

PATIENT SATISFACTION & OUTCOMES MANAGEMENT™

IN PHYSICIAN PRACTICES

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Lack of aggressive cardiac care is lost opportunity to save lives

Physicians often don't act on poor cardiovascular control

Thousands of patients are dying of cardiovascular disease because physicians fail to treat them appropriately and aggressively with effective medications.

This simple but powerful message is driving new, national performance measurement initiatives on beta-blocker use after heart attacks and control of hypertension and cholesterol, and prompting medical groups around the country to establish cardiovascular quality improvement programs.

With cardiovascular care falling behind the science of medicine, medical groups need to rethink their prescribing practices and develop screening and outcomes management tools, cardiovascular experts say.

This "failure-to-prevent" syndrome presents a major public health problem, says **Gideon Bosker, MD**, assistant clinical professor at Yale University School of Medicine in New Haven, CT, and author of *Pharmatecture: Minimizing Medications to Maximize Results*. "Physicians are committing millions of patients unwittingly to the placebo group," he says. "For a number of reasons, individuals at risk for or who have heart disease are not being extended the life-prolonging benefits of drug-based prevention." Bosker asserts that physicians should customize their pharmacologic approach based on a patient's individual risk factors and, when appropriate, construct multiple "[drug] cocktails for cardioprotection that address the entire spectrum of an individual's risk factors. These regimens may consist of only a single prescription

Tackling cardiovascular outcomes

As scientific evidence provides a better understanding of cardiovascular risk factors and the medications that manage them, physicians have an opportunity to greatly improve outcomes for patients with cardiovascular disease. Yet many of these effective therapies remain underused. In this special issue of *Patient Satisfaction & Outcomes Management*, we address the barriers to appropriate care and offer a wide range of strategies and interventions to improve outcomes. ■

EXECUTIVE SUMMARY

By failing to use prescription medications more aggressively, physicians are undercutting their cardiovascular care and endangering patients.

- Nurse case management improves the follow-up of patients with hypertension, hyperlipidemia, and other chronic conditions.
- Patients don't complain about symptoms related to "silent" cardiovascular diseases, such as hypertension.
- Physicians still need education about updated guidelines as studies show fewer contraindications for ACE inhibitors and beta-blockers.

ingredient, such as a beta-blocker or statin," he adds. "But more often, a mixture of medications and/or nutritional supplements may be required to provide comprehensive cardioprotection."

To assess the full pharmacoeconomic impact of drug-based prevention of heart disease, outcomes measures should be broadened beyond mortality or hospitalization for myocardial infarction to include such issues as the need for invasive diagnostic procedures, angioplasty, or coronary artery bypass graft, and the development of congestive heart failure, says Bosker.

Physicians also need practical help identifying and monitoring their at-risk patients, including follow-up related to compliance and lifestyle changes. "It's not that doctors don't know that this is important," says **Thomas H. Lee, MD**, medical director of Partners Community Health Care, an integrated delivery system in Boston. "It's that there aren't systems there to support them."

Many physicians would be surprised to discover how poorly their patients' cardiovascular conditions are controlled. When the National Committee for Quality Assurance (NCQA) in Washington, DC, tested its upcoming performance measure on hypertension, it found that only 32% to 42% of patients with hypertension had been

brought below the target of 140/90 mm Hg.

In a recent study of 800 hypertensive men at five Department of Veterans Affairs sites, about 40% had blood pressure of 160/90 or greater despite an average of six hypertension-related visits per year. Physicians increased drug therapy in only 6.7% of visits.¹ Another study found that almost 90% of women with heart disease were not brought within the goals of the National Cholesterol Education Project.¹

In his own practice, Lee conducted an informal survey and reviewed patient charts in an urban clinic where he works. He found that only 20% of the patients with hypertension were within the target range. "Often it's wishful thinking on the part of the physician that blood pressure will come under control [with patient lifestyle changes and without further medication]," he says. Lee, an internist and cardiologist, is co-chair of the Cardiovascular Measurement Advisory Panel for the NCQA, editor of the *Harvard Health Letter*, and associate professor at the Harvard University School of Medicine.

Now, he assigns a nurse to follow up with patients on education and lifestyle issues as well as compliance with medication therapies and further monitoring.

In fact, nurse involvement can be crucial both in reviewing charts before a patient visit and providing follow-up afterward. Some programs have established special clinics to work with patients on ongoing monitoring and lifestyle issues. (See related stories, pp. 52-59.)

"All of the successful programs that produce good outcomes and good compliance have nurse case managers [to provide follow-up]," says **Rodman Starke, MD**, executive vice president for science and medicine of the American Heart Association in Dallas. "They're not cheap, but neither is recurrent myocardial infarction or repeat angioplasty."

In the midst of a busy practice, physicians may be more focused on patients' acute problems than the long-term risks of cardiovascular disease. The

COMING IN FUTURE MONTHS

■ Do race and gender affect physicians' treatment choices?

■ A closer look at variation in care across the country

■ How New England surgeons joined to produce better outcomes

■ Strategies to help incorporate guidelines into clinical practice

■ Are faulty statistics affecting your patient satisfaction results?

asymptomatic nature of cardiovascular disease and its associated risk factors makes the physician's job even more difficult, says Bosker.

"In many patients, the disease process may be silent, as it is in silent ischemia or hypertension," he says. "As a rule, people don't come to their physicians with dramatic symptoms suggesting that their blood pressure is up or that their low-density lipoprotein (LDL) cholesterol is not at goal or that their platelets are too sticky."

Moreover, Bosker points out, "It may not be reasonable to expect patients to buy into a rather abstract trade-off, in which we ask them to comply with costly cardioprotective medications that may have side effects in exchange for the theoretical benefit of added life expectancy years down the road."

Physicians know that the numerical warning signs may foretell serious consequences, but the impact of high blood pressure or high cholesterol evolves over many years. That lack of immediate pressure for action makes less aggressive treatment seem more palatable.

"If we really systematize the evaluation of patients and try to link patients with drug therapy that we know can improve outcomes, and we do so with the vigilance that we might apply to vaccinations or nutritional counseling for the pregnant woman or cancer markers, we will prevent people from falling through the cracks," says Bosker.

Whether medical groups use simple data collection forms or sophisticated computer programs, physicians need to receive ongoing information about how they are managing their patients, says **Randall Stafford**, MD, PhD, an internist and assistant professor of medicine at Massachusetts General Hospital/Harvard Medical School in Boston.

"Most physicians would have almost no idea what percentage of their congestive heart failure patients are taking ACE inhibitors," says Stafford, who has studied the national use of ACE inhibitors, warfarin, beta-blockers, and other cardiovascular medications. "To provide them with that feedback is really doing a service to physicians. To the extent that they're compared with their colleagues, it does provide a great incentive to improve practice."

Confusion about old medicine vs. new scientific evidence may also lead to underuse of medications.

Until recently, certain contraindications led to cautious use of beta-blocker therapy among diabetics, the elderly, individuals with chronic

obstructive pulmonary disease, and patients with congestive heart failure. But as outlined in a recent *Quality Care Alert*, issued by the American Medical Association and other medical societies in December, beta-blockers are still beneficial for many of those patients. **(See copy of alert, inserted in this issue.)**

"The carry-over of that fear about potential complications with such agents as beta-blockers in certain patient subgroups has deterred physicians from being aggressive with those drugs," says Bosker.

Studies also demonstrate that ACE inhibitors reduce mortality for patients with congestive heart failure. The use of ACE inhibitors among patients with congestive heart failure grew in the early 1990s, but only rose to 31% by 1994.² "Despite the new findings, there's a tradition about how congestive heart failure is treated," notes Stafford. "The health care system may be very slow to change."

Using physician leaders and pharmacists to promote the new guidelines may increase their adoption, he says. But Stafford notes that physicians may be influenced by claims from pharmaceutical firms about competing medications that aren't necessarily evidence-based. "It may be necessary to hold the pharmaceutical industry to a higher standard of accuracy in some of their promotions," he suggests.

Problems of patient noncompliance

Patient attitudes can affect their compliance with medication regimens — and physician attitudes about adding drugs to address various risk factors.

"There are so many medications that are available and shown to be useful in cardioprevention; it's gotten to the point where patients may be taking four or five or even eight different medications," says Bosker.

Physicians need to consider cost, compliance, side effects, and potential drug interactions, he says. "Many of them don't want to increase the number of drugs in an already complicated regimen. If you streamline the drug regimen, then cardioprotection becomes manageable. And if you identify 'high productivity' medications — such as amlodipine, aspirin, beta-blockers, or atorvastatin — which can manage one or more risk factors for an extended period of time without the need for add-on medications, then 'cocktails for cardioprotection' will be safer, more

effective, and better tolerated.”

Medical groups have developed various methods to improve patient compliance, from writing “contracts” on lipid management to simple but persistent reminders from physicians. “A little encouragement makes such a difference,” says Starke. “Are you on your diet? Are you still taking your pills?”

At Massachusetts General’s anticoagulation clinic, lab technicians visit patients’ homes every month or two to draw blood to monitor warfarin use. Nurses follow up with patients by phone or postcard. That helps avoid the problem of patients who begin treatment but don’t return for follow-up — who may simply slip through the cracks, says Stafford.

“That’s a real fear on the part of primary care physicians, that often we really only keep careful track of patients who come back to see us,” he says. “It may be just as important or more important to know what’s happening with people who miss their appointments.”

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The key steps in boosting cardiovascular outcomes

Careful use of medications can control risk factors

Advances in pharmacologic therapy allow physicians to prolong the lives of patients with heart disease and prevent or slow the development of the disease among those at risk. But in a comprehensive review of medical literature, **Gideon Bosker**, MD, assistant clinical professor at Yale University School of Medicine in New Haven, CT, found that physicians often aren’t taking advantage of the available tools.

He suggests these key steps toward improving “cardioprotection”:

□ **Consider all risk factors and prescribe medications best-suited to address them.**

By their nature, performance assessment

indicators focus on specific treatments and end points, such as beta-blocker use after myocardial infarction. But prevention of a primary or recurrent heart attack requires a careful screening of patients and prescription to address all significant risk factors, Bosker says.

“Each individual has a different constellation of risk factors. We need to customize the ‘cocktail for cardioprotection’ to fit the needs of the individual patient,” he says. “If an elderly patient has a lipid disorder and isolated systolic hypertension, the cocktail should be customized to rectify those risk factors.” For example, that patient may receive a statin such as Atorvastatin and a calcium blocker such as Amlodipine, as well as counseling about lifestyle issues such as diet and exercise, Bosker says. **(See table on cardioprotective cocktails, inserted in this issue.)**

□ **Address undertreatment of specific patient subgroups.**

“We can identify those groups of patients that studies show tend to be pharmacologic outcasts when it comes to medication-based prevention of heart disease,” says Bosker. Medical groups should target quality improvement and screening toward this group, he says. “They include women, the elderly, patients with heart failure, patients with hypertension without underlying heart disease, patients with hyperlipidemia, and diabetics,” Bosker says.

He notes that African-Americans are often undertreated for hypertension.

□ **Expand the definition of outcomes and cost-effectiveness.**

Traditionally, treatment success is measured by its effect on mortality and future heart attacks. But the use of appropriate medication may also reduce the need for costly and invasive diagnostic procedures, angioplasty, and coronary artery bypass graft. “If we measure our outcomes according to this broader constellation of end points, risk-factor intervention produces results that are pharmaco-economically much more attractive than if we limit our evaluation to the traditional end points,” Bosker says.

□ **Consider patients’ lifestyle and compliance.**

Medication use goes hand-in-hand with modification of lifestyle. Patients can make a significant impact on their cardiovascular risk by quitting smoking, reducing their dietary fat, and exercising regularly. Bosker concedes, “It is difficult to get patients to comply with lifestyle modifications, which is why so much of cardioprotection inevitably defaults to drug-based treatment.”

Sins of omission: When physicians fail to prescribe

- ✓ Only 31% of congestive heart failure patients nationwide are on ACE inhibitors, although clinical guidelines advocate its use as an initial therapy.¹
- ✓ Nationally, only 11% to 25% of people with hypertension have their blood pressure controlled within normal range.²
- ✓ Beta-blocker use was documented in only 21% of office visits of patients with coronary artery disease who had no strong contraindications.³
- ✓ As few as 21% of eligible patients receive prescriptions for beta-blockers following hospital discharge for a heart attack.⁴
- ✓ In one study, physicians failed to intensify drug therapy despite elevated blood pressure readings in three-quarters of office visits by hypertensive male patients.⁵

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In addition, physicians may be reluctant to add drugs to an already complex regimen. "It's gotten to the point where patients may be taking four or five or even eight different medications," Bosker says.

The answer is to hone in on drugs that, within the framework of a single prescription agent, are sufficiently potent and effective enough to shoulder the burden for any individual risk factor, he says.

"To leave risk factors neglected is essentially to commit your patient to the placebo group. Sins of

omission are essentially as potentially as harmful as sins of commission. The 'failure-to-prevent' syndrome is tantamount to a permission to die prematurely unnecessarily," Bosker explains. (See box, at left.)

Side effects also may lead patients to lapse in taking their medication. After all, the disease itself may be silent and asymptomatic for many patients. "Patients need to buy into the notion that they're taking drugs that may be costly, may have side effects, that may not make them feel any better, in exchange for the theoretical benefit of adding years of quality to their life," says Bosker.

Along with effectiveness, physicians must consider how "user-friendly" the drugs will be for patients, he says. ■

Clinic helps patients manage their cholesterol

Control with follow-up, patient education

Controlling cholesterol can prolong life. This is both a simple truth and a complex challenge. Cardiovascular patients and their physicians understand the importance of lipid control in prevention of recurrent heart attacks. But the continuous monitoring, lifestyle changes, and follow-up required to manage lipid levels is daunting.

The Jackson (MS) Heart Clinic, P.A. staff responded to this dilemma by creating a Lipid Management Clinic. Physicians may start a patient on cholesterol-lowering medication, then send them to the clinic for follow-up.

Most of the Lipid Management Clinic's patients are seeing one of the medical group's 12 cardiologists because of a past heart attack, angioplasty, or documented heart disease, although some patients may come for primary prevention.

They begin with a six-hour course, held over three class sessions. Patients learn about the pathophysiology of cholesterol, stress, and exercise, how to read nutritional labels and select appropriate foods, and how to stay on a diet without giving up the enjoyment of food. The clinic even has a mini-grocery store with examples of healthier products that patients can substitute for their previous choices.

Helpful Contacts

Here are some resources you can tap into for more information about cardiovascular guidelines.

- ♥ **National Cholesterol Education Program:** Provides publications summarizing clinical practice guidelines and recent research on the importance of cholesterol in heart disease, as well as patient education materials at a minimal charge. Contact: NCEP, P.O. Box 30105, Bethesda, MD 20824-0105. Telephone: (301) 251-1222. Web site: <http://www.nhlbi.nih.gov/nhlbi/>.
- ♥ **American Heart Association:** Publishes guidelines on treating acute myocardial infarction, aspirin and anticoagulant use, cholesterol-lowering therapy, and other issues. Contact: AHA, National Center, 7272 Greenville Ave., Dallas TX 75231. Telephone: (214) 706-1179. Web site: <http://www.americanheart.org>.
- ♥ **Anticoagulation Forum:** Provides advice for the establishment of anticoagulation services, publishes a newsletter and sponsors educational programs. Contact: Barbara Ganick, Executive Director, Anticoagulation Forum, 88 East Newton St., E-113, Boston, MA 02118-2395. Telephone: (617) 638-7265. Fax: (617) 638-7267. E-mail: barbara.ganick@bmc.org. Web site: <http://www.acforum.org>.
- ♥ **National Guideline Clearinghouse:** The Agency for Health Care Policy and Research has established an extensive on-line database that provides comparisons of guidelines on a variety of conditions. Web site: <http://www.guideline.gov>.

Patients have baseline blood tests, then periodic rechecks. Medications may be adjusted until patients reach the goal of low-density lipoprotein below 100. Each patient has a flow sheet with their lipid profiles, and patients return every two to six months, even after they have reached the goal, says clinic director **Monica Massey, RN**.

“Our job is to scour the lipid profile and to bring anything to the doctors’ attention that isn’t as it should be,” says **Connie Bassett, RN**, case manager.

Group practice physicians could set up a similar tracking system by clustering the schedules of lipid patients on the same day each week, notes Massey.

The Lipid Management Clinic has just started using new software to track the number of

patients who have reached their lipid goals, how long it took to achieve goals, emergency department admissions, and other indicators.

Much of the clinic’s work focuses on lifestyle changes that must accompany medication. Massey admits that altering old habits is a challenge, particularly in a region of Southern-fried chicken and vegetables cooked with bacon or fat-back. “It’s behavior modification,” she says. “People don’t want to quit smoking, stop drinking, eat differently, and exercise. You are trying to get people to have a healthier lifestyle when deep down they don’t want to.”

Massey shows patients how to cook and achieve a similar taste of their favorite recipes with healthier ingredients. Several times a year, the clinic hosts social functions for patients such as a heart-healthy dinner, showing them that healthy food can still be tasty.

“You’re not going to get anybody down here to eat seaweed and bean sprouts,” says Massey. “We take a diet they already like and help them achieve a healthy diet that’s [essentially] the same thing.” ■

Special clinics allow better warfarin monitoring

Concern about dosing risk leads to underuse

Anticoagulation therapy presents a dilemma for physicians: Warfarin prevents strokes among patients with atrial fibrillation, but it also increases the risk of major bleeding. As a result, less than half the appropriate candidates receive the drug.¹

Wider use of warfarin requires better monitoring. Physicians can accomplish that by using an anticoagulation service to monitor patients — or allowing them to track their own care through self-testing kits.

“An anticoagulation clinic is a focused and coordinated approach to care,” says **Jack Ansell, MD**, professor of medicine and vice chairman of the department of medicine at the Boston University School of Medicine. “That is what is often lacking in a routine or haphazard system.”

In fact, the Anticoagulation Forum, a loose-knit international network of about 500 anticoagulation clinics based in Boston, has seen a steady

growth in membership since its founding in 1991. "In the last five to eight years, there has been a rapid rise in the number of anticoagulation clinics to smaller hospitals, group practices, managed care organizations, and other providers of health care as they see the benefits of such clinics," Ansell says.

Testing should be frequent

Patients generally visit an anticoagulation clinic at least monthly to check their prothrombin time, or time to clotting. Often, that testing time frame is weekly or biweekly, and if patients are having difficulty with their dosage, they may come in more than once a week.

Nurses or pharmacists at the clinic have the authority to alter the dosage of the medication to improve its effectiveness and reduce risks of bleeding.

Patient self-testing involves just a finger prick and eliminates the inconvenience of coming to a lab or office for the monitoring. Ansell likens it to the self-management of diabetic patients who monitor their need for insulin.

Although the effectiveness self-testing hasn't been compared to anticoagulation clinics, "there is good evidence in the literature that it leads to good patient care and reduced complications as compared to routine or usual care,"³ says Ansell. "I think that patient self-management will be a very important model of care in the future."

Some physicians may be reluctant to send their patients to clinics for monitoring for fear of fragmenting their care.

With the help of tracking software such as a program called CoumaCare from Dupont, the pharmaceutical firm that manufactures Coumadin, the clinics can tell whether patients are following up on their appointments.

Do anticoagulation clinics improve outcomes? That is a major question that is being addressed by the Managing Anticoagulation Services Trial, led by David Matchar, MD, director of the Center for Health Policy at Duke University in Durham, NC.² Six sites served six to 10 medical groups. A control group continued with their usual methods of prescribing and monitoring warfarin use.

So far, both physicians and patients seem to be responding favorably to the clinics, says **Greg Samsa**, PhD, associate professor at the Center for Clinical Health Policy Research. "In an entirely different study yet in progress, we found that patients followed by the anticoagulation service tended to

come back more frequently [for testing]," he says. "They often seem to establish a fairly close relationship with the anticoagulation service provider. That may be one thing that encourages the patient to come back more regularly."

But Ansell notes, "With Coumadin, the potential complication rate of major bleeding or thrombosis can be so high and serious that such clinics may well be worth the extra visit outside of one's usual primary care doctor.

"I do not favor setting up a small clinic for every disease entity or problem," he says. "But I think that this is in a class of its own."

Financially, it may be difficult for an individual group practice to set up an anticoagulation clinic, particularly since the reimbursement of services may be limited. But physicians could accomplish much the same by setting aside a particular day or time to see warfarin patients and assigning follow-up duties to a nurse or other staff member.

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Cardiovascular care tops HCFA's agenda

Collaborative led to 10% drop in mortality rates

Cardiovascular diseases are once again the leading focus of the Health Care Financing Administration's (HCFA) quality improvement program, with new projects beginning this year on acute myocardial infarction (MI), heart failure, and stroke.

In its initial Cooperative Cardiovascular Project (CCP), which ended last year, peer review organizations nationwide worked with hospitals to improve on indicators such as aspirin and beta-blocker use, timing to reperfusion, and use of ACE inhibitors. **(For a complete list of indicators, see box on p. 56.)**

Cooperative Cardiovascular Project Quality Indicators

These are the indicators tracked by the Cooperative Cardiovascular Project of the Health Care Financing Administration for patients with confirmed acute myocardial infarctions.

During hospitalization:

1. Aspirin
2. Timing of aspirin
3. Reperfusion, either by administering thrombolytics or performing primary percutaneous transluminal coronary angioplasty
4. Timing of thrombolytics
5. Timing of PTCA

On or prior to discharge:

6. Aspirin
7. Beta-blockers
8. Smoking cessation advice and counseling

For patients with low left ventricular ejection fraction:

9. ACE inhibitors
10. Avoidance of calcium channel blockers

A study of the first four states to launch the CCP showed that mortality rates dropped by 10% while performance on all indicators improved.¹ Hospitals used a variety of interventions, from changing standing orders to improving communication among emergency and primary care physicians and cardiologists. **(For sample interventions to improve thrombolytic therapy, see p. 57.)**

illuminating the need for interventions

“Shining a light on this problem has heightened people’s awareness of the impact of these relatively simple interventions,” says **Martha Radford**, MD, FACC, Deputy Director of the Center for Outcomes Research and Evaluation at Yale-New Haven (CT) Health. She is also associate clinical coordinator at Qualidigm, a peer review organization (PRO) in Connecticut, one of the CCP pilot states. Qualidigm also has been designated the Clinical Area Support PRO, which means it helps coordinate the national Acute Myocardial Infarction Clinical Project.

The CCP also illuminated problems and solutions associated with heart attack treatment. Use

of various therapies varied widely across the nation and even within locales. Prescription of beta-blockers at discharge among ideal candidates, for example, ranged from 36% to 62%. On average, 33% of ideal candidates failed to receive reperfusion, either from thrombolytic therapy or angioplasty.²

Yet hospitals showed that they could make dramatic progress through targeted interventions — particularly if a physician leader championed the process and physicians worked to eliminate barriers to appropriate care, Radford says.

“The most successful QI project I saw was so successful because it was championed by a chief,” she says. “It became part of their monthly medical staff meeting to go over the data. They improved more than I’ve ever seen anyone improve in any project.”

Hospitals found lots of room for improvement

A Best Practices Working Group from four PROs surveyed 36 hospitals to determine which interventions were most successful.³ When hospitals examined their systems of care from admission to discharge, “[they] really found a lot of room for improvement,” says **Dale Bratzler**, DO, MPH, principal clinical coordinator for the Oklahoma Foundation for Medical Quality in Oklahoma City and a member of the group.

Here are some of the major strategies that helped hospitals improve their care for patients with acute MI:

Gain the active support of influential physician leaders.

Although the CCP focused on hospital-level improvement, “it’s the individual physicians who have to change what they’re doing at the bedside to actually impact patient care,” says Bratzler, who is also vice chairman of the medical affairs section of the American Health Quality Association in Washington, DC.

For example, Stratis Health of Bloomington, MN, a PRO, developed an advisory board of physicians and other clinicians. Cardiologists led the CCP presentations at hospitals to discuss the indicators and methods of improving outcomes. In fact, research shows that the use of well-respected opinion leaders can influence physicians to increase their use of therapies such as beta-blockers and aspirin among acute myocardial infarction patients.⁴

(Continued on page 58)

Minnesota Hospital Process Changes to Improve Use and Timing of Thrombolytics

These interventions were used by Minnesota hospitals as a part of the Cooperative Cardiovascular Project. This list was compiled by Stratis Health of Bloomington, MN, which is the peer review organization for Minnesota and worked with the hospitals to improve performance.

♥ Hospital Process

• Administering thrombolytics

Move mixing of thrombolytics from pharmacy to critical care unit.

Administer thrombolytics in ED

Initiate thrombolytics without waiting for laboratory results (using ECG results instead). Keep everything needed to administer thrombolytic in one place.

Streamline procedures for drug restocking and availability.

Drug kit should be user-friendly.

• Standing orders, protocols, pathways

Create standing orders that activate a flow sheet to help nurses document timing of thrombolytics — the flow sheet remains a permanent part of medical record.

Develop critical measure checklist.

• Laboratory

Prioritize lab work for chest pain patients.

Revise laboratory procedures.

• Nursing procedures

Admit distressed chest pain patients directly to ICU from ED without formal physician's order.

Start IVs, ECG, X-rays and lab work without initial formal physician orders.

• ECG

Streamline procedure, preferably perform ECG in ED by RN.

Change ECG machine locations to make them more available in ED.

Dedicated machine situated directly in ED.

♥ Resources

• Training

Cross-train nurses to work in different hospital areas.

Education of nurses is an automatic component of competency for working in the ED and ICU.

Train all physicians, internists and nurses working in the critical care unit.

• Staffing

ED and Urgent Care clinics are manned by physicians 24 hours a day, seven days a week. Create a thrombolytic team: for example, at one hospital an emergency response team consisting of 4-5 extra people was created. They record, start a checklist, involve the ED nurse to move the process more quickly and are available at each shift to bring together the lab, ICU nurse, recording nurse, and 1-2 additional nurses to carry out the protocol. Each team member is cross-trained.

Revise on-call and staffing procedures for ED coverage.

♥ Ambulance Process

Place ECG machine in ambulance to speed up process using the FAX via phone directly to the physician; print-out is available when patient arrives at ED (bought with community donations).

♥ Physician Process

Involve physicians in quality improvement monitoring having them provide feedback to other physicians and act as "mentor" to ED staff. Allow ED physicians more latitude in making decisions in the treatment of AMI patients.

♥ Hospital Communication

Maintain close working relationship between ED and ICU.

Post and distribute ACC/AHA Guidelines for the Management of Patients with Acute Myocardial Infarction.

♥ External Communication

Educate community about signs and symptoms of a heart attack and calling 911.

Conduct seminars for women sensitizing them to symptoms of heart disease and making them aware of lack of gender equity in areas of prompt treatment.

Improved communication among physicians also played a role in many interventions. In some cases, confusion over responsibility for different aspects of care led to delays in thrombolytic therapy or gaps in use of appropriate medication at discharge.

“Timing is everything here,” says Bratzler. “The data are really clear that the longer the delay until you give the [thrombolytic] drug, the poorer the patient’s prognosis is. Someone needs to make that decision and do it quickly. The national goal is 30 minutes from the door to the time the drug starts. In some cases, the cardiologist insisted on being called first, which builds inherent delays in the system,” he says. “The reason some of the cardiologists wanted to be called is because sometimes they want to take patients up to the catheterization lab and do angioplasty.”

Some community hospitals use a rotation system of area physicians who work in the emergency department. To ensure uniformity in their training, one hospital established a credentialing program for emergency physicians who administer thrombolytics. Others arranged for physicians to discuss communication issues and focused on the development of clinical pathways.

Speeding up the processes

Meanwhile, the increased use of angioplasty presents a new challenge for many hospitals and physicians. “Some of these hospitals are making a change toward more reliance on PTCA [angioplasty] rather than thrombolytics,” says **Tom Arneson**, MD, MPH, associate medical director for health care quality improvement at Stratis Health. “They’re concerned that their timing on thrombolytics for patients who get [that therapy] may get worse.”

One strategy involves speeding up information flow, such as ordering ECGs more quickly and allowing nurses to start ECGs.

□ Promote collaboration at all levels and use multidisciplinary QI teams.

At its inception, the CCP represented a “sea change” for HCFA in the way it approached national quality improvement, says Radford. Instead of sending dunning letters to physicians or hospitals based on data from retrospective chart reviews, the PROs restructured to collaborate with providers.

“We’re always open to the suggestions of our collaborators — hospitals, physicians, nurses,

quality assessment staff,” says Radford. “Everybody realizes the centrality of the physician community here.”

Physicians and others have been responsive to the new approach and the feedback it provides. Collecting detailed information for quality improvement would be expensive without HCFA’s support.

Best practice hospitals also commented on the importance of inclusive QI teams. “You had to have a team put together that crossed disciplines and looked at the barriers to providing effective care,” Bratzler says. The teams included medical staff, nursing, pharmacy, and emergency department staff, he says.

□ Change systems to promote evidence-based care.

It’s not enough just to remind physicians of current guidelines on treating patients with acute MI. After all, they generally know what is appropriate care. “You’ve got good people doing the best they can working in an imperfect system. Look at your system,” says Arneson.

About half of the hospitals in the “best practices” study changed standing orders to include such items as prescribing aspirin on admission. The Mayo Clinic in Rochester, MN, provided pocket cards for physicians as easy reminders. Hospitals also looked for barriers in their systems that led to unnecessary delays.

□ Monitor progress and use rapid-cycle improvement.

Almost half of the “best practices” hospitals went beyond the retrospective data review and feedback from HCFA. Instead, they set goals, tracked indicators, and made swift changes to their interventions, using concurrent data collection, says Bratzler. “If you wait for retrospective data, it’s tougher to know whether your interventions are working or not.”

For example, at Tulsa Regional Medical Center where Bratzler is director of education, “when a patient is dismissed, that case is automatically reviewed. Every quarter we get data. We have nurses that will look at the cases before the patient goes home to make sure we’ve done certain things. We’re looking at our own care as it occurs,” he says.

Monthly or bimonthly meetings allow a QI team to make adjustments, he says. “You don’t have to collect 250 cases like HCFA did to see if you had a problem,” he says.

In fact, a QI review of cases should become a normal part of health care, says Radford. “It is

my hope that examining what we do in some critical detail will become some part of our medical culture in a more systematic way than we've seen before."

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Patients' rights addressed by accreditation program

Include independent reviews, expert opinion

Patient safeguards, including independent appeals and continuity of ongoing care, will soon be a part of health plan requirements for accreditation by the National Committee for Quality Assurance (NCQA) in Washington, DC.

As state legislatures and Congress consider adding consumer protections, the NCQA announced that Accreditation 2000 will incorporate several of them.

"We think the role of NCQA is to standardize these efforts," says spokesman **Brian Shilling**, who notes that 20 states and several health plans already provide for independent appeals. "[The independent appeal provision] has a lot of support from the health plan community as well as consumer organizations."

Accreditation 2000 standards are still in draft form, with a final version due in late summer. They would require health plans to:

- Provide an independent review process when members have exhausted a health plan's internal process.

NCQA will likely set up a certification

program for independent review organizations to ensure that they have appropriate medical expertise.

- Ensure that a "same or similar specialist" as the one involved in the member's case evaluates the denial in at least one level of the internal appeals process.

- Allow patients to continue with care for an active course of treatment for up to 90 days if the provider has been dropped from a health plans network. For example, pregnant women would be covered by this standard.

- Provide minimum access to behavioral health patients. Accreditation 2000 also focuses on coordination of care of behavioral health and medical providers. ■

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CME questions

1. According to Thomas H. Lee, MD, medical director of Partners Community Health Care, physicians may fail to adequately use medication to manage hypertension or other cardiovascular risk factors because:
 - A. they don't know enough about the guidelines
 - B. they worry that the drugs are too expensive
 - C. they need better systems of identifying and monitoring at-risk patients
 - D. the drugs don't work very well
2. According to Gideon Bosker, MD, "cocktails for cardioprotection" should include:
 - A. a combination of drugs to address a single risk factor
 - B. prescriptive agents that are potent and effective enough to manage each risk factor
 - C. a combination of drugs that are standardized for all patients with cardiovascular risk
 - D. higher doses of drugs that address cardiovascular risk factors
3. Closer monitoring of patients through anticoagulation clinics could lead to:
 - A. greater use of warfarin to prevent stroke in patients with atrial fibrillation
 - B. less frequent visits by patients to have their blood tested
 - C. lower rates of admission to emergency departments
 - D. lower reimbursements to primary care physicians by managed care organizations
4. According to Martha Radford, MD, FACC, deputy director of the Center for Outcomes Research and Evaluation at Yale-New Haven (CT) Health, the most important component of a successful QI project involves:
 - A. sufficient financial resources
 - B. support from managed care organizations
 - C. support from a physician leader as "champion" of the project
 - D. high morale among employees who will work on the QI team