Centers host global health talks on disease, health performance

In two talks last quarter hosted by CHP/PCOR on global health themes, the World Health Organization’s top official for HIV, malaria and tuberculosis described the devastation caused by the diseases and called for intensified efforts to combat them, and a health economist who leads the Institute of Medicine’s Board on Global Health discussed ways to evaluate different countries’ performance on health.

In a Dec. 13 talk on “Leadership in Combating HIV, Malaria, TB and Other Emerging Infections,” Jack Chow — former assistant director-general for the diseases at the World Health Organization (now a special envoy of WHO’s director-general) — urged the attendees to become engaged in fighting the diseases through research, education, innovative partnerships and political activism. “My aim today is to ignite the Stanford community to become active in global health, to confront the devastation of these diseases, and to raise the level of health around the world,” he said at the talk in Encina Hall. Chow, an MD who trained at UC-San Francisco and Stanford Hospital, called HIV, TB and malaria “the premier diseases of mass destruction of our time.”

Jack C. Chow of the World Health Organization speaks in Encina Hall.

Pricey defibrillators may be worth the cost, study finds

It might sound like a stretch to call the implantable cardioverter defibrillator a bargain. But not to a team of CHP/PCOR and VA researchers, who report that the ICD — one of the most expensive medical devices on the market — is a relatively cost-effective way to help prevent sudden cardiac deaths among certain patients.

“In appropriate patients, these devices provide value, despite their expense,” said Douglas Owens, a CHP/PCOR core faculty member and a senior investigator at the VA Palo Alto.

He co-authored an analysis of ICD use that appeared in the Oct. 6 issue of the New England Journal of Medicine.

In examining eight studies on the effectiveness of ICDs in various patient populations, Owens and his colleagues found that the device costs as little as $34,000 per quality-adjusted life year.
Arrow receives nation’s top scientific honor

Kenneth Arrow, a CHP/PCOR fellow whose work has changed thinking in stock markets as well as the healthcare and insurance industries, was selected as one of eight recipients of the National Medal of Science for 2005, the White House announced Nov. 14. The medal is the nation’s highest scientific honor.

Arrow, 84, is the Joan Kenney Professor of Economics and Professor of Operations Research, emeritus, as well as a senior fellow at the Freeman Spogli Institute for International Studies and the Stanford Institute for Economic Policy Research. In 1972 he and colleague John R. Hicks received the Nobel Prize in economics, for their pioneering contributions to general economic equilibrium theory and welfare theory.

“Arrow has made groundbreaking contributions to the pure theory of economics but also holds a broad understanding of the social science arena in which theories are confronted and practical lessons worked out,” said a White House statement.

A 1963 paper he wrote on health care changed the way people viewed health and economics by exploring the relationship between insurers, who cannot directly observe what medical care patients need, and the insured, who can sometimes overuse the resource of medical care.

Arrow holds a doctorate in economics from Columbia University and about 20 honorary degrees. His dissertation was published in 1951 and became the classic Social Choice and Individual Values. He is a member of the National Academy of Sciences and the Institute of Medicine.

*This article was produced by the Stanford News Service.

Quality Indicators’ broad use fulfills promise of translational research

While university research typically culminates in published papers and conference presentations, the Quality Indicators project at CHP/PCOR has produced something more: a set of practical tools that are used by health systems, insurers, public health agencies and employer coalitions to screen for potential quality problems and flag possible underuse or overuse of care.

Since their release in 2002, the indicators — developed by the Stanford-UCSF Evidence-based Practice Center under a contract with the Agency for Healthcare Research and Quality — have evolved considerably in terms of their dissemination, technical sophistication, ease of use and user support.

Back in 2002, relatively few people beyond hospitals’ quality improvement departments were aware of or using the indicators. Today, reflecting the widespread interest in healthcare quality improvement, the QIs are used by hundreds of hospitals, medical groups, health plans, state health departments and employer coalitions — even by automaker General Motors.

Five of the indicators have been endorsed by the National Quality Forum, a prominent nonprofit group that is crafting a national strategy for healthcare quality improvement. Some of the indicators are being incorporated into quality measures developed by the Centers for Medicare and Medicaid Services, the National Committee for Quality Assurance, and others.

“It’s exciting to know that these tools we developed are out there, being used by hospitals every day,” said CHP/PCOR executive director Kathryn McDonald, who leads the Stanford-UCSF Evidence-based Practice Center and the Quality Indicators project.

The QIs consist of three sets of measurements: the Prevention Quality Indicators — aimed at detecting hospitalizations that might have been prevented with proper outpatient care; the Inpatient Quality Indicators — which highlight potential problems with the quality of inpatient care; and the Patient Safety Indicators — aimed at identifying potentially preventable complications and medical errors in inpatient care.

While the indicators were originally developed for internal quality improvement purposes, their use has now expanded to include public reporting of healthcare data. State health departments in eight states, for example, are using the indicators to produce quality “report cards” which give consumers comparative information on hospitals’ case volumes, complication rates and mortality rates for scores of medical conditions and procedures, including heart bypass surgery, hip fracture, stroke,

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QUALITY INDICATORS, FROM PAGE 2

pneumonia, gastrointestinal hemorrhage, postoperative sepsis, and admissions for diabetes complications.

User support for the indicators has improved considerably in recent years, thanks to a support team led in part by CHP/PCOR researchers. The team answers users’ questions about how to run the QIs (a task requiring the use of a statistical software program) and how to interpret the results. They also receive users’ feedback and suggestions. Based on such input, the team has refined the indicators, improved the supporting documentation, and introduced new features.

Over the past two years, for example, the QI team has been developing a Pediatric Quality Indicators module, in response to requests from clinicians and policymakers who wanted data tailored to pediatric populations. The first set of Pediatric QIs, based on the existing indicators, will be released by spring 2006. A second set, composed of new indicators, will be released in 2007.

“This project is novel because we have a feedback loop to the research team,” McDonald said. “We get to hear directly from the hospitals and other users about how they use the indicators and how they might be improved.”

Such feedback was conveyed to the QI team in person on Sept. 25 and 26, when an inaugural AHRQ Quality Indicators Users Meeting was held in Rockville, Md. The meeting — organized in part by McDonald and by Quality Indicators project manager Sheryl Davies at CHP/PCOR — was attended by more than 100 representatives of healthcare systems, hospital associations, state health departments, healthcare payers and purchasers — a stronger-than-expected turnout.

“The conference was a great opportunity for users to ask us questions, give us ideas, and help us identify the next steps in our research,” Davies said.

At the meeting, Carol Munsch — regional director of clinical data for the nonprofit Covenant Healthcare System in Milwaukee, Wisc. — discussed how the five-hospital system routinely uses the Quality Indicators to identify potential quality problems, compare itself against competitors, and monitor its progress on quality improvement efforts.

A few months ago, for example, Covenant implemented Rapid Response Teams — groups of nurse specialists, ICU and emergency medicine experts who are trained to intervene early and aggressively when a patient begins showing signs of decline. It has been documented that hospitals often fail to respond quickly enough to such declines, and the patient deteriorates further until he or she suddenly “crashes,” experiencing a life-threatening episode such as respiratory failure or renal failure.

Covenant Healthcare wanted to track how often the Rapid Response Teams were being used, and how this affected patient outcomes. “Typically that would be very labor-intensive to track — we would have to manually review the patient charts,” Munsch explained, “but running the QIs was a relatively fast and easy way to measure our progress.” When Covenant compared the number of patient “crashes” before and after implementing Rapid Response Teams, “we saw a tremendous improvement in patient outcomes,” Munsch said. “We saw that because of this intervention, we were able to save lives.”

Munsch said the QIs have also helped Covenant identify coding problems at its hospitals. When the system recently ran the Patient Safety Indicators for obstetric complications, they showed that one of the system’s hospitals had an unusually high rate of obstetric complications.

After a team of clinicians and quality improvement personnel investigated the problem, they found that the hospital did not actually have a higher complications rate, but that a couple of medical record coders were being overly aggressive, recording minor complications as something more serious. The individuals were given training on proper OB coding and the issue was resolved.

At the September users meeting, several sessions focused on how to use the QIs for public reporting of healthcare quality data. This is a challenging area, say project researchers, because the QIs were not originally designed for this purpose. They note that because the indicators are based on hospitals’ administrative data (primarily coding and billing records) rather than clinical data, there are limitations to how the results can be interpreted.

This fact has led the researchers to revise and expand the documentation explaining how the QIs can be used and interpreted. “Adapting the indicators for public reporting has been a challenge,” Davies said.

McDonald said the existence of a “feedback loop” for the QIs has been invaluable, helping researchers understand how their work is being used and how they can make it more relevant to healthcare organizations. “As we place more emphasis on translational research, I think there will be more projects like this,” she said. ❖

In addition to McDonald and Davies, the Quality Indicators research team includes Corinna Haberland and Amy Ku at CHP/PCOR, along with colleagues at the Battelle Memorial Institute and the University of California-Davis.
Medical tech advances likely to fuel big cost increases, studies find

Contrary to the claims of some healthcare technology enthusiasts, research by CHP/PCOR faculty finds that new medical technologies are likely to further inflate future Medicare costs, posing great financial risk to the program.

Emerging treatments such as implantable defibrillators for heart ailments, drugs to prevent Alzheimer’s disease, or more effective cancer treatments could boost spending significantly, with single treatments potentially increasing costs by as much as 70 percent, according to two studies published online by Health Affairs on Sept. 26.

“There’s been a move in some circles to emphasize the ability of medical technologies to solve Medicare’s financial problems. Unfortunately, our results show that's a hope that won’t pan out,” said CHP/PCOR core faculty member Jay Bhattacharya, a co-author of the studies, “Consequences of Health Trends and Medical Innovation for the Future Elderly” (also co-authored by CHP/PCOR director Alan Garber) and “Technological Advances in Cancer and Future Spending by the Elderly.”

“The bottom line is, Medicare is in deep financial trouble, and technological advances won’t fix that,” Bhattacharya said. He added that, costs aside, the medical advances examined in the studies would be enormously worthwhile to many patients if they became widely adopted.

Some savings may be expected if disability rates among the elderly continue to drop, according to the studies. But those savings would likely be overshadowed by increased spending on elderly recipients who live longer due to medical advances and would thus require more years of medical care. “If we cure people of cancer, they’ll die later on of something else, and that something else may be very expensive,” Bhattacharya said.

The elderly currently consume more than $300 billion worth of health care annually, and most of this is paid for by Medicare. Some cost savings may be possible if the number of obese Americans is reduced, according to the “Consequences of Health Trends” study.

The two studies use a detailed model of Medicare spending created by Bhattacharya, Garber and colleagues from RAND Corp. and the Greater Los Angeles VA Healthcare System. The researchers examined the spending increases that might face the elderly through 2030 under several different scenarios, including potential cost spikes caused by 10 new medical technologies that a panel of experts said are likely to emerge during the period.

Some of the technologies would have only modest impacts, including cancer vaccines and better treatments for acute stroke, each of which is predicted to increase elderly healthcare spending by less than 1 percent.

Other technologies, however, could trigger major cost increases. For example, researchers estimated the cost of expanding the use of implantable cardiac defibrillators. If half the patients with new cases of heart failure or heart attacks received the devices, the study found, elderly healthcare spending would rise by $14 billion in 2015 and by $21 billion in 2030. The increase would amount to almost 4 percent of total annual spending.

Other new technologies could cost even more. A preventive treatment for Alzheimer’s disease or improved cancer-fighting drugs could each increase elderly spending 8 percent, and anti-aging compounds — an area of active research in biomedicine — could drive up costs from 14 to 70 percent, according to the studies.

Bhattacharya noted that “these advances would revolutionize care for many people, and that’s obviously a great benefit.” The advances, however, would fuel large increases in healthcare expenditures, for three key reasons. First, the high-tech treatments would themselves be expensive. A relatively low-cost cure for cancer was projected to cost $10,000 per patient, for example, while cardiac defibrillators might cost about $37,000. Second, patients benefiting from the new treatments would live longer, requiring more years of care.

Third, U.S. demographics would play a major role in fueling medical cost increases, as the population of Medicare beneficiaries is growing much faster than the population of younger workers whose payroll deductions fund the Medicare program. “If I were to summarize these studies in three words, it would be, ‘demographics trumps technology,’” Bhattacharya said.

The computer model used in the studies was based on a representative sample of about 100,000 Medicare beneficiaries from the Medicare Current Beneficiary Survey. The model also incorporated information about younger people, using data from the National Health Interview Study.

The studies were funded by the Centers for Medicare and Medicaid Services and the National Institute on Aging. Bhattacharya, Garber and their colleagues at RAND have presented the results to CMS and NIA officials. Medicare actuaries are studying the findings to determine how they might be incorporated into Medicare’s financial projections.

*This article is based in part on a RAND Corp. news release.*
At annual lecture, Wennberg discusses practice variation, urges reform

In his 30-plus years of studying healthcare utilization and costs across the United States, John E. Wennberg has found that just about the only constant in the nation’s healthcare system is inconsistency.

Having compared hospitals and clinics from one region of the country to another, as well as those within the same region and the same healthcare system, Wennberg — director of the Center for the Evaluative Clinical Sciences at Dartmouth Medical School; founding editor of the Dartmouth Atlas of Health Care; and featured speaker for the 2005 Eisenberg Legacy Lecture, hosted by CHP/PCOR on Nov. 3 — has documented large unwarranted variations in the amount, intensity and cost of healthcare services provided to specific patient populations.

The variations, Wennberg explained at the Eisenberg lecture, can’t be explained by illness, patient preferences or the dictates of evidence-based medicine. As a consequence, he pointed out, there is no consensus in the American medical community as to what is the “right” rate of particular medical interventions — nor is there much discussion about the problem of variation, much less what to do about it.

“This never gets discussed at medical staff meetings. It is subliminal behavior,” Wennberg said at the Eisenberg Legacy Lecture, held this year at Stanford in the Bechtel Conference Center. The annual lecture, which honors the memory of John Eisenberg — a renowned health services researcher and former director of the Agency for Healthcare Research and Quality — is funded by the California HealthCare Foundation and is co-sponsored by CHP/PCOR, the Institute for Health Policy Studies at UC San Francisco and the Center for Health Research/School of Public Health at UC Berkeley.

In his 90-minute talk on “Understanding Practice Variations,” Wennberg presented a wealth of data illustrating the phenomenon, and he urged the healthcare community, particularly academic medical centers, to examine and address the variations. To remedy the nation’s overdependence on costly, high-intensity interventions such as surgery and ICU stays, he called for improved physician communication and greater patient involvement in medical decision making.

He also urged reform of the nation’s healthcare financing system, with incentives to encourage clinicians to deliver more efficient, more effective care.

“Our system of healthcare financing rewards the quantity of procedures, not the quality of decision making,” said Wennberg, a pioneer in the study of healthcare utilization and quality. His talk drew some 80 attendees from the three university sponsors and from organizations including healthcare systems, health insurers, biotech companies and healthcare investment firms.

Wennberg described three types of medical services: “effective care” (interventions widely established as medically necessary), “preference-sensitive care” (treatments such as discretionary surgery, for which there are viable alternatives), and “supply-sensitive care” (services involved in managing disease, such as specialist referrals).

He then discussed his most recent research showing striking variations in all three types of care: a comparative study of the performance of individual California hospitals, published Nov. 16 as a Health Affairs Web exclusive, with CHP/PCOR fellow Laurence Baker as a co-author. The study found that some California hospitals spend as much as four times more than others to care for patients with similar chronic illnesses, with no gain in quality or patient satisfaction for those that spend more.

Regarding “effective care,” Wennberg presented data from a Medicare reporting system that tracks hospitals’ compliance with best-practice guidelines for treating conditions including heart attack and pneumonia. Patients at the highest-ranking hospitals received the recommended care 85 percent of the time, while patients at the lowest-scoring hospitals received such care less than half the time. Among California’s academic medical centers, the quality score for treating pneumonia ranged from 64.7 at Stanford Hospital to 52.3 at UCLA Medical Center.

Wennberg lamented that many proven treatments, from beta blockers for heart disease to antibiotics after surgery, are consistently underused. “The irony is that most of these proven interventions don’t cost that much,” he said.

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Trainees win awards at Medical Decision Making meeting

CHP/PCOR trainees **Hau Liu** and **Elisa Long** were recognized last fall as winners in the Lee Lusted Student Prize Competition, one of the most prestigious national awards for trainees in the field of medical decision making. The awards were announced at the close of the 27th annual meeting of the Society for Medical Decision Making, held Oct. 21-24 in San Francisco.

Liu, a trainee with the AHRQ’s Health Care Research and Policy Fellowship Program, won for his presentation on “The cost-effectiveness of parathyroid hormone and alendronate in high-risk osteoporotic women” (co-authors Kaleb Michaud, Smita Nayak, D. Karpf, Douglas Owens and Alan Garber).

Long, a doctoral student in Management Science and Engineering, won for her presentation on “The cost-effectiveness of antiretroviral therapy for injection drug users in Russia” (co-authors Margaret Brandeau, Tatyana Vinichenko, Cristina Galvin, Swati Tole, A. Schwartz, Gillian Sanders and Douglas Owens). Of the 55 student presentations for the competition, Liu and Long were among the four winners selected. Congratulations to them both!

In addition, several other CHP/PCOR researchers presented at the SMDM meeting, including Emily Carter, Mary Goldstein, Kaleb Michaud, Smita Nayak, Gillian Sanders, Tamara Sims and Swati Tole. “They all gave outstanding presentations,” Owens said.

As in the past, CHP/PCOR was prominently represented at the 2005 SMDM meeting, with more than 15 of the centers’ trainees, faculty and affiliates attending. Dena Bravata and Gillian Sanders were the program co-chairs for the meeting; Kathryn McDonald is vice president of SMDM; Gillian Sanders is vice president-elect; and Dena Bravata is a trustee of the Society.

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**Internet use can help patients with stigmatized illness, study finds**

Research has shown that people with stigmatized health conditions, such as mental illness or sexually transmitted diseases, tend to avoid discussing the problem and seeking treatment — a situation that can harm the patient as well as others.

A recent study co-authored by CHP/PCOR fellows **Laurence Baker** and **Todd Wagner**, however, finds that the Internet can be a valuable tool to help break through the stigma of such illnesses, by enabling patients to anonymously seek information and treatment. The study, published in the October 2005 issue of *Social Science and Medicine*, found this was particularly true for psychiatric illnesses such as anxiety and depression.

“The Internet is potentially very useful in situations where getting good medical advice to patients is challenging,” said Baker. “For conditions that can be hard for patients to talk about, the Internet may be of great benefit since it provides a chance to gain information without having to discuss sensitive issues face-to-face.”

While several studies have examined patterns of Internet use among various populations — including those seeking health information — none had specifically examined Internet use among those with stigmatized illnesses. Baker, Wagner and colleague Magdalena Berger hypothesized that people with a stigmatized illness would be more likely than those with non-stigmatized illnesses to use the Internet to seek information and communicate about their health condition. They also hypothesized that, since people with stigmatized illnesses often don’t know about available treatments, those who searched the Internet would be more likely to report that their Internet use increased their use of medical services.

To test these hypotheses, the researchers analyzed a large nationally representative survey of Internet use for health information, allowing them to examine patterns of Internet use among patients with stigmatized and non-stigmatized illnesses. For purposes of the study, the researchers identified four stigmatized illnesses: anxiety, depression, herpes and incontinence. Patients who reported having one or more of these conditions were compared with patients who had non-stigmatized chronic illnesses, such as diabetes, hypertension or back pain.

The researchers explored the respondents’ Internet use in detail by evaluating how often they used the Internet to seek health information; how often they used it to communicate with healthcare providers, family members or others about their condition; how satisfied they were with the information they obtained online; how much time they spent on the Internet overall; and whether their Internet use affected the number of times they saw a doctor or other healthcare provider. The researchers controlled for many factors, but cautioned against drawing causal relationships given the cross-sectional nature of the data.

The study results largely confirmed the researchers’ hypotheses: People with stigmatized illnesses were more...
likely to have used the Internet for health information and to have communicated with a physician online. Significantly, those with a stigmatized illness were more likely to report that they increased their use of healthcare services after using the Internet. In particular, people with psychiatric illnesses (in this case, anxiety and depression) were more likely to turn to the Internet for health information than those with non-psychiatric stigmatized illnesses. Similarly, people with psychiatric conditions were more likely than those with other stigmatized illnesses to report that their Internet use increased their healthcare utilization.

The results aren’t surprising, the authors say, given the privacy and anonymity the Internet allows. “Online information … can be casually perused without classifying oneself as having a mental (or other) illness,” they write in their paper. “This informality may make searching for health information online less intimidating than seeking advice from a health professional.”

The authors conclude that “the Internet may be a good public health education and intervention tool for targeting some people with stigmatized illness.” But these benefits, they caution, assume that (1) the information patients obtain online is accurate and unbiased, and that (2) patients are not overutilizing healthcare services as a result of their Internet use. They note that “the Internet is replete with information of questionable value,” and that “there have been instances of pathological use of the Internet among those with … mental illnesses.”

Despite these caveats, Wagner said he is encouraged by the study results, because they highlight the significant potential health benefits of Internet use, particularly for hard-to-reach patients. “The Internet has made it much easier for the average person to find an enormous amount of medical information very quickly and anonymously,” he said. “This study shows us how patients can benefit from the anonymity of the Internet.”

Wagner noted that while some physicians are wary of their patients’ use of the Internet for medical information, he believes that “physicians shouldn’t disregard this information; instead, they should help their patients manage it.” For example, he suggests that physicians compile a list of the health Web sites that provide, in their judgment, the most accurate and unbiased information.

STIGMATIZED ILLNESS, FROM PAGE 6

Their analyses found that the reduced mortality associated with the use of anti-TNF inhibitors was due primarily to a reduction in cardiovascular disorders. It is unclear whether the reduced cardiovascular risk was due to the anti-TNF treatments or to patients’ reduced use of prednisone, for which anti-TNF inhibitors often substitute.

Since their introduction in 1999, anti-TNF inhibitors have become widely used as a second-line therapy for rheumatoid arthritis patients, thanks to their effectiveness in reducing joint inflammation.

Because the study was based on observational data and not a controlled trial, “we can’t say that more [rheumatoid arthritis] patients should be taking anti-TNF drugs,” said Michaud, a trainee in the Agency for Healthcare Research and Quality Fellowship Training Program. But, he added “the results are reassuring. You’d hope that any medication that’s effective in treating this disease would decrease mortality.”

This study was funded in part by a grant from the Center on the Demography and Economics of Health and Aging (CDEHA).
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(QALY), a measurement that takes into account quality of life as well as length of survival. By comparison, the use of automated external defibrillators on large airplanes costs $36,000 per QALY, and stent therapy for heart attack patients costs $24,000 per QALY.

ICDs are implanted under the skin of patients whose lower heart chambers beat too quickly (ventricular tachycardia) or quiver ineffectively (ventricular fibrillation) and who are at risk of cardiac arrest. The device monitors the rate and rhythm of the heart and sends an electrical shock if it detects dangerous rhythms, helping to avert sudden cardiac death. According to the Food and Drug Administration, 416,000 defibrillators were implanted between 1990 and 2002.

ICDs were originally used in the 1980s on patients who were resuscitated from a cardiac arrest, but heart specialists saw an opportunity to expand the use of the device. “Doctors began to say, ‘We shouldn’t wait for people to drop dead; Let’s use this as a preventive tool,’” said study co-author and CHP/PCOR fellow Mark Hlatky.

Researchers began examining the use of ICDs to prevent cardiac arrest, resulting in eight large, randomized clinical trials that were published between 1996 and 2004. Each study involved a different type of high-risk patient, and six of the eight studies found that ICDs improved patient survival.

“The gain for patients in these studies is quite important, because the benefit is life,” said Paul Wang, a professor of medicine at Stanford who has treated many high-risk cardiac patients with ICDs.

Owens said the pool of patients who could potentially benefit from an ICD continued to grow with the completion of each trial. And the Centers for Medicare and Medicaid Services now estimates that as many as 500,000 Medicare beneficiaries might be eligible for a prophylactic ICD in the United States.

But the devices don’t come cheap, with implantation costs usually exceeding $25,000 per patient. “The device costs more than a new car,” noted Hlatky. “The number of budgetary dollars that the government and private insurers could put towards this is staggering.”

The hefty tab for an ICD poses a difficult challenge to insurers, who must decide exactly which patients to provide coverage for: Any person at risk of cardiac arrest? Just those patients with prior heart attack or heart failure?

Owens, Hlatky and co-author Gillian Sanders — a CHP/PCOR adjunct associate now at Duke University — conducted their study in an effort to help guide such decisions. Using data from the eight trials, the team developed a decision model to estimate the length of life and the expenditures for patients who either had or did not have an ICD implanted for preventive purposes. The researchers assumed that the benefit of the defibrillator would continue throughout the patient’s lifetime, and that the device would be replaced every five years.

Although two of the trials found no benefit from the device in reducing mortality, the researchers found that ICD use was projected to add between 1.01 and 2.99 quality-adjusted life years in the six other studies. “These are very substantial benefits,” said Hlatky. “Quite a few people got a meaningful increase in life expectancy from the ICD.”

The researchers also found that the cost-effectiveness of the ICD compared with the control therapy in these six populations ranged from $34,000 to $70,200 per QALY. These figures indicate that the device is cost-effective for those populations in which a significant reduction in mortality has been demonstrated.

“This increment in life expectancy is substantial compared with many other medical interventions,” the authors wrote. “The incremental cost-effectiveness of the ICD, in appropriately selected patients, is similar to that of other interventions often accepted as cost-effective.”

While federal officials don’t formally consider cost-effectiveness when making Medicare coverage decisions, private insurers could use this information to guide future decisions. Indeed, the Blue Cross Blue Shield Association Technology Evaluation Center, which provides such guidance to certain private insurers, helped fund the study and is likely to share the information with its clients.

The Department of Veterans Affairs and the Agency for Healthcare Research and Quality also provided support for the study. Its findings were covered by the Wall Street Journal, United Press International, the Minneapolis Star-Tribune and ABCNews.com.

*This article was produced by the Stanford School of Medicine’s Office of Public Affairs.*
Media cover studies on state’s hospital costs, kids’ antidepressant use

In the fall quarter, the news media highlighted the following work by, and comments of, CHP/PCOR faculty and affiliates:

• A study led by John E. Wennberg and co-authored by CHP/PCOR fellow Laurence Baker, released Nov. 16 as a Health Affairs Web exclusive, found that some California hospitals spend as much as four times more than others to care for patients with similar chronic illnesses, with no gain in quality or patient satisfaction. In fact, the study found, as the volume of care increased, patient satisfaction and quality of care declined.

The study, funded by the California HealthCare Foundation and the Robert Wood Johnson Foundation, allows direct comparisons of the efficiency of individual hospitals in treating patients with chronic illness, based on Medicare claims from a hospital and its physicians.

The study found that Los Angeles was the most costly healthcare region in California. The average Medicare payment for inpatient hospital care was $43,506 per Los Angeles patient during the last two years of life — 36 percent higher than Orange County, 44 percent higher than San Diego, and 67 percent higher than Sacramento. The findings were covered by the Los Angeles Times and the San Francisco Chronicle.

*This item courtesy of the California HealthCare Foundation

• A study co-authored by CHP/PCOR fellow Randall Stafford, published in the December issue of the Journal of Adolescent Health, found that despite clinical guidelines calling for depressed adolescents to be treated with a combination of psychotherapy and medication, antidepressants began to supplant, rather than complement, the role of mental health counseling between 1995 and 2002. Stafford and lead author Jun Ma examined two national databases that tracked outpatient visits to hospitals and clinics between 1995 and 2002, and assessed the number of visits for patients between age 7 and 17 who were diagnosed with depression.

The researchers found that doctor visits for pediatric and adolescent depression more than doubled during this period, increasing from 1.4 million visits in 1995, to 3.2 million visits in 2002. At the same time, the number of visits in which antidepressants were prescribed rose from 47 percent in 1995 to 52 percent in 2002, while mental health counseling declined from 83 percent to 68 percent. The findings were covered by the Associated Press, Reuters, the San Jose Mercury News, Forbes magazine and CNN.com.

• A study by CHP/PCOR associate Susan Frayne, published in the Dec. 12 issue of the Archives of Internal Medicine, finds that diabetes patients with mental illness are less likely to receive optimal diabetes care than those without a mental illness. Frayne and colleagues examined data for 313,586 VA patients with diabetes, of whom 25 percent had a mental health condition. They found that diabetics with a mental health condition were 24 percent less likely to have had hemoglobin A1c testing, 24 percent less likely to have had their low-density cholesterol tested, and 32 percent more likely to have poor glycemic control. The findings were covered by Reuters Health.

• An op-ed piece by core faculty member Paul Wise, titled “Children’s health gains at risk of reversal,” appeared in the Dec. 22 San Jose Mercury News. Wise asserted that children with chronic illness require two key things — comprehensive health insurance and access to specialty care — and that both are in jeopardy for California’s chronically ill children, due to policy changes that fail to adequately consider children’s special health needs.

On the first point, Wise wrote, comprehensive health coverage for chronically ill children is weakened by a patchwork of county-run programs that have different benefits and eligibility rules. On the second point, the significant gains in children’s health that have been achieved through regional pediatric care networks in California are now threatened by cost-cutting proposals that could reduce chronically ill children’s access to such care, by lumping them in with chronically ill adults.

• Director Alan Garber was prominently featured in a Dec. 15 ABC News special report by Peter Jennings titled “Breakdown: America’s Health Insurance Crisis.” In the documentary, Garber discussed issues including the importance of risk pooling; the impact of rising health costs on businesses; and the need for physicians to consider cost-effectiveness when prescribing treatments.

• Alan Garber provided comment for a Dec. 1 Wall Street Journal article about charities that are funded by pharmaceutical companies and are designed to help insured patients who take expensive medications afford their high co-payments for the drugs. He was also quoted in a Dec. 28 Wall Street Journal article discussing the mounting costs of biotechnology drugs.

• Paul Wise was featured in an Oct. 4 National Public Radio report on the U.S.’s relatively high infant mortality rate compared with other nations. He said a key reason is inadequate health care for women, especially poor women, before they become pregnant. ❖
GLOBAL HEALTH, FROM PAGE 1

devastating effects and the urgency of taking action. He noted, for example, that the number of people who die annually from the three diseases — 6 to 8 million — rivals the death toll from World War II. Sadly, he said, the world’s response has been nowhere near the intensity of the fight waged during World War II; disease control efforts are impeded by insufficient medications, personnel and healthcare infrastructure, along with broader factors including poverty and ignorance.

Noting that three-fourths of those who die from malaria worldwide are African children under age five, Chow lamented that “this disease is robbing Africa of its future.” Regarding HIV, 40 million people are now living with the virus, and 5 million new infections are expected each year. Women are particularly vulnerable to HIV because of a lack of knowledge and empowerment, Chow said. “In many African villages, women have never even heard of HIV, so how can we expect them to protect themselves?”

Chow discussed poverty as a key factor that fuels the spread of and high mortality rates from the diseases. In a world where 40 percent of all people earn less than $2 a day, millions die needlessly because they can’t afford basic interventions. “A mother who works in a poorly ventilated factory and develops TB, dies for lack of a $15 supply of medications,” he said. “A boy gets malaria and dies for lack of a simple mosquito net.” Many people in poor countries buy medicines on the black market, he added, and end up with counterfeits that are worthless.

Another key impediment to progress, Chow said, is a lack of financial incentives to spur research and development of new drugs. The last TB medication used in the standard regimen was released was in 1972, while scores of drugs have been developed for other ailments.

Against this backdrop, Chow said, “We must do more and do it now.” He called for a multi-pronged approach that would improve community health infrastructures, fund more research, train more healthcare personnel, promote partnerships between industry, government and NGOs, and mobilize citizens to lobby their government. Broader efforts are also needed, he added, to promote economic development, increase education (particularly of women), and ensure universal health access.

Despite the challenges, Chow said there is cause for hope, as evidenced by the many innovative efforts underway, particularly public-private partnerships and biotech industry collaborations. Efforts include the Medicines for Malaria Venture, the Global Alliance for TB Drug Development, and BIO Ventures for Global Health.

Chow also cited innovative efforts in academia, such as an Indiana University partnership with a sister hospital in Kenya. Faculty and trainees from the university travel to Kenya to care for patients and educate healthcare workers, while personnel from the Kenya hospital spend time in Indiana, learning new medical approaches and techniques. (In a similar effort, CHP/PCOR faculty member Paul Wise leads a global health residency program in which Stanford medical faculty and trainees spend several weeks in Guatemala, providing patient care, educating health workers and learning about cultural factors that influence health.)

Sometimes effective solutions arise from surprisingly simple sources. Chow told of how researchers in China discovered that a derivative of a common weed, called Artemisinin annua, is 95 percent effective against the most common form of malaria in Africa. Seeking to cut the therapy’s per-treatment cost in half, from $2 to $1, WHO is paying farmers to cultivate the weed in three African countries. “The farmers love it,” Chow said. “It’s easy to grow, and the farmers are making 60 percent more income” than from an equal acreage of corn.

While acknowledging that it can be difficult for U.S. researchers to get attention for projects targeting diseases of the poor, Chow said he’s encouraged by the strong interest he’s seen from students at Stanford and elsewhere. “The Stanford community has a lot to offer,” he said. “With its emphasis on translational research, Stanford is well-positioned to shorten the time between the initial spark of innovation and the deployment of new interventions.”

Approaching global health from a different perspective, Dean T. Jamison gave a Nov. 28 talk at CHP/PCOR on “Exploring Health System and Country Performance on Improving Health Conditions Around the Globe.” Jamison is a professor of education and of public health at UCLA, a fellow of the NIH’s Fogarty International Center, and chair of the Institute of Medicine’s Board on Global Health.

Jamison began by noting that in many countries, “there has been enormous progress in health over the last 50 years,” with health inequalities steadily narrowing, life expectancy increasing, and infant mortality decreasing by 2 percent per year. He cited as successes the eradication of smallpox and the near-eradication of polio. Despite such progress, however, some developing countries are experiencing rising infant mortality and declining life expectancy, due to inadequate healthcare infrastructures and deadly infectious diseases such as HIV/AIDS and malaria.
Announcements from the fall 2005 quarter

CHP/PCOR core faculty member Mary Goldstein, fellow Paul Heidenreich and adjunct fellow Linda Bergthold were selected as members of the California Technology Assessment Forum, a nonprofit forum that evaluates the safety and effectiveness of emerging medical technologies. The group is affiliated with the Blue Shield of California Foundation.

CHP/PCOR core faculty member Paul Wise was selected to chair the advisory board for the new Office of Community Health, established by the School of Medicine to address community health needs through collaborative partnerships with community-based organizations including local health departments, community health centers and school districts. Philip Pizzo, dean of the School of Medicine, announced the new office at the school’s Oct. 4 Forum on Community Health and Public Service.

Executive director Kathryn McDonald represented CHP/PCOR at the first conference of the Global Health Policy Research Network, held Sept. 27-28 in Washington, D.C. The research network, of which CHP/PCOR is a part, is funded by the Bill & Melinda Gates Foundation and is coordinated by the D.C.-based Center for Global Development. The network brings together international experts in public health, economics and other fields to develop original research on global health policy issues. At the conference, McDonald participated in sessions on topics including current priorities for global health policy, and barriers to improving global health.

Mary Goldstein was appointed to the Department of Veterans Affairs Office of Information’s Health Information Systems Executive Board for Health Data Systems. She was also appointed to the Department of Veterans Affairs Patient Care Services’ Committee for Clinical Decision Support Systems.

Welcome to new staff and affiliates:
In the fall quarter CHP/PCOR welcomed these new staff members and affiliates:

John Calcagni, an RA with the FLAIR project, most recently worked at the University of Michigan Medical School’s Department of Family Medicine, as the lead

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And while it is relatively easy to gauge the success of a country’s disease control efforts, Jamison said, it is more difficult to make broader assessments of a country’s performance on health. “How would you know a good health system if you saw one?” he asked. The task of measuring countries’ health performance is complicated by the large number of variables involved, including population demographics, disease severity, and contextual factors such as a country’s water quality, education levels and cultural norms.

Using as a starting point recent research on hospital and physician outcomes for specific interventions (such as New York state’s effort to track hospitals’ mortality rates following coronary bypass surgery), Jamison discussed different ways to evaluate country performance on health.

For example, a country’s current health indicators could be compared against those indicators from five or ten years ago, or they could be compared against those of other countries with similar demographics. Highlighting this latter approach, Jamison presented a graph that plotted various countries’ average life expectancy and infant mortality rates against their average per-capita income and education levels — two commonly used predictors of population health. He then highlighted the outliers: countries that have fared significantly better or worse on their health measures than would be expected given their income and education. “When we identify the outliers, we ask ourselves, What do their health systems look like? What’s different about them?” Jamison said.

Surprising to some, he pointed out, the United States’ health indicators are worse than those of many less-wealthy nations; the U.S. ranks 29th among world nations in life expectancy and 38th in infant mortality. “Whatever we’re doing for children’s health in this country doesn’t seem to be working,” Jamison said.

Meanwhile, nations including China, Cuba and Costa Rica have performed better than expected on their health measures. China’s infant mortality rate, for example, was 14 percent lower than expected in 1962 and 73 percent lower in 1977, despite the country’s large population and low per-capita income. Jamison also discussed China’s campaign in the 1980s aimed at phrasing out government-provided health coverage for many workers and villagers, and transitioning to a system of personal responsibility in which individuals pay for their care out-of-pocket. ❖
In the realm of “preference-sensitive care,” Wennberg presented data showing that rates of knee and back surgery in the area served by Stanford Hospital are more than double the rates of those surgeries in Los Angeles and San Francisco. “This is prima facie evidence that there’s a problem with our clinical decision making,” he said.

Wennberg’s analyses reveal that such variations can’t be explained by patient characteristics such as age, sex, ethnicity or patient preferences. “What matters most in determining the variation in use rates is not the condition you have or the treatment you may want, but the physician whom you ask for advice,” he said. Wennberg has also found no clear association between the supply of certain types of surgeons and the rates of surgeries they commonly perform.

To reduce overuse of discretionary surgery, Wennberg advocated “shared decision making,” in which patients take an active role in making decisions about their care. “When the choice of treatment involves tradeoffs, patient preference should be the driver of medical decisions, but too often the decision is made by the doctor,” he said. A good example is whether a breast cancer patient should undergo a mastectomy or a lumpectomy: Both procedures are medically viable options, but have very different lifestyle implications for the patient.

Wennberg cited clinical studies showing that patients who have used decision aids are better informed about their treatment options and feel more comfortable with their chosen treatment. Patients using shared decision making also choose surgery less often than other patients.

Regarding “supply-sensitive care,” Wennberg’s latest research has found wide variation among California hospitals in their number of inpatient days per patient, for Medicare enrollees in the last six months of life. Such patients spent an average of 19.2 days in the hospital at UCLA Medical Center, for example, compared with just 11.6 days at UC Davis.

Wennberg said the American medical community and the public must challenge the assumption that more care is better. In fact, the opposite appears to be true. He cited a recent Dartmouth study that examined whether patients with hip fractures, colon cancer and heart attacks who lived in U.S. regions with a higher intensity of medical interventions had better outcomes than those living in regions with less care. The study found that patients in the higher-intensity regions had higher mortality rates and worse functional measures.

Improving healthcare delivery in the United States will require major changes in healthcare financing as well as culture, Wennberg said. “This isn’t just a matter of cajoling doctors to talk to their patients more — it’s a matter of changing the financial incentives in the system.”

As a promising development, he cited the Medicare Health Care Quality Demonstration Programs that were created under the Medicare Modernization Act and are set to begin in early 2006. Under the programs, participating health systems will test major changes to improve healthcare quality and efficiency, including alternative payment systems and modifications to Medicare’s traditional benefit package.

In addition to the Eisenberg lecture, Wennberg led two CHP/PCOR-hosted discussion meetings with groups of faculty and postdoctoral trainees. “This event was a wonderful opportunity for us to bring together the health policy community and discuss with a national expert important questions surrounding practice variation,” said CHP/PCOR executive director Kathryn McDonald.

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Publications from the fall 2005 quarter


Dexter F, Macario A, Epstein R, Ledolter J. “Validity and usefulness of method to monitor surgical services’


Ma J, Lee KV, Stafford RS. “Depression treatment during outpatient visits by U.S. children and adolescents.” *Journal of Adolescent Health* 37, no. 6 (December 2005): 434-442.


Presentations from the fall 2005 quarter

Don Barr:
“How can we teach students to avoid unconscious race bias when they aren’t even aware it exists?” Presented at the conference, “Just Doctoring: How Can Medical Education Address Racial and Ethnic Disparities in Health Care?” Oct. 6-8, 2005 at Loyola University Chicago’s Stritch School of Medicine, Chicago, Ill.

Kate Bundorf:

Alain Enthoven:

Michael Gould:

Hau Liu:

Susana Martins:
“Group visits to improve hypertension management.” Poster presentation on behalf of the ATHENA project, at the Bay Area Clinical Research Symposium, Oct. 14, 2005 in San Francisco, Calif.


Kaleb Michaud:
“The cost-effectiveness of parathyroid hormone and alendronate in high-risk osteoporotic women.” American College of Rheumatology Annual Scientific Meeting, Nov. 13-17, 2005 in San Diego, Calif.

“Reduced mortality among RA Patients treated with anti-TNF therapy and Methotrexate.” American College of Rheumatology Annual Scientific Meeting.


Rudolf Moos:
“Social contexts and mechanisms of behavior change.” National Institute on Alcohol Abuse and Alcoholism meeting, on “Mechanisms of Behavior Change,” November 2005 in Rockville, Md.

Tamara Sims:


research assistant for two projects on the development and implementation of a Web-based health screening reminder system in primary care practices. He received a BS in biological sciences from Kent State University.

Cynthia Holland, CHP/PCOR’s new administrative assistant, previously served as office manager for Connect Direct Inc., a Redwood City direct marketing and advertising agency. She has worked in administrative positions at Bay Area firms including Palm Inc., Legacy Partners and Citicorp Credit Services.

Jeffrey Rideout, a new CHP/PCOR adjunct associate, is vice president of the Internet Business Solutions Group in the Healthcare Practice at Cisco Systems, and is also Cisco’s medical director for health policy and benefits. He was previously president and CEO of Blue Shield of California’s non-profit charitable foundation, and chief medical officer for Blue Shield. He is a board-certified internist who completed residency training at UC-San Francisco. He received his MD from Harvard and his undergraduate degree from Stanford.

Patricia Sinnott, a new CHP/PCOR associate, is a health economist with the VA Health Economics Resource Center. Her research interests include the evaluation of healthcare provider quality and efficiency, aspects of workers’ compensation, and the economics of physical therapy and rehabilitation. She was previously a senior manager at the Pacific Business Group on Health. She received a BS in physical therapy from UC-San Francisco, and received an MPH and a PhD in Health Services and Policy Analysis, both from UC-Berkeley.

Nicole Smith, a data analyst working on projects with Grant Miller and Jay Bhattacharya, previously worked for Intermountain Health Care as a data analyst and statistician. Her previous experience includes serving as a research assistant in the economics department at Brigham Young University. She received a BS and MS in statistics, both from Brigham Young University.

Ellen Thompson is an RA working with Michael Gould on a project to develop and validate a computer-based decision-support system for management of solitary lung nodules. She recently completed a master’s degree in Life Sciences Communication from the University of Wisconsin. Her research interests are in the areas of science and communication. She received undergraduate degrees in biology and French from Washington University.

Grants submitted:
“Free to be Healthy”
Carnegie Foundation/Cato Institute
Principal investigator: Jay Bhattacharya
Project period: 1/1/06 - 12/31/06

“Politics and Public Health: Responding to the HIV Crisis in Russia”
FSI/Presidential Fund for Innovative Studies
Principal investigator: Douglas Owens
Project period: 1/1/2006 - 12/31/08

“The Causes and Consequences of Indoor Air Pollution: An Experimental Investigation in Bangladesh”
FSI/Presidential Fund for Innovative Studies
Principal investigator: Grant Miller
Project period: 1/1/2006 - 12/31/08

Grants awarded:
“Economics of Aging: Medical Expenditures of the Elderly”
National Bureau of Economic Research subcontract
Principal investigator: Alan Garber
Project period: 4/1/05 - 3/31/06

“An Applied Analytic Initiative in Child Health Policy”
Packard Foundation/Lucile Packard Children’s Hospital
Principal investigator: Paul Wise
Project period: 10/1/05 - 9/30/07
Research in Progress seminars and special events, fall 2005

**Sept. 28:** Yu-Chu Shen. “Is Managed Care Still an Effective Cost Containment Device?”

**Oct. 5:** Kathryn McDonald (facilitator), Presenters’ Practice Session for Annual Meeting of the Society for Medical Decision Making

**Oct. 12:** Joseph Mikels, “Going with Your Gut Feeling: Age Differences in Affective Versus Cognitive Processing of Healthcare Information”

**Oct. 26:** Anita Tucker, “Measuring Interpersonal Processes of Care in Diverse Populations”

**Nov. 2 (special seminar):** John E. Wennberg, “2005 Eisenberg Legacy Lecture: Understanding Practice Variations”

**Nov. 9:** Grant Miller, “Contraception as Development? New Evidence from Family Planning in Colombia”

**Nov. 16:** Douglas Owens and Swati Tole, “Assessing the Costs and Benefits of Screening for HIV”

**Nov. 28 (special seminar):** Dean T. Jamison, “Exploring Health System and Country Performance on Improving Health Conditions Around the Globe”

**Nov 30:** Peter Chira, “Teens and the Internet: Using Health Technology to Improve the Transition Process for Adolescents with Chronic Illnesses”

**Dec. 13 (special seminar):** Jack C. Chow, “Leadership in Combating HIV, Malaria, TB and Other Emerging Infections: How can the Research Community Help?”

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About CHP/PCOR

The **Center for Health Policy** (CHP) and the **Center for Primary Care and Outcomes Research** (PCOR) are sister centers at Stanford University that conduct innovative, multi-disciplinary research on critical issues of health policy and healthcare delivery. Operating under the Freeman Spogli Institute for International Studies and the Stanford School of Medicine, respectively, the centers are dedicated to providing public- and private-sector decision-makers with reliable information to guide health policy and clinical practice. CHP and PCOR sponsor seminars, lectures and conferences to provide a forum for scholars, government officials, industry leaders and clinicians to explore solutions to complex healthcare problems. The centers build on a legacy of achievements in health services research, health economics and health policy at Stanford University. For more information, visit our Web site at [http://healthpolicy.Stanford.edu](http://healthpolicy.Stanford.edu)