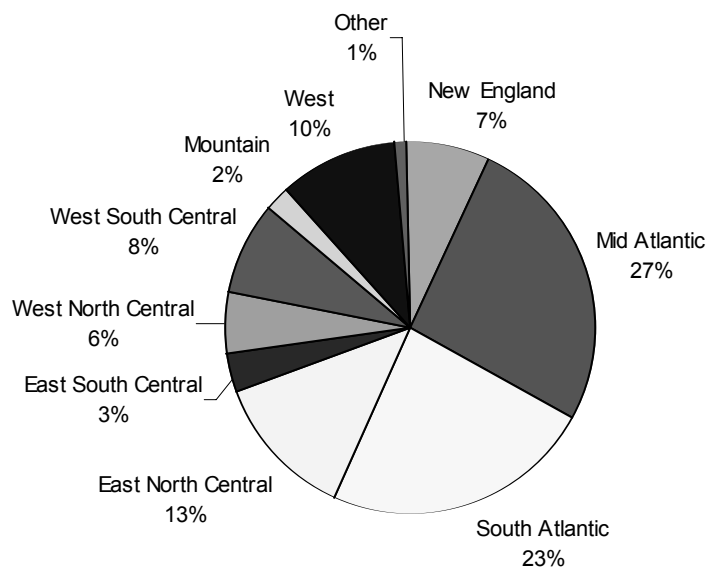
ALL ACPNet Physician Info Form (n=247)



What do you use your computer for?



Membership by ACP Status



Membership by Census Division

Pilot Study Update:

The Hanover Project History

By Jon Schmeyer, MD and Peter Martelli



Hanover Advantage is a 112-physician PHO centered on the sole hospital in Hanover, Pennsylvania, in south-central PA. This organization began in the early 1990s in response to managed care pressures on medical practice. Since then, it has evolved into a community-oriented fixture that serves to provide a forum for the local physicians, the hospital, employers, insurers and community programs to meet, discuss their needs and perceptions, and take action to remedy problems and improve local health care. Initiatives include numerous programs to educate physicians on governmental issues, like HIPAA, to develop and maintain a Work Injury Management Team to improve the quality of care and management of work-related injury, and to conduct the diabetes management project.

Hanover is a community with one hospital, at least twenty miles in any direction to the next nearest hospital. The hospital and local physicians have a spirit of autonomy, independence and entrepreneurialism. The providers in Hanover want this project to support their belief that quality, efficient medical care is delivered in their town.

The Hanover project itself centers on a quality-improvement theme, examining the potential of a toolkit and an electronic diabetes registry. The project toolkit enables clinicians, through practice analysis, to identify opportunities to improve patient management, implement practice changes based on best practices and to measure their performance. Baseline measurements of practice performance would be compared to assessments at three and six months. Results will be reported to the physicians and submitted in a peer-review journal publication.

The doctors were told that since this is a pilot project their observations, ideas, concerns, and questions are very important. One concern that became apparent to the study coordinators at ACP was that there was not yet enough support to manage the electronic support and HIPAA security issues of implementing an electronic registry nationwide. That element was cut out of the national project, in the hopes that once the network is better established it can revisit this idea.

Hanover Advantage had input in each stage of the implementation, including the instrument (flow sheet) development, background research, letter of introduction, training sessions, method to collect data (manual or electronic), physician support network, database development, and data analysis. In the letter of introduction to the participating physicians, the

project was described as balancing clinical practicability with scientific rigor because of the time constraints on the doctor and staff, and the need for unbiased and valid results.

In March 2003, a press release was sent to the local newspaper. It stated that this is the first time non-integrated physician practices in a rural setting will be measuring their clinical care to national and local benchmarks. Now, as the project continues into Phase II, community members who have heard about it are impressed and pleased that our local health care providers are striving to demonstrate their efforts to deliver top quality care in Hanover.

Many local physicians have dedicated themselves to the success of this project. To highlight just a few who played critical roles: Dr. Oscar Murillo was responsible for conceiving this entire initiative in the community and continuing to lead and encourage participation; Dr. Kurt Thomas was instrumental in getting a grant to support the project; and Dr. Thomas Rapp provided leadership in designing a diabetes flow sheet, and then refining it through critical analysis of the items and their practicality within the office setting.



Dr. Jon Schmeyer, previously Chairman of the Board of Directors of Hanover Advantage, is now the Director of Hanover Advantage; Peter Martelli is the Research Coordinator of ACPNet.

Tools and Techniques:

How & Why to Conduct a Good Chart Abstraction

Reliable abstraction is a critical feature of medical chart review process, and one that you will become familiar with as the network grows and new studies are conducted. If we could come to every office and help you, we would - however, the realities of running a truly national network with a limited amount of money keep us from doing that. So, instead, please read this article on abstraction, give it a try when we start the data collection, and let us know if we can help along the way.

Medical chart review can be considered a science and an art - 'science' because there are best practices for the procedure, and 'art' because manipulating medical charts can sometimes be a complex dance. In "The Art and Science of Chart Review," JJ Allison, MD, MS, et al. write recommendations