Jan-Feb 2011/Issue 2

CardioSurve Newsletter

The Voice of U.S. Cardiologists

ISSUE HIGHLIGHTS

New Standard for Health Care Delivery Focuses on Patients

One hundred years after William Mayo, founder of the Mayo Clinic, spoke these prolific words, the patient continues to be the main focal point in health care delivery reform. The system is being transformed into one that puts the patient first and rewards physicians and other medical professionals for their commitment to quality and evidence-based care.

"The best interest of the patient is the only interest to be considered."

– William Mayo

This edition of the *CardioSurve* Newsletter investigates the trends in quality improvement at the point of care, capturing the findings from over six months of research with 350 cardiologist panel members. Clearly quality is the new standard for health care delivery.

From Pedigree to Performance: Quality Improvement

"Knowing is not enough, we must apply. Willing is not enough, we must do." – Goethe

For more than half a century, traditional continuing medical education (CME) has been a U.S. physician requirement for the advancement of knowledge in the medical profession. Yet within the past decade, there has been a push toward new innovative educational formats which target improved patient outcomes. Translating knowledge into practice has in a sense moved from pedigree to performance.

How are cardiologists employing quality improvement at their practices?

The majority of cardiovascular professionals are actively engaged in quality improvement and, in the past year, four-in-five (81%) report that they have participated in activities focused on improving the performance of their practice. The most popular quality improvement activities include reading literature on best practices for a specific cardiovascular condition (56%), talking to decision-makers in the practice about opportunities for improvement (46%), implementing a quality improvement project in their practice (37%), and completing an assessment of quality improvement knowledge (28%).

Interestingly, while the majority of cardiologists participate in quality improvement activities, fewer cardiovascular practices as a whole engage in formalized quality improvement. About one-half of practices (47%) have conducted a project specifically undertaken for performance improvement within the past 12 months. Performance improvement projects are likely to involve discussions with physicians (74%), additional data analysis (68%), brainstorming (52%)

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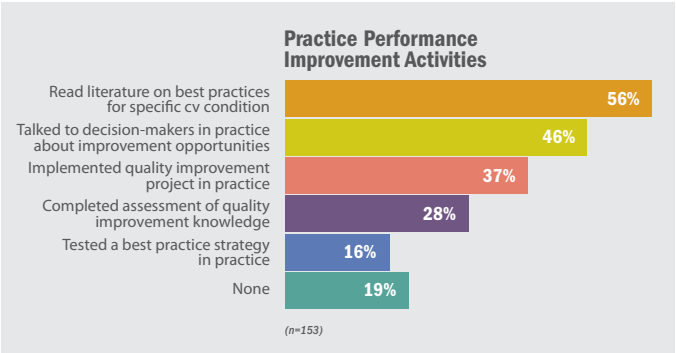


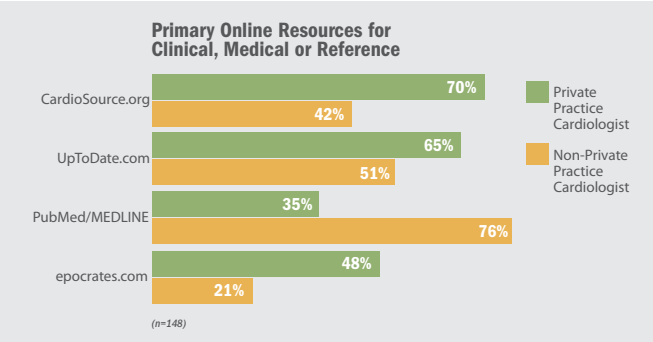
For more information or answers to your questions about CardioSurve, contact Paul Theriot at *ptheriot@acc.org*.

Point of Care Online Resources

Advancements in technology have made it possible to put an ever expanding breadth of information into the hands of cardiologists through the click of a button.

Physicians go online for different reasons. While there is a universal need for the latest clinical guidelines (77%) and browsing by topics (58%), practitioners in private practice are more apt to go online for CME credit (76%), clinical searches (67%) and drug information (44%); academic and hospital-based physicians are more focused on online textbooks/references (57%) and journal scans (57%).

Different online resources deliver different benefits to practitioners. Not surprisingly, private practitioners and non-private practitioners differ in their website usage; the private practitioner focuses on point of care patient treatment resources, while the non-private practitioner is more likely to seek academic research.



The most commonly cited websites for private practitioners are CardioSource.org (70%), followed by UpToDate.com (65%), and then by epocrates.com (48%). Non-private practice cardiologists are more likely to use PubMed/MEDLINE (76%) and UptoDate.com (51%).

Cardiologists go to *CardioSource.org* for clinical guideline information (93%), educational needs/learning (78%), and clinical trial information (70%). With UpToDate.com, cardiologists are primarily seeking information on treatment/patient condition (84%), followed by educational needs/learning (62%), and then by teaching/instruction of a colleague (51%). Epocrates.com is used for accessing information on drugs (93%); while checking references (82%), looking for clinical trial information (55%), and information on treatment/patient condition (52%) are the benefits of going to PubMed/MEDLINE.

In terms of website usage, most cardiologists visit CardioSource.org, UpToDate.com, and PubMed/MEDLINE with the same frequency - on a weekly to monthly basis. Epocrates.com, has a higher rate of usage with more daily and weekly visits, due to the need for referencing drug information at the point of care and the ease of use with its mobile interface. Clearly physicians are taking advantage of online resources at the point of care in the effort to provide patients with care based on the evidence and best available scientific knowledge. ■

Pedigree to Performance: *continued from previous page*

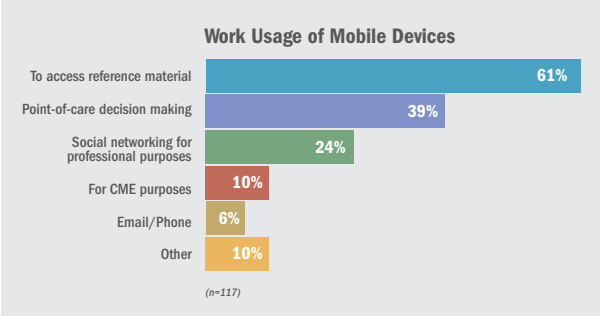
and root cause analysis (51%). Given the significant role of data analysis and communication, leveraging the wealth of information from outcome reports, electronic health records, national databases, and distributing this information as a tool for performance improvement could prove significant for quality improvement.

Implementing quality activities at the practice level is not without difficulty. The top three challenges that practices face when trying to improve their performance include not having enough financial resources (51%), time (46%) and staff resources (32%).

In the end, today's cardiology provider is embracing performance and taking steps toward practice improvement despite the fiscal and staffing issues that can hinder success. The focus is on finding solutions that can streamline processes, reduce costs, establish best practices and put the best patient care as their highest objective. ■

Mobile Device Usage

Approximately 4-out-of-5 cardiologists (79%) use a mobile device in their work. The Apple iPhone/iPod Touch devices are the most popular at 39 percent, followed by Blackberry at 24 percent and the Apple iPad (12%). Clearly, Apple has become a dominant player in the marketplace from a usage standpoint and is supported by over 1,500 apps for health care professionals.



Cardiologists primarily use their mobile devices to access reference material (61%) followed by point of care decision-making at 39 percent. So, the devices are having a powerful impact on real-time clinical decision-making.

One-third (32%) of cardiologists use their mobile devices at least once a day to access clinical cardiology information, news or education. ■

Hot App: *JACC* on iPad

The product that some consider the wave of the future for personal computing hit the market in April 2010 when Apple released the iPad. The touch-screen, tablet computer was designed to showcase audio and visual media including books, magazines, games and movies. The ACC, working with publishing partner Elsevier, saw an opportunity to develop an iPad application for the *Journal of the American College of Cardiology* (*JACC*) to give readers a new way to access groundbreaking cardiovascular content. With the application in the early phases of development, CardioSurve investigated technology adoption and interest in the concept.

Specifically, thinking about the *JACC* content on the iPad, more than half (54%) of cardiologists indicated that they would read *JACC* on the iPad and nearly two-thirds (62%) noted that they would read it in place of a print version. More than one third of cardiovascular physicians (36%) reported that the availability of *JACC* on the iPad would encourage them to purchase the iPad product. *JACC* on iPad was released in November 2010. ■

The Many Faces of Team-Based Care

Health care is a team sport. Although effective teamwork has been documented as a significant contributor to enhanced clinical outcomes and a requirement for health care reform, implementing team-based care models in practice can pose challenges.

To better understand the changing practice landscape and evolution of team-based care, the ACC conducted a survey of cardiovascular practices in 2010. Over 2,400 unique practices in the U.S. participated in this research representing almost 14,000 cardiologists.

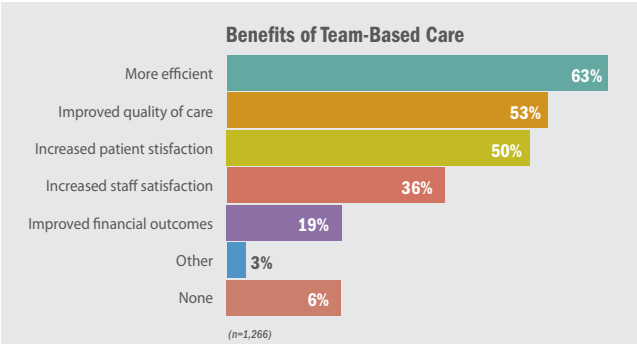
Four-in-seven (57%) report that their approach to care delivery is "team-based" using non-physician practitioners and clinical staff to participate in the decision-making, coordination of care, and shared responsibility for the quality of care. It is not surprising to find that solo practitioners are less likely to employ a team-based care model while hospital-based, multi-specialty, and academic practices are more likely to utilize physician extenders in their care delivery.

Those practices that have implemented team-based care identify a number of improvements resulting from the approach. Increased efficiency (63%), improved quality of care (53%) and increased patient satisfaction (50%) are the primary improvements occurring at team-based care practices. Other benefits of the team approach include increased staff satisfaction (36%) and improved financial outcomes (19%).

Although there are clear benefits to providing team-based care, many practices report that they do not provide team-based care because of no or minimal reimbursement (34%) and the inability to break the more traditional view (33%) of practicing medicine held by patients and providers. Lack of tools (18%) and no clear practice model (19%) are also cited as hurdles to more utilization of physician extenders.

The research also explored some of the team-based care systems or functions established as part of the provider infrastructure as well as the ways that physician extenders are utilized.

Team-based care providers are most likely to implement patient education (69%) and internal communications (63%) as a part of their care protocol. Performance improvement activities (56%) and data monitoring (56%) are also practiced followed by patient adherence (50%), objective feedback (47%) and clearly-defined roles (41%). Not surprisingly, hospitals and medical schools are more likely to engage in quality improvement types of team-based care – internal communications, data monitoring and performance improvement.



In team-based care, one focus is on shifting power to the team – physician extenders. Practices report utilizing a number of different models leveraging physician extenders. Nurse practitioners or physician assistants working collaboratively in outpatient clinics with physicians (49%) are the most popular type of model, followed by providing collaborative inpatient care with physicians and the physician billing for services (39%) or using the physician extender to run the outpatient clinic device, coagulation, lipid, etc. (33%). Physician extenders as independent billers, such as billing "incident to" (18%), having independent outpatient clinics and billing independently (17%), providing inpatient care and billing for services (18%), or serving as rounding nurses for inpatient or outpatient services with physicians (18%), are less popular. Taking first call for after-hours patient phone calls is the least used model (9%).

These findings suggest that while most cardiovascular providers are practicing team-based care, opportunities exist for more interdisciplinary roles and responsibilities, increased tools for feedback and quality improvement, and increased responsibility for physician extenders. ■

CARDIOSURVE

CardioSurve™ is a unique, insightful panel of 300-350 cardiologists which provides an in-depth perspective of what U.S. cardiologists think.

For additional information about this report or CardioSurve™, please contact Paul Theriot at 202-375-6357 or *ptheriot@acc.org*.

Treatment Spotlight: Personalized Medicine

"It's far more important to know what person the disease has than what disease the person has." – Hippocrates

The year 1953 ushered in the human genome era with the discovery of the double helix. The dawning era of personalized medicine represents the second wave of this revolution; rather than waiting to react to symptoms, physicians can know genetic predispositions through testing and be more predictive in diagnosis and treatment. Clearly, science has given physicians the tools to better know the patient.

"When the human genome was sequenced in 2003, the implications for cardiovascular and stroke medicine – in terms of the new diagnostic, therapeutic and preventive strategies that may ultimately result – were immediately recognized."

Alison E. Baird, PhD., "Genetics and Genomics of Stroke", *JACC*, Vol. 56, No. 4, 2010

To better understand the cardiovascular mindset resulting from this new wave of medicine, CardioSurve explored the perceptions of personalized medicine and its future. The research asked cardiologists to first define "personalized medicine." Nearly three out of four (72%) cardiologists cited genetic testing as the key defining attribute while approximately half (53%) of the panel responded with molecular diagnostics. Additional considerations for age (56%), gender (56%), race (52%) and co-morbidity (49%) were also viewed as aspects of personalized medicine.

Today, few cardiologists are incorporating personalized medicine into treatment – only 7 percent of cardiovascular patients are being treated with personalized medicine. Patients are often stewards of their own treatment, inquiring about therapies they have seen advertised. However, patients clearly are not familiar with personalized medicine since cardiologists report that only 6 percent of patients are even asking about personalized medicine.

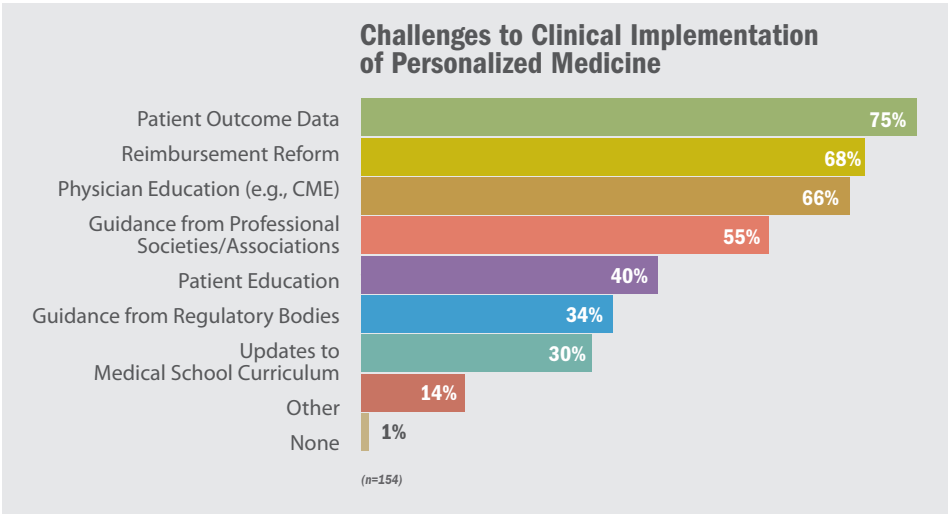
This light usage, or lack thereof, is largely due to the fact that the majority of cardiologists do not feel that personalized medicine is impacting the treatment of their patients suffering from cardiovascular disease. The primary instigator of the short-term skepticism is that 75 percent of these cardiologists believe that there is a lack of patient outcome data in regards to the implementation of personalized medicine technologies. Additionally, there are reimbursement concerns for these tests (68%), a shortage of physician education such as CME on the topic (66%), and a lack of guidance from professional societies/associations (55%) on personalized medicine.

In the winter of 2010, the U.S. Food and Drug Administration (FDA) updated the labeling for the anticoagulant Warfarin with pharmacogenomically-guided dosing ranges. Also, in the spring of 2010, the FDA issued a boxed warning on the label for PLAVIX® which informed healthcare professionals that tests are available to identify genetic differences in the functionality of the CYP2C19 liver enzyme. Given this background, nearly two-thirds (63%) of cardiologists treating patients still do not believe that genetic information is currently very helpful in setting the initial Warfarin dose for their patients, and only 6 percent of patients being treated with Plavix for the first time are receiving genetic testing to guide treatment. The primary challenge to the clinical implementation of personalized medicine stems from uncertainty over the value of genetic testing from both therapeutic and financial perspectives. Additionally, the number of cardiologists employing personalized medicine techniques will see limited growth in the near future.

This trend will likely change as personalized medicine develops and becomes more established in the area of proven patient outcomes, education and reimbursement. In the next five years, 73 percent indicate that personalized medicine will have some measurable impact on cardiovascular patient treatment and within the next 10 years, more than nine out of 10 cardiologists believe that personalized medicine will have a larger role in cardiovascular patient treatment.

"The answer to the specific question of the role of genotyping in everyday practice remains unknown at the present time."

David R. Holmes, Jr., et al., "ACCF/AHA Clopidogrel Clinical Alert: Approaches to the FDA 'Boxed Warning'", *JACC*, Vol. 56, No. 4, 2010



Also encouraging to the advancement of personalized medicine, a strong learning gap exists in this emerging field: more than half (58%) of cardiologists do not feel confident in their understanding of personalized medicine. However, 54 percent of cardiologists are very interested in expanding their knowledge about personalized medicine, which presents an important educational opportunity.

The optimal term to encapsulate the perception of today's cardiologist in regards to personalized medicine is "potential." If the evidence-based outcomes research progresses with educational content and payer reimbursement, then the promise of personalized medicine can be realized. ■