A Fragmented System: Prospects for Health Reform

CHP/PCOR core faculty member Victor R. Fuchs was the honored guest and speaker for the 2007 Eisenberg Legacy Lecture, a yearly lecture series co-sponsored by CHP/PCOR, the University of California, Berkeley, and the University of California, San Francisco, and funded by the California HealthCare Foundation.

Fuchs—regarded as a father of the field of health economics—gave a talk entitled “Reflections on Health, Health Care, and Health Care Reform” to an audience-packed room at the Berkeley campus.

Stephen Shortell, dean of the UC Berkeley School of Public Health, welcomed the audience and began by describing Dr. John Eisenberg, a renowned internist and health services researcher who directed the Agency for Healthcare Research and Quality from 1997 to 2002, in whose memory the lectureship series was established.

CHP/PCOR director and core faculty member Alan M. Garber introduced Fuchs, noting that he was “one of the first social scientists to probe deeply into the determinants of health.”

He continued, “One of his most unique characteristics is his ability to reach across from the world of economics to diverse audiences, exerting a large influence in many areas.”

Fuchs began his talk by discussing determinants of health and the changing landscape of health economics. Previously termed “medical economics,” health economics emerged out of the conception that if one does not start by examining health, then it may be less productive to examine medical care and other related areas.

Determinants of health, including genetic endowment, psychosocial environment, physical environment, socio-economics, individual behaviors, and medical care, have a major impact on health outcomes and on the ways that health

Health Care Reform, continued on page 3

McDonald Receives Saenger Distinguished Service Award

Congratulations to CHP/PCOR executive director Kathryn M. McDonald, who was awarded the Saenger Distinguished Service Award at the Society for Medical Decision Making’s 29th Annual Meeting!

The award recognizes service to SMDM in terms of leadership, role in the operations of the Society, and the contributions to the scientific and educational activities of the Society.

“It was a great honor, quite a surprise, and somewhat embarrassing [to receive the award],” McDonald expressed. “I feel too young to get an award with the word ‘distinguished’ in it. And, there are so many people who serve SMDM tirelessly. I felt like sharing it with everyone who has served with me on a variety of committees.”

Saenger Award, continued on page 2

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SMDM Meeting Convenes Medical Researchers

October 2007 marked the 29th Annual Meeting of the Society for Medical Decision Making (SMDM), held in Pittsburgh, Pa. The theme of the meeting, “Exploring the Science of Decisions,” promoted coverage of a wide range of health topics.

The meeting consisted of series of symposia, workshops, courses, invited speakers, and abstract sessions, pointing to the contributions of SMDM members that have improved medical decision making at all levels nationally and internationally.

CHP/PCOR core faculty member Douglas K. Owens spoke in a special symposium “Evidence-based Comparative Effectiveness in the United States—Where Is It Going and What Role Should SMDM Play?”, along with Carolyn Clancy, director of the Agency for Healthcare Research and Quality and other prominent health care leaders.

Scientific abstracts presented included work by current Stanford trainees, Eran Bendavid, Elisa Long, and Tamara Sim. Previous trainees also presented numerous abstracts.

“All the SMDM meetings have such high-caliber science, representing an interesting span of fields,” said Kathryn M. McDonald, CHP/PCOR executive director and senior scholar. “The meetings are always a place where I learn lots of new things.”

FALL MEDIA MENTIONS

Media Mentions are a compilation of select CHP/PCOR-relevant daily media reports produced by the Stanford School of Medicine’s Office of Communication & Public Affairs. Media Mentions are edited by CHP/PCOR editor Amber Hsiao.

CHP/PCOR core faculty member Alain C. Enthoven was featured in a Milwaukee Journal Sentinel article (July 12) that discusses his talk about sweeping reform in Wisconsin’s universal health proposal. Enthoven was in Wisconsin to discuss sweeping reform of health care, calling for a proposal that would provide universal health coverage to nearly everyone in the state.

CHP/PCOR core faculty member Paul H. Wise provided comments in a San Jose Mercury News article (Oct. 12), that discusses a finding from the University of Washington-Seattle regarding children’s health care. Researchers at the University found that children only get about half the recommended treatment for common medical problems, such as asthma and obesity, which potentially leads them to an unhealthy adulthood.

A Washington Post Op-Ed (Oct. 14) discussed a Committee for Economic Development report. CHP/PCOR core faculty member Alain C. Enthoven and adjunct fellow Robert B. Chess were involved in the committee that put together the report, which examines the U.S. employer-based health care system and the restructuring of the current health care system to control costs, improve quality of care, and improve coverage.

Media Mentions, continued on page 11.
Arguing that these factors have far-reaching effects on health, Fuchs explained that, at any given time, medical care is a relatively unimportant determinant of differences in life expectancy across populations in various countries. However, over time, advances in medical care have been the “most important determinant of increases in life expectancy since World War II,” even though there is “widespread agreement that [medical technologies] are the main contributor to rising health care expenditures.”

Fuchs touched upon other major policy challenges, including health insurance coverage and massive health expenditures that have failed to address the problem of the 47-million uninsured, as well as quality of care issues.

“The United States spends more relative to other countries—50 to 60 percent higher in per capita expenditures compared to the next highest country in health care expenditures,” he explained.

Fuchs also discussed the various types of health care and insurance arrangements, each of which has weaknesses. None may be a promising long-term solution to the health system problems. For example, he argued that the United States depends too much on employment-based insurance that induces high costs and provides tax subsidies inequitably through the employer.

On the government-funded end, he pointed to income-testing for coverage for programs like Medicare and Medicaid, making the case that these systems require people to “have low income in order to have insurance” and “put people in a situation where every time they get a better, higher-paying job, or get a little education to improve themselves, they get hit with an effective marginal tax rate that is more than what rich people pay.”

As rising salaries cause low-income workers to lose eligibility, these individuals get kicked out of the system and are left with no coverage.

Fuchs also described the fragmentation of the delivery system as “still, to a large extent, a cottage industry. You have poor coordination of care... and you just are not getting as good quality care or efficient care as you would like to get.” Moreover, today’s most promising technologies are not being adequately assessed for cost effectiveness.

These factors, along with many others, have caused the perfect storm of overutilization. Even though U.S. physicians get paid more than in most other countries, physicians’ net incomes only amount to approximately 10 percent of the health care bill, according to Fuchs. He further elaborated that the third-party payment system contributes at least in part to the higher costs, even if they are able to negotiate lower rates with health care providers.

“Most people who have insurance are not bearing the full cost of what they buy,” Fuchs said. “The law of economics says that the lower the price, the more you’re going to buy; third-party payment lowers costs of health care, but there is an economic self-interest on the provider’s part. Since they are getting paid fee-for-service, their self-interest is utilization.”

There is also the issue of aggressive marketing by producers of drugs, devices, and other supplies that are now being targeted at patients. Defensive medicine is yet another problem that leads to a “tendency to use more costly drugs, tests, procedures, and the services of health professionals than is appropriate.”

Fuchs concluded the presentation by discussing conditions for cost-effective care that are needed in health care reform: information, infrastructure, and incentives. Information and further research on cost-effectiveness can lead to better guideline formation and treatment; infrastructure development is necessary for strong coordination of treatment of conditions, especially ones that require interdisciplinary teams; and better incentives must be present as it is “hard to swim upstream” to battle these issues in the current health care system.

“The biggest challenge in reform is to address how to make technologic innovation and diffusion more rational,” Fuchs said. “That is what is going to affect the rate of growth of expenditures over time.... If you want to affect the rate of growth, you need a system in place that is going to make the technological innovation process more rational.”

Referring to attacks on the current reform proposals, Fuchs comments, “Some will say that the devil is in the details, though I don’t think that is the whole story. If you don’t have the essentials to health care reform right, then it isn’t going to work.”

Fuchs argues that these essentials include providing health care coverage for everyone on a basic plan funded by a dedicated tax. Additionally, there needs to be a system for administration and accountability structured like the Federal Reserve where the control is in the hands of someone in it for the long haul. Such an independent organization should “hire the best people to be on staff with a long-term commitment and be accountable to Congress and the President, but at an arms-length.”
HIV/AIDS Takes Toll on Lives of Orphaned Elderly

The bedrock of care for the elderly is slowly being uprooted in Africa. CHP/PCOR researchers are examining the impact of the HIV/AIDS epidemic on the elderly, a population that has received little attention till now.

HIV/AIDS has had a profound impact on all aspects of life for people in sub-Saharan Africa. Even though the region's population only accounts for 11 percent of the world’s population, nearly 70 percent of people globally living with HIV/AIDS reside there.

The epidemic has posed serious threats to economic and social stability, as family structures are being uprooted in cultures where elders traditionally rely on working-age adults as caregivers. The HIV epidemic has undercut that structure, leading many seniors—approximately 1 million, the size of the population of San Francisco—with no working-age caregivers.

Much attention has been paid to the issue of children orphaned by HIV/AIDS, but researchers at the Center for Health Policy and Center for Primary Care and Outcomes Research (CHP/PCOR) are currently examining how HIV/AIDS is affecting living arrangements for the elderly population in sub-Saharan Africa.

The project, entitled “The HIV/AIDS Pandemic and Africa’s Orphaned Elderly,” is funded by CHP/PCOR’s Center on the Demography and Economics of Health and Aging.

“The HIV epidemic in Africa has disrupted the population in many ways, but one effect that has not been extensively studied is the effect on caregiving for elderly people in Africa,” explained Jay Bhattacharya, a CHP/PCOR core faculty member and one of the researchers involved in the project. “In much of Africa, there is a common family structure where the older people in the family will come and live with their sons and daughters.”

In order to investigate the effect of the HIV/AIDS epidemic, CHP/PCOR core faculty members Grant Miller and Bhattacharya, and Stanford University student Tim Kautz obtained data from UNAIDS—the Joint United Nations Program on HIV/AIDS—and have matched it with another data source of high-quality information on the living arrangements of individuals in 18 countries.

It is fairly novel to use this latter data source—the Demographic Health Surveys—for a study of the elderly, as opposed to the more historically common use of researching women, children, and reproduction in low- and middle-income countries.

“The most interesting part of this study, to me, is not that HIV creates more orphaned elderly—it is almost guaranteed that increases in HIV mortality rate will leave some elderly without caregivers,” Kautz expressed. “The surprising part is the magnitude of the problem. These 18 countries only represent about 60 percent of the population of sub-Saharan Africa, so the scope of the problem is probably even broader than we estimate.”

By relating the evolution of AIDS mortality in different African countries over time with changes in living arrangements amongst the elderly, the data have allowed the researchers to parse out rather precise information regarding familial relationships and living arrangements.

The focus here, of course, is to examine how elders are being cared for in spite of the epidemic.
Orphaned Elderly, continued from page 4

“Usually if people foresee a caregiver dying, they would make other arrangements. The fact that you see so many people living alone, despite all these extra arrangements that people make, suggests the orphaned elderly problem is an extreme one.”
—Jay Bhattacharya

These are not elderly people who are affected only because a working-age caregiver died,” Miller explained. “Rather, these are people for whom there also hasn’t been any fallback or alternative arrangement made to live with a distant relative or someone else. These are people who used to cohabitate with a working-age caregiver and now don’t.”

This distinction makes all the difference. Bhattacharya explained, “Usually if people foresee a caregiver dying, they

options aside from relying on their families for long-term care,” Miller said. “A less extreme but potentially very costly or consequential outcome is that you live with a less closely-related or unrelated working-age adult, though we can’t say directly if that’s worse than

HIV/AIDS is also distinctively different from other diseases. Most diseases afflicting large populations tend to kill people at very young and very old ages. HIV/AIDS, however, is unique in that its impact is disproportionately on adults in their prime working years.

“We make the assumption that people tend to be less healthy when disability occurs at early ages, so these are people likely in trouble. But, it would be nice to know more precisely what the functional status of these people is in order to figure out the right way to support them.”

And with little formal sector support for the elderly—such as the existence of public pension programs seen in wealthier countries—the problem is exacerbated.

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“The data suggest that there needs to be some sort of systematic way to address the orphaned elderly problem—right now, it just seems like it’s not being addressed at all,” Bhattacharya said. “Solutions will vary a lot by country. In some, it might be possible to have group homes, where you wouldn’t limit it to AIDS orphans, but open it to anyone living alone. In other countries, that might not be possible because the concentration of older people living alone is not high enough.”

TIM KAUTC, a Stanford University student, volunteered in Kikwe, Tanzania, during the summer of 2005 for a program in which he gave a presentation on HIV prevention in local schools. Crafting a wooden spoon, Kautz and his host family’s grandfather pause for a photo.
FEATURED Q&A

Stepping It Up a Notch
Using a Pedometer to Improve Health

A new study suggests that you might want to consider including a pedometer in your daily routine, but not without a handy diary and goal in mind. CHP/PCOR senior scholar Dena M. Bravata led a recently-published study in the Journal of the American Medical Association to evaluate the association of pedometer use with physical activity and health outcomes among outpatient adults. Bravata shares her motivation for conducting the systematic review, as well as some rather promising findings for those less-inclined to reach a goal of 10,000 steps per day.

>> Why pedometers?

The Japanese have been using the pedometer for a long time, even way before they became popular in the United States. In Japan, there’s a culture of walking clubs—it’s where the “10,000 steps-a-day” slogan originated. The purpose of this systematic review was to answer the question whether use of a pedometer increases people’s physical activity and improves their health.

Also, I’m a doctor, and I’m sometimes faced with 75-year-old patients who have never had a gym membership—there’s not physical activity beyond maybe some light housework or going grocery shopping in their daily routines.

There is no way that I’m going to be able to get them from that to 90 minutes of moderate exercise a day, as recommended by the American College of Physicians for someone who wants to lose weight. That’s not practical. So, that also motivated me to do the study.

If you’re able to get patients toward 10,000 steps a day using a pedometer, that’s pretty close to the Surgeon General’s recommendations of 30 minutes of moderate exercise a day. Once I get them going, then maybe I can get them to do more. Otherwise, it’s just not feasible, especially for the elderly.

>> So how was physical activity affected by the use of a pedometer?

We found on average that if you wear a pedometer, you increase your physical activity by about 2,000 steps per day. That’s equivalent to walking an extra mile a day. And depending upon how fast you walk, burning about 100 calories.

In the randomized control studies we looked at, people increased the number of steps they took each day by 2,491. In the observational studies, it was 2,183 steps per day—a 27 percent increase from the baseline. Five days was the minimum number of days participants had to have worn a pedometer, and 104 days was the maximum, with an average of 18 weeks.

We tried to ask what were the things that were really associated with physical activity. A couple things really came out: one was the use of a step diary, and the second was having a step goal.

I was interested in knowing if 10,000 steps a day was a better goal than any other goal or not having a goal, and the answer is that having a goal is clearly associated with increase in physical activity. There were four studies that did not provide pedometer users with a goal, and none of those showed an increase in physical activity. Clearly, having a step goal is key, and that makes a lot of sense, right? Because when you are looking at a pedometer, you think, “Oh, I walked 5,000 steps today. I should be walking more.”

However, we found no difference in having 10,000 steps per day than having any other goal. Just having some goal was associated with an increase in physical activity. For example, some of the studies prescribing individualized step goals did not seem to lead to any greater or lesser improvement of physical activity.

On the goal part—people tend to not achieve their goals, but having a goal is still important. I think that the reason why the step diary is important is because at the end of each day when you write down how many steps you walked, what people end up doing is they go back and see patterns of what they did. We are all creatures of habit, so on average, I am getting 5,500 steps, and I may see that I take 2,500 steps more on days where I take a walk at lunch.
We found on average that if you wear a pedometer, you increase you physical activity by about 2,000 steps per day. That’s equivalent to walking about an extra mile a day.
—Dena M. Bravata

>> Were there other significant biological measures affected by increased activity?

Yes—Another finding was that people who used pedometers improved their health. In particular, they lost weight and reduced their blood pressure. There was an average decrease in Body Mass Index (BMI) of 0.4—and this is from a sample of patients who had a BMI baseline of 30, which would qualify them in the “obese” category. By decreasing the BMI just by 0.4, that brings them into the “overweight” category.

People decreased their blood pressure by 3.3 millimeters of mercury. That might not seem like a lot, but it’s actually a remarkable finding for many reasons. The first reason is that these people did not have very high blood pressure to begin with, with a systolic range of 130 to 140, and diastolic range of 80 to 90; this put many of them in the “Prehypertension” range. So given that—and they aren’t taking blood pressure medicine—to reduce it by this much over is pretty dramatic.

The people who reduced their blood pressure the most were folks who had the highest blood pressure at baseline, and also people who walked the most. However, weight loss was not a predictor of reduction in blood pressure.

The people with the greatest reduction in blood pressure weren’t people who lost the most amount of weight. This suggests that an increase in physical activity for some people, doesn’t necessary lead to a reduction in weight loss. It might still be that they are doing really good things for themselves, though, by reducing blood pressure.

>> So what were the predictors of people who did lose weight?

While pedometer users, on average, lost weight, the people who lost the most weight were not the people with the greatest increase in steps per day.

What that suggests is that people wearing a pedometer were either doing physical activity immeasurable by the pedometer or maybe once they put it on, they were motivated to go swimming, weight lifting, and engage in other physical activities that don’t trip the pedometer counter.

Or, they were clearly watching their diet—you can see how that would happen. You have your pedometer on, and you see you’re not walking as much as you should so maybe you eat a little less. Or, maybe it’s a combination of these factors.

>> How was the review conducted, and why were 2,220 of the articles excluded from the review?

We looked at 2,246 articles, and in the end found 26 studies that met our inclusion criteria. We didn’t include studies that were really short; if you didn’t wear a pedometer for at least five days we didn’t include it. We also didn’t include any interventions that took place in a hospital—the whole point is that we want to know about patients outside of this setting.

We also didn’t include studies on dairy cows. [laughter] When cows go into estrus, apparently their physical activity changes, so we went through a lot of studies where they put a pedometer on the forelock of a cow and measured their physical activity because it’s directly related to the amount of milk they produce.

>> Seems like a reasonable exclusion criteria. What types of people, on average, received the interventions that you examined in the review?

The mean age of participants was 41-years-old, with a range of +/- 9 years. A few of the studies had individuals 60-years-old and up. Eighty-five percent of the subjects were women, since the purpose of many of these studies was to enroll post-menopausal women, or to only include women, etcetera.

>> So how has the study affected your own practice?

The findings are very interesting. Many of my patients are frustrated by their inability to lose weight. Now, I can point to these finding and say look, weight loss has been an issue for you—get out there and do a little more physical activity, and maybe even reduce your blood pressure a little bit without having it necessarily be all about the weight loss.

* * * * *

CHP/PCOR researchers involved in this systematic review include: assistant director of research Vandana Sundaram, research assistant Allison L. Gienger, previous fellows Nancy Lin and research assistant Robyn Lewis, and fellow Ingram Olkin.
During December 2007, I accompanied Dr. Paul Wise to San Lucas Toliman, Guatemala. He has been doing clinical work and research in this area for decades, and has a very close relationship with many members of the community.

The purpose of my trip was two-fold: (1) To get a sense for what international health work looks like on the ground as I am currently applying to medical school and hope to do similar work once I am a physician; and (2) To see an example of a small project relating health and governance—by associating land redistribution with increased birth weight—a microcosm of the larger project on health and governance on which I have been fortunate to work with Dr. Wise this year.

I came away from this trip with a better understanding of the importance of public health work, the challenges involved in practicing medicine abroad, and the significance of the Health and Governance project I work on here at PCOR. I feel more enthusiastic than ever about going to medical school.

—Moira McKinnon
RESEARCH IN BRIEF

GENDER USE OF CARE IN THE VA

There has been a dramatic increase in the number of women veterans in the past 10 to 15 years. Women now comprise approximately 20 percent of the veteran population, and this has led to an increasing awareness of the need for women veterans’ services. CHP/PCOR associate Susan M. Frayne led a recently published study, “Gender and Use of Care: Planning for Tomorrow’s Veterans Health Administration” (VHA), that examines utilization and costs of VHA care in women versus men veterans.

“The VA has taken more notice of women veterans and has taken a lot of steps to improve clinical services, setting up comprehensive women’s centers, establishing national women veterans’ health programs, and more, but little research has been conducted for women veterans on their special health care needs,” Frayne explained.

The work started a few years ago when the VA Department of Research and Development Services began to increase research focusing on women veterans to inform what the research needs were. The group of investigators was interested in women’s health research and formed a women’s health research agenda-setting committee. Frayne was on this committee, which conducted work that culminated in a meeting in 2004 called the Evidence-Based Agenda-Setting Conference where they decided what was important to the VA for care of women veterans.

“We realized that we needed to gather some data [in order to address women veterans’ concerns] because there was very little to work off of to base our recommendations,” Frayne said.

The group took advantage of the available VA national administrative data and did an analysis that was reported at the agenda-setting meeting. The findings showed that women veterans tend to be younger than male veterans. Women’s unadjusted health care use of outpatient services was also approximately 11 percent higher than for men; this decreased to 1.5 percent higher after adjusting for age and medical conditions.

This translates to an exceptional finding: because men veterans are known to have a worse health status than men in a general population, the fact that women veterans were using health care services as much as fairly ill men in the general population is remarkable, according to Frayne.

Furthermore, when utilization rates were broken down by medical conditions and mental health conditions, the researchers found that women who had both a medical and mental health condition were particularly heavy users of outpatient care, and they used services more heavily than did men who had mental and mental health conditions.

“I think this presents a couple of issues: one is that women veterans are the fastest growing sub-population of the VA population,” Frayne said. “The fact that women veterans use outpatient services as heavily or more heavily than men suggests that, as the women population continues to increase, the VA needs to have room in capacity, including gender-specific needs.”

She continues, “The second thing is that the women veterans in this study are relatively young. As this current cohort of women veterans age, health care utilization may increase further and impact our capacity to provide care. Finally, the data supports the idea that models of care that simultaneously address medical and mental health needs for veterans are needed.”

Given these important policy considerations, an integrated-care approach may be key to providing interdisciplinary care.

“One of the advantages of the VA is that it is a unified health care system, so evidence-based practices can be implemented system-wide,” Frayne said. “There are opportunities for quality improvement that can be implemented and tested for effectiveness. There are good opportunities in the VA to do research on these types of questions concerning gender use of services.”

* * *

CHP/PCOR associate Susan M. Frayne is an associate professor of medicine at the VA Palo Alto Health Care System. A general internist, she previously founded and directed a comprehensive women’s health center in Boston in which medical and mental health services were closely integrated. She conducts health services research at the interface of medicine and mental health.

Other CHP/PCOR members involved in the study include faculty fellow Wei Yu and associate Ciaran S. Phibbs.

HEALTH RISK ASSESSMENT TOOLS

On November 28, research conducted by the Health Management Corporation (HMC)—WellPoint’s disease management subsidiary—was presented at the Center for Disease Control and Prevention’s annual National Wellness and Health Promotion Summit. CHP/PCOR adjunct associate Tony Linares serves as a consultant with HMC, and was part of the analytics staff on the presented project that focused on health risk assessment (HRA) as a trigger to wellness. Other analytics staff members include Thomas Kotsos, Griselda Chapa, Kenechi Nnamani, and Leah Dewey.

HMC provides a range of services that address primary, secondary, and tertiary prevention. In the clinical setting, this translates into avoiding illness through wellness interventions, mitigating illness through disease management, and providing comprehensive services to members with more complex conditions, such as cancer.

Health risk assessments (HRA) have been used as a population health profiling tool for at least 25 years. Recently, because of increased evidence of the impact lifestyle variables have on lifetime health costs, morbidity, and mortality, there has been an increased interest in HRA responses.

Currently, the responses are viewed not only as an assessment of personal health, but also as a logical springboard to wellness programs that offer evidence-based interventions which can prevent, delay, or manage illness. Because HRA information is often a gateway for services, it can provide an important early indicator to help gauge respondents’ willingness to change or participate in future interventions tailored to their unique needs.

The study included a sample of 1,440 patient from a state-sponsored health plan. The outcome was the respondents’ willingness to change their behavior in relation to their diabetes risk. Analysis was done using logistic regression to model willingness to participate in future wellness programs (dependent variable). Independent variables included: (1) demographic variables; (2) self reported risk factors; and (3) HRA derived diabetes risk score. There are four risk score levels calculated by online logic, ranging from low to very high risk.

Controlling for age and gender characteristics, the results indicated a statistically-significant increase in the respondents’ willingness to change their behavior as future diabetes risk increased from low to super high.

The higher the risk score the more likely an individual wanted to be contacted by a disease management enrollment team. For each level increase in diabetes risk, the ratio of those agreeing to be contacted for future follow-up to those not agreeing increased by a statistically-significant amount of 25 percent.

Risk Assessment, continued on page 15
Although she has spent over ten years in academic research, CHP/PCOR data analyst and project manager Jennifer Hayes has experienced the world from many perspectives.

Originally from Boston, Jennifer completed her Bachelor’s degree in psychology and earned Masters’ degrees from both Boston University and Harvard University. However, when not working toward her degrees, Jennifer also spent four years as a residential child care worker for troubled children, spent time abroad as a teacher in Australia and Greece, and even spent a summer working as an international flight attendant.

At Harvard, Jennifer’s coursework focused on educational research methods and data analysis. After graduation, Jennifer lived in Philadelphia for four years, where she assisted on the patient safety culture projects with CHP/PCOR adjunct associate and co-Investigator Anita Tucker at the Wharton School of Business.

“I was assisting with the transcription and coding of the qualitative data when Stanford needed a data analyst/project manager for the project.” Jennifer jumped at the opportunity to move to the west coast, driving across the country to start in her new position without ever having been to the Palo Alto area. Jennifer muses, “I knew I could always return to the east coast when the project ended, but now I really hope to stay!”

One project in particular is an ongoing intervention designed to have hospital senior leaders observe frontline workers in order to gain a better understanding of the obstacles to providing safe patient care. She spends her work hours analyzing qualitative data for the study, which includes observational data on safety problems and resolutions submitted by the 20 participating hospitals, as well as interviews between investigators and healthcare providers. She reads through the data to identify emerging themes and then creates a coding manual that includes these themes, how they are defined, and specific examples from the text.

The project has been in the works since 2000, under the direction of a number of CHP/PCOR affiliated faculty and staff, including senior scholar Sara J. Singer who notes, “Not only is Jennifer diligent, thorough, and in complete command of project details, but she performs her work with a view toward the overarching aims of the project. This combination enables her to contribute insights to discussions and papers, characteristic of great researchers.”

During her non-work hours, Jennifer volunteers with the Junior League, an organization that assists women and children in need. She is also involved in the Bring Me a Book Foundation, an organization based in Mountain View that donates books and bookshelves to schools in the Bay area and eight other states as well as internationally, including India, Guatemala, Kenya, and Malawi.

“We give workshops to parents to teach them the importance of incorporating reading into the family’s daily routines, and strategies to overcome barriers to reading such as limited language skills or difficulty finding the time to read,” she says. “Workshops are conducted in both English and Spanish and after the workshop, the parents are given a bilingual book to take home and read with their children.”

In line with her interests in conducting research and helping underserved communities here and abroad, Jennifer is hoping that, in the near future, she will have the opportunity to assist with projects focused on health and human rights. Jennifer is especially interested in Equatorial Guinea, a Spanish-speaking country in sub-Saharan Africa, which is relatively wealthy due to its oil exports, yet is reported to have the ninth greatest under-five mortality rate in the world.

“I visited the country for a month last year and saw the inequalities firsthand,” she says. “Even in the little infrastructure that exists in the capital city, such as the hospital and the national university, water and electricity are intermittent throughout the day – yet just a mile down the road, oil company employees and government officials live on compounds with modern living facilities, computers, swimming pools and more.

While Jennifer’s primary tasks on the patient safety project will be ending soon as a result of the project’s completion, she will without a doubt find new tasks to tackle quickly, given her curiosity and desire to learn.

Media Mentions, continued from page 2

A Reuters Health article (Oct. 15) discussed the recent report on risk rates for patients undergoing angioplasty or bypass procedures. CHP/PCOR senior research scholar Dena M. Bravata led the study and is quoted. CHP/PCOR faculty fellow Mark A. Hlatky is also quoted in articles on the topic in HealthDay, theHeart.org, and WebMD.com.

CHP/PCOR core faculty member Paul H. Wise spoke at a summit in October on infant mortality, and is quoted in an article on a related topic, published in the Cincinnati Enquirer (Oct. 16). It that a way to make babies healthier is to make women healthier, whether they’re pregnant or not.

CHP/PCOR associate John Morton provided comments in an Agence France Presse article (Oct. 24) about U.S. children hospitalized for health problems linked to obesity. According to a new study, the number of children hospitalized has tripled from 1997 to 2004.

CHP/PCOR associate Keith N. Humphreys wrote an Op/Ed, published in the San Francisco Chronicle (Oct. 26) about infant enrichment through DVDs and videos, citing that there is “no scientific evidence that the such videos is beneficial.”

CHP/PCOR associate Keith N. Humphreys is quoted in The Age (Nov. 3) on the high-end, resort-type rehabilitation centers for drug and alcohol addiction, stating that there...
A number of CHP/PCOR members attended the recent Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting 2007 in early November.

As the largest operations research conference convened each year, the INFORMS conference features a number of topics that range from traffic jams and airline control, to artificial intelligence and data mining.

During the “Operations Research in Medicine and Health Care” cluster, CHP/PCOR faculty fellow Margaret L. Brandeau chaired the session entitled “Resource Allocation in Healthcare,” and fellow Eran Bendavid was a panelist for the session entitled “Infectious Disease Prevention and Treatment Models,” chaired by Stanford University doctoral student Elisa Long.

Bendavid presented his study, “Improving WHO Guidelines: HIV Monitoring Strategies in Resource-Poor Settings,” which examined alternative ways of monitoring HIV/AIDS disease progress with diagnostic tests, conducted by performing a cost-effectiveness analysis to show that where resources are limited, monitoring a single lab parameter, the CD4 count, is the most cost-effective way to manage patients.

CHP/PCOR fellow Eran Bendavid’s research on HIV was presented at the recent American Public Health Association (APHA) annual meeting. Bendavid’s HIV work won one of the two awards for “Excellence in Abstract Submission among Student APHA Members” and was the winner of the “HIV/AIDS Section Student Scholarship.”

Bendavid Wins Award for Work on HIV/AIDS in Resource-Poor Settings

CHP/PCOR associate Keith N. Humphreys wrote an Op/Ed in a San Francisco Chronicle article (Dec. 2) about the low likelihood that physicians would embrace the use of marijuana as medicine. He notes a Brown University study that surveyed nearly one thousand physicians and found that doctors were significantly less supportive of medical marijuana than compared to the general public.

CHP/PCOR director and core faculty member Alan M. Garber was interviewed during a segment on National Public Radio’s “Morning Edition” (Dec. 24) discussing Medicare’s prescription drug program, which does not cover treatments using experimental drugs.

CHP/PCOR associate Thomas N. Robinson is quoted in a Chicago Tribune article (Dec. 27), on the effect of branding on children. Based on his research, children as young as 3 can be swayed by brand preferences. The article describes ongoing business partnerships that Florida’s Seminole County Public Schools that have created controversial “report card incentives,” or food prizes that are awarded to students based on their academic achievement.

Media Mentions, continued from page 10

The work was done in collaboration with CHP/PCOR core faculty member Douglas K. Owens, and former CHP/PCOR faculty member Gillian D. Sanders and fellow Ahmed Bayoumi.

“The study looked at southern Africa, the most highly endemic region for HIV,” Bendavid explained. “HIV in southern Africa is a very different disease from what we know here. For a variety of reasons, people start treatment much later than we do, and their mortality is much higher even after they start treatment.”

Considering these settings, Bendavid and Owens looked at the utility of monitoring patients to determine when to start, when to switch, and when to stop treatment. Despite substantially increased costs of testing, they found that measuring CD4 counts—an indication of how strong one’s immune system is and a marker of when to start treatment—prevents costly opportunistic diseases, averts hospitalizations, and improves life expectancy. While measuring viral loads improves outcomes further, CD4 counts yielded the “biggest bang for your buck.”

CHP/PCOR senior research scholar Dena M. Bravata was lead author of a recent study on pedometers. Bravata was quoted in numerous media outlets, including the New York Times, San Francisco Chronicle, and Los Angeles Times. The study found that people who used pedometers that encouraged walking could lead to weight loss and lower blood pressure. Bravata was also featured in the December “Author in the Room” audio teleconference for the Journal of the American Medical Association.

is no evidence that high-end programs are more effective than less fancier places.

CHP/PCOR associate Margaret L. Brandeau praised him for his research: “Dr. Bendavid’s work sheds light on the difficult—and important—problem of how best to monitor and treat HIV-treated patients when resources are limited. It is an impressive modeling study that provides useful information for clinicians in resource-constrained settings who want to make the best use of limited resources.”

CHP/PCOR associate Thomas N. Robinson is quoted in a Chicago Tribune article (Dec. 27), on the effect of branding on children. Based on his research, children as young as 3 can be swayed by brand preferences. The article describes ongoing business partnerships that Florida’s Seminole County Public Schools that have created controversial “report card incentives,” or food prizes that are awarded to students based on their academic achievement.

Media Mentions, continued from page 10

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FALL QUARTER PUBLICATIONS


Gerston LB, Ullah N, Hastie T, Goldstein MK. Does cancer risk affect health-related quality of life in patients with Barrett’s esophagus?


Wahidi MM, Govert JA, Goudar, RK, Gould MK, McCrory DC. Evidence for the treatment of patients with pulmonary nodules: when is it lung cancer? ACCP evidence-based clinical...
In the past, quality of care issues did not necessarily receive the limelight in health care discussions, but this has changed in most recent years. Now, the public cares immensely, not only about accessing and receiving health care in the first place, but also receiving proper health care provisions based on what is best for patients, and sometimes, based on what medical literature suggests is the best evidence in a specific clinical area.

While the latter is more elusive and difficult to define, groups—such as the Geriatrics Research Education and Clinical Center (GRECC), currently headed by CHP/PCOR core faculty member Mary K. Goldstein—are trying measure the quality of health care and get the metrics straight for evaluating quality. The hard part, however, is getting these performance measures right, given that each patient has his or her individual needs.

“The measures tend to be very simplistic, but the patients are very complex,” Goldstein explained. “Some measures don’t take complexities of patients into account, so physicians just don’t use them. It’s desirable to be able to consider a more complicated account of a patient when giving recommendations.”

Goldstein has been working for approximately 10 years now with the Stanford Center for Biomedical Informatics Research (BMIR, formerly known as the Stanford Center for Medical Informatics Research) to address this long-standing issue. BMIR has developed informatics tools that are used to represent medical knowledge in computable formats.

“We worked with them to develop knowledge bases in computable formats that could represent much more complexity of the medical knowledge than a simple performance measurement or reminder,” Goldstein said. “Then, you can apply these knowledge bases to patient data to draw conclusions on the state of the patients. For example, is the blood pressure meeting its target, or are drugs being used appropriately given their other diagnoses, medications, and history of adverse reactions?”

In the initial phase, the informatics tool was developed for hypertension in the “Assessment and Treatment of Hypertension: Evidence-Based Automation” (ATHENA) project. In order to do this, the researchers had to decide the best way to represent the knowledge in this medical domain, with evaluation of key scenarios and concepts encountered in the hypertension clinical area, and then encode this information into the knowledge base.

In 2002, the system was field tested in three large medical centers. Based on these clinical trials, the knowledge base accumulated more medical knowledge and evidence-based information for determining the best path of care for patients.

“We originally developed a plan to use the evidence-base for hypertension to build the informatics tool because there was a

Quality of Care, continued on page 15
FALL PRESENTATIONS

WADE AUBRY
CHP/PCOR associate
“Coverage with Evidence Development”

“Phased Introduction and Payment of Interventions under Protocol”

LYNN B. DAVIS
CHP/PCOR trainee
“A Cost-Benefit Analysis of Preimplantation Genetic Diagnosis for Carrier Couples of Cystic Fibrosis”


MARY K. GOLDESTIN
CHP/PCOR core faculty member
“Automating Clinical Practice Guidelines with ATHENA Decision Support System”

“Clinical Decision Support for Quality Improvement”
Presented at Biomedical Informatics 205 at Stanford University, October 31, 2007.

“Longitudinal Studies of Aging”

“Quality Improvement for Hypertension Management: Informatics and Interaction”
Presented at Department of Medicine Grand Rounds, University of Utah, as part of Visiting Professor activities in Salt Lake City, Utah, December 6, 2007.

MICHAEL K. GOULD
CHP/PCOR faculty fellow
“Evaluation of Patients with Pulmonary Nodules: When is it Lung Cancer?”

“Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies in Asthma”

KEITH N. HUMPHREYS
CHP/PCOR associate
“Peer-Intensive Interventions for Addiction”
Presented keynote address at Conference on Substance Use and Communities in Alessandria, Italy, October 15, 2007.

DOUGLAS K. OWENS
CHP/PCOR core faculty member
“Evidence-Based Comparative Effectiveness in the U.S.: Where Is It Going and What Role Should the Society for Medical Decision Making Play?”
Presented at the 29th Annual Meeting of the Society for Medical Decision Making in Pittsburgh, PA, October 20, 2007.

“The End of Risk-Based Screening for HIV? Evaluating the Costs and Benefits of Routine HIV Screening in Health Care Settings”

SARA J. SINGER
CHP/PCOR senior research scholar
“Engaging Leaders in Patient Safety”
Presented at the Center for Medical Simulation in Cambridge, MA, December 11, 2007.

GRANTS AWARDED

“Evidence-based Practice Center: Induction of Labor”
Funding: Agency for Healthcare Research and Quality
Principal Investigator: Douglas K. Owens
Project Period: September 20, 2007 to September 30, 2008

“Automated Knowledge System for Diabetes Management: ATHENA-DM”
Funding: Palo Alto Institute for Research and Education
Principal Investigator: Mary K. Goldstein
Project Period: October 4, 2007 to September 30, 2008

“Assessing Suicide Risk in the ED”
Funding: Child & Adolescent Services Research Center
Principal Investigator: Sarah M. Horwitz
Project Period: November 1, 2007 to October 31, 2008

“Cost and Benefits of the VA Central IRB”
Funding: VA Health Services & Research Department
Principal Investigator: Todd H. Wagner
Project Period: 2007 to 2010

GRANTS SUBMITTED

“Improving the Public Health Impact of HIV Testing in Highly Endemic Regions”
Funding: National Institutes of Health
Principal Investigator: Eran Bendavid
Project Period: July 1, 2008 to June 30, 2013

“Network Theory”
Funding: National Institutes of Health
Principal Investigator: Laurence C. Baker
Project Period: July 1, 2008 to September 30, 2009

“The Interaction of Public and Private Health Insurance”
Funding: National Institutes of Health
Principal Investigator: M. Kate Bundorf
Project Period: December 1, 2008 to November 30, 2009

“Training Program in Health Services Research”
Funding: Agency for Healthcare Research and Quality
Principal Investigator: Alan M. Garber
Project Period: July 1, 2009 to June 30, 2014
FALL QUARTER ANNOUNCEMENTS

CHP/PCOR associate Keith N. Humphreys was appointed to the National Advisory Council of the Substance Abuse and Mental Health Services Administration by U.S. Department of Health and Human Services Secretary Michael Leavitt. Humphreys will serve a 4-year term on the council, which advises on federal government policies and programs concerning serious mental illness, addiction treatment, and youth substance use prevention.

CHP/PCOR associate Russ B. Altman was recently elected to be a fellow at the American Institute for Medical and Biological Engineering.

CHP/PCOR core faculty member Mary K. Goldstein was appointed as the Acting Director of the Geriatrics Research Education and Clinical Center (GRECC), VA Palo Alto Health Care System.

CHP/PCOR adjunct associate Wade M. Aubry was appointed to a 2-year term on the Agency for Healthcare Research and Quality’s (AHRQ) Effective Health Care Stakholder Group. The first meeting was held on October 26th at the AHRQ Eisenberg Center in Rockville, Maryland. Aubry was also appointed as a core faculty member at the Philip R. Lee Institute for Health Policy Studies on December 10, 2007.

CHP/PCOR adjunct associate Wade M. Aubry co-authored the book, which was published by Oxford University Press in 2007. This book, which is a comprehensive case study of the rise and fall of a controversial breast cancer treatment that continues to impact clinical research, health policy, and coverage decision making, was favorably reviewed in the September 6, 2007, New England Journal of Medicine and the November/December 2007 issue of Health Affairs.

CHP/PCOR said farewell to Jason Lee, research assistant for the Stanford-UCSF Evidence-based Practice Center. While at the centers, he assisted executive director Kathryn M. McDonald, assistant director of research Vandana Sundaram, and senior research assistant Sheryl Davies on the AHRQ quality indicators project and VA congestive heart failure- quality enhancement research initiative, among others. He will be attending medical school.

lot of good evidence for management of the condition,” Goldstein explained. “But for whatever reason, physicians were not following the guidelines.”

The ATHENA clinical trials demonstrated a significant improvement in adhering to guidelines for best clinical practices in hypertension cases. Primary care providers improved their management of the condition in a number of key ways: they were more likely to intensify therapy when the blood pressure was above target, and the choice of drugs was more adherent to guidelines.

“However, we did not show that it changed the patient’s overall blood pressure,” Goldstein said. “That will be another step to address down the road with these systems.”

More recently, Goldstein and BMIR researchers have collaborated with colleagues at the Center for Health Care Evaluation at the VA Palo Alto Health Care System, including CHP/PCOR associate John W. Finney. They have worked with them to expand to a new clinical domain—non-cancer chronic pain management in primary care.

“Chronic care management presents a lot of challenges for the primary care provider: substance abuse, appropriate medical and legal documentation, things of that sort,” Goldstein said. “The new system for opiate-therapy management has been developed and is undergoing its first clinical trial now.”

The group has also secured grant funding to begin to develop the knowledge base for diabetes. Goldstein believes that these knowledge bases have the potential for use in many large health systems in the future. The systems would ideally be worked into a regular clinical workflow and integrated with electronic medical record databases at some point in the future.

“The direction we’d like to go is to build a sort of library of encoded medical knowledge that could be used for a variety of purposes,” Goldstein said. “One purpose is to use it to generate real-time clinical decision support, either for patients or providers. Other uses could be as a source to be queried if they had questions they wanted to pose. Given these circumstances, we can process data using these knowledge-based systems to review the quality of care.”

Risk Assessment, continued from page 12

These results suggest that completing the HRA serves as a trigger to action. It provides feedback to the members about their current behavior and ways to mitigate their risk and perhaps avoid or at least delay the onset of diabetes. While medical and pharmacy claims information is important to identify chronic disease, HRA information can be appended to that information in a timely and cost-effective manner. The result is a more thorough understanding of an individual’s health care needs and readiness to change.

* * * * *

This piece was submitted and authored by CHP/PCOR adjunct associate Tony Linares, and his colleagues Thomas Kotsoo and Griselda Chapa.
RESEARCH IN PROGRESS SEMINARS

Free and open to the public, the winter quarter seminars will be held at the Health Research & Policy Building (Redwood Building), Room T138-B on Wednesdays, 1:30 pm – 3:00 pm. Please visit the event series webpage for the most up-to-date session information.

September 26, 2007
Karen Eggelston, PhD, CHP/PCOR & APARC Fellow

October 3, 2007
Do You Get What You Pay For? The Relationship Between Premiums and Benefits in Medicare Prescription Drug Plans
Kosali Simon, PhD, Cornell University

October 10, 2007
Developing and Writing Grant Applications
Alan M. Garber, MD, PhD, CHP/PCOR Director, Core Faculty

October 17, 2007
Children with Special Health Care Needs and the Disproportionate Share Hospital System in California, 1998–2004
David Krodel, Stanford University

October 24, 2007
Effects of Soft Budget Constraints and Continuity of Hospital Safety Net Services
Yu-Chu Shen, PhD, Naval Postgraduate School
Karen Eggelston, PhD, CHP/PCOR & APARC Fellow

October 31, 2007
Do Consumers Respond to Quality Information? The Case of Fertility Clinics
M. Kate Bundorf, MBA, MPH, PhD, CHP/PCOR Faculty Fellow
Helena Szrek, University of Pennsylvania

November 7, 2007
The Impact of Nurse Staffing and Human Capital on Patient Outcomes for VA Inpatient Care
Claran S. Phibbs, PhD, CHP/PCOR Associate

November 14, 2007
The Cost-Effectiveness of Combination Treatments for Uncomplicated Malaria in sub-Saharan Africa
Katherine E. Herz, MD, CHP/PCOR Trainee

November 28, 2007
Can Pediatric Health Care Systems Survive Health Care Reform? Resilience and Vulnerability of Trauma and Chonic Illness Care in California
Paul H. Wise, MD, MPH, CHP/PCOR Core Faculty

December 5, 2007
Cost-Effectiveness of a Quantitative D-dimer Assay in Diagnosing Pulmonary Embolism in Patients Presenting with Undifferentiated Symptoms
Ram Duriseti, Doctoral Candidate in Decision & Risk Analysis, Stanford University

January 9, 2008
The Overlooked Orphans: The Size of the Impact of AIDS on the Orphahned Elderly in sub-Saharan Africa
Tim Kautz, Stanford University Student
Jay Bhattacharya, MD, PhD, CHP/PCOR Core Faculty
Grant Miller, PhD, MPP, CHP/PCOR Core Faculty

January 16, 2008
Anatomy of a Guideline: The Making (and Remaking) of the New American College of Physicians’ Guideline on Screening Mammography in 40- to 49-year-old Women
Douglas K. Owens, MD, MS, CHP/PCOR Core Faculty

January 23, 2008
The Prevalence, Correlates, and Persistence of Maternal Depression: A Services Failure?
Sally M. Horwitz, MA, PhD, CHP/PCOR Core Faculty

January 30, 2008
Implementation Research: Finding Out What Actually Works in Translating Research into Practice
Mary K. Goldstein, MD, MS, CHP/PCOR Core Faculty

February 6, 2008
To Be Announced
Paul A. Heidenreich, MD, MS, CHP/PCOR Core Faculty

February 13, 2008
To Be Announced
Laurence C. Baker, PhD, CHP/PCOR Faculty Fellow

February 20, 2008
To Be Announced
Eran Bendavid, MD, CHP/PCOR Trainee

February 27, 2008
To Be Announced
M. Kate Bundorf, MBA, MPH, PhD, CHP/PCOR Faculty Fellow

March 12, 2008
Can Equity Concerns Be Incorporated in Cost-Effectiveness Analyses?
Ahmed Bayoumi, MD, MS, former CHP/PCOR Trainee

The Center for Health Policy and the Center for Primary Care and Outcomes Research are sister centers at Stanford University that conduct innovative, multidisciplinary research on critical issues of health policy and health care 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-section 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 health care 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.