

University of California Davis
Center for Health Services Research in Primary Care

SIXTH ANNUAL REPORT
1999-2000

The UCD Center for Health Services Research in Primary Care has now completed five years of continuing growth and development. During this time, Center efforts have focused on careful building of expertise, experience and relationships within the University and with outside partners. The Center's growth reflects a consensual academic validation of the solid organizational and research base that the Center has developed. In this way, the continuing development of research and educational activities is being recognized and acknowledged within the University of California research community. This annual report will provide an overview of the activities reflected since approval as an Organized Research Unit on July 1, 1999, and delineate the accomplishments of this past year.

I. Activities and Accomplishment of Current Year

A. Administrative and Organizational Development

Center Leadership

During this reporting period, Richard L. Kravitz, MD, MSPH, has continued to serve as Center Director. Dr. Kravitz' research expertise and contributions to education and service at the University have been acknowledged in his promotion to the rank of Professor in the Division of General Internal Medicine on July 1, 1999. In the continuing process of research skill development, Dr. Kravitz completed a sabbatical working with the New England Health Institute at Tufts University while Edward J. Callahan, PhD, directed the Center on an interim basis. An experienced health services researcher, Dr. Callahan was appointed as Center Associate Director in July 1998. Dr. Callahan's primary appointment is Professor of Psychology in the Department of Family and Community Medicine.

Reporting Relationships

Dr. Kravitz continues to report to Allan Siefkin, MD, (Associate Director for Clinical Affairs for UCD Health System) concerning day-to-day administrative affairs, and to the Vice Chancellor for Research for long-term programmatic affairs.

Center Space

The Center currently occupies approximately 1,400 square feet in Suite 2500 of the Patient Support Services Building. This space consists of four faculty offices and 13 cubicle workstations. With utilization at maximum and a new full-time faculty member (Peter Franks, MD) scheduled to arrive February 1, 2001, space will become an urgent issue in the fall. Allan Siefkin, MD, Associate Director for Clinical Affairs, is working with us to locate appropriate space to meet immediate needs and accommodate our anticipated growth.

Computing Resources

The Center's computer resources include a terminal server for management of software programs and another server for file and print management. One of the challenges of working in health services research, with a reliance on computer systems for data analyses, remains keeping up with technology requirements. The current restrictions on federal funds for computer purchases raises challenges in meeting these needs for the various projects in which the Center participates. Thus far, the Center has managed its resources meeting the needs of numerous Center projects. Because data stored on Center computers is often confidential, there are meticulous security, backup, and maintenance procedures. The Center uses core funds to provide for necessary computer maintenance. With the addition of a terminal server this year, the Center should have the ability to meet research needs over the next year.

One new development in the computer capacity of the Center has been the acquisition of Teleforms software technology. Teleforms software allows survey data to be scanned directly into a database using optical character recognition; the software has been used to facilitate data acquisition for several research projects. The purchase of the technology was funded by the School of Medicine's Shared Research Equipment Fund. Using this software, the Center has developed forms for research projects that allow direct scanning of research data, thus obviating the need for data entry. Several Center staff (Fred Molitor, Jonathan Neufeld, Mairin Rooney) have become sufficiently familiar with the software to serve as a resource to other faculty wishing to make use of it.

Center Core Faculty and Staff

Center professional staff currently consists of a Director (Richard Kravitz, MD), an Associate Director (Edward Callahan, PhD), an Econometrician (Paul Leigh, PhD), a Sociologist (Debra Paterniti, PhD) and a Research Scientist (Fred Molitor, PhD). The Center's administrative team consists of the program manager, Christine Harlan, and two Administrative Assistants, Penny Barath and Kristen Enders. Ty Tong provides computer support. Sara Lu Vorhes' duties include community outreach and project management.

The Center research staff continues to grow along with the Center's expanding research portfolio. The research staff currently includes two statistical programmers, one nurse abstractor, two research coordinators, four post-graduate researchers and five student interns. To cover projects slated to begin this fall, the Center is now in the process of hiring an additional programmer, two project managers, another abstractor, and two research assistants.

Dr. Rahman Azari has continued as a part-time faculty member with the Center, filling the role of core Center statistician. A faculty member in the Division of Statistics, Dr. Azari assists Center faculty in the development of new research proposals. He maintains regular office hours at the Center to provide limited consultation to faculty members. Depending on funding availability, Dr. Azari is also available to provide assistance on ongoing research projects. Steven Samuels, PhD, has been available to provide additional statistical support for Center projects. Dr. Samuels is Adjunct Professor in the Department of Epidemiology and Preventive Medicine. His special expertise is in research design and sampling. His time was funded by a

combination of core Center funds, research grant cost recovery, and a contribution from the Department of EPM.

Executive Committee

The Executive Committee continues to provide guidance to the Director on the long-term development of the Center as well as providing operational guidance, determining the allocation of Center resources, and reviewing and approving faculty membership applications. Executive Committee membership for the year 1999-2000 included:

Faculty

Richard L. Kravitz, M.D., M.S.P.H.

Klea D. Bertakis, M.D., M.P.H.

Rahman Azari, Ph.D.

Edward Callahan, Ph.D.

Christiana Drake, Ph.D.

Nathan Kuppermann, M.D., M.P.H.

Paul Leigh, Ph.D.

Joy Melnikow, M.D., M.P.H.

John Robbins, M.D., M.S.P.H.

Patrick Romano, M.D., M.P.H.

Marc Schenker, M.D., M.P.H.

Department

Center Director, General Medicine

Founding Director, Family and Community
Medicine

Statistics

Associate Director, Family and Community
Medicine

Statistics

Pediatric Emergency Medicine

Epidemiology and Preventive Medicine

Family and Community Medicine

General Medicine

General Medicine

Epidemiology and Preventive Medicine

Faculty Membership in the Center

Faculty membership increased during the past year to 69 members. Of this number, 48 hold their primary faculty appointment in a department in the School of Medicine and 21(30%) hold a faculty appointment with other departments in the University or with organizations outside of the University. A list of faculty members is appended in Appendix #1.

Outreach Activities

Intramural outreach. In ongoing efforts to channel the expertise and enthusiasm of UCD faculty into projects related to its mission, the Center has continued a multi-pronged outreach campaign. The Core Center faculty and staff have played key mentorship roles with junior faculty and post-doctoral fellows, including Anthony Jerant (Family and Community Medicine); James Marcin (Pediatrics); Donald Hilty (Psychiatry); Ladson Hinton (Psychiatry); Victoria Handa (OB/Gynecology); Jorge Garcia (Medicine); Shagufta Yasmeen (Medicine/Gynecology); Jeanny Park (Pediatrics); Jonathan Neufeld (Behavioral Health Center/Family Medicine/Psychiatry), and Caroline Chantry (Pediatrics). In addition, the Center has continued its efforts to introduce faculty in the statistical and social sciences to the excitement of multidisciplinary applied health care research. In 1999-00, several non-SOM faculty assisted with Center proposals or projects: Robert Bell (Communication); Donald Palmer (GSM); Hans Mueller

(Statistics); Colin Cameron (Economics); Jay Helms (Economics); and Christiana Drake (Statistics).

In recognition of the importance of fostering collaborations between UCD clinicians (who mainly work in Sacramento) and UCD social and statistical scientists (based mainly in Davis), Dr. Edward Callahan has continued his efforts to reach social science faculty from the Davis campus for collaborative research. While the Yolo Causeway remains a barrier to collaboration between the campuses, these efforts will continue. As one means to foster increased interaction, arrangements are underway to broadcast Center conferences to convenient campus locations.

Extramural outreach. The Center continues to grow as a resource for the Medical Center, the University, and the Sacramento region. Drs. Kravitz and Romano have continued to consult periodically with Dr. Allan Siefkin and Mr. Brett Hobde in an effort to assist with Medical Center quality assurance. Dr. Rahman Azari serves as chief statistical triage officer, frequently directing medical school faculty and staff to appropriate statistical colleagues. Several Center members remain actively involved in a variety of graduate groups, and graduate students are encouraged to participate in Center research activities. Finally, the Center is involved in a number of community activities. For example, Dr. Kravitz serves as a consultant to the Visible Fairness Project, a community based consortium whose goal is to make discussions of cost effectiveness explicit within the greater community.

As alluded to earlier, the Center also seeks to expand its relationships with potential funders including state government agencies and private sector interests. Currently the Center has contracts with the Office of Statewide Health Planning and Development as well as several sections within the Department of Health Services. We are also working closely with the Medical Center Development Office to develop productive collaborations with Sequenam Incorporated, a biotechnology corporation.

Meetings of external advisory board. In fall 1997, the Center Executive Committee convened an External Board of Advisors. With the assistance of Tom Hobday and his staff at UCD Health Science Advancement, the Center initially recruited eight distinguished leaders from academia, medicine, industry, and law. The inaugural meeting of the Board was held at the Broadway Building in May 1998. Since that meeting, three additional board members have been recruited. The purpose of the Board is to provide Center leadership with advice on the direction of its programs. The Board met once during the 1999-2000 academic year; in addition, Drs. Kravitz and Callahan and Ms. Harlan met individually with each board member. The next meeting is planned for November 2000. A list of current Board members is provided as Appendix 2.

B. Research Proposal Development

Providing assistance in the development and submission of new research proposals remains a major objective of the Center. In particular, the Center seeks to help junior faculty members develop their own areas of research. Particular emphasis is placed on helping in the development of proposals to initiate pilot projects as well as full research programs. On the intramural side, the Center this year assisted faculty with proposals to the Health System

Research Fund (three of the preproposals were selected for further development and ultimately one was funded). The Center also submitted a total of 21 proposals to extramural funding agencies including the U.S. Agency for Healthcare Research and Quality, the National Institute on Aging, the Office of Statewide Health Planning and Development, the Robert Wood Johnson Foundation, and the American Heart Association. Appendix 3 summarizes these proposals and indicates their funding status.

C. Active Working Groups During 1999-2000

1. Oncology

The Health Services Research in Oncology program, led by Frederick Meyers, MD, has two primary themes, palliative care and clinical epidemiology. The palliative care group has a specific interest in the way in which patients and their families interact with their physicians, and a broader interest in the delivery of health care at a systems level. The Epidemiology group has a specific interest in outcomes-linked large groups, and to a lesser extent interest in individual patient/physician interaction.

As part of the Center's long term planning process, initial work has begun to expand our involvement with the UC Davis Cancer Center. This collaboration will involve the definition of areas of overlapping research and clinical interests, identification of potential research project collaboration, involvement of Center personnel with expertise in statistics, data base management, population studies, epidemiology, cancer prevention, communications, health economics, and psychological and sociological assessment and measurement in Cancer Center projects. This planning will be a prime focal area for planning during the 2000-2001 academic year.

2. Applied Technologies in Primary Care Working Group

At an initial series of meetings, a variety of different technologies (e.g. telemedicine, hand-held computers, electronic medical records) and potential applications and research projects for primary care were discussed. From these meetings, a focus on exploring and expanding the use of hand-held personal digital assistants (PDA's - e.g., PalmPilot) for improving the quality of physician experience tracking and care has emerged. This subgroup, PDA Working Group, with both physician and technical staff representation, including members from Psychiatry, Family Medicine, Pediatrics, and OB/Gyn.

The initial goals for the working group are to standardize various applications for the Palm across medical center departments so that resources can be shared. We are trying to build on pioneering work completed by individual departments. As a brief summary, we have the following areas identified several interest areas: resident education tracking, electronic sign-out procedures, portable patient record notes.

Future directions include tracking the impact of palm use on things like resident efficiency and clinical outcomes including time efficiency, compliance with screening/health maintenance recommendations, etc in PDA users compared to non-users.

3. Large Dataset Library

Over the past year, J. Paul Leigh, PhD (health economist), with the help of Nhue Do (student research assistant) and Mike Schembri (programmer), has developed a detailed plan to create a Large Dataset Library (LDUL). The purpose of the library is to compile, clean and maintain important national and regional health datasets for the purposes of research and analysis.

A questionnaire was sent to nearly 100 potential researchers, asking about the interest of persons in the databases and whether other databases ought to be added. Results of the 22 respondents are being tallied. Great interest was shown in the National Health and Nutrition Examination Surveys as well as the National Health Interview Surveys. The LDUL is an important asset to health care researchers (both clinicians and social scientists) on both sides of the Causeway. Researchers are able to request analytic files supporting specific analyses. A website was created that describes 20 datasets: http://web.ucdmc.ucdavis.edu/chsr_pc/research/data/index.html

D. Active Research Projects During 1999-2000

1. Patient-Physician Communication Project (PPCP) (PI: Richard Kravitz, MD)

Funded by the Robert Wood Johnson Foundation Grant, PPCP is a study to investigate patient requests and physician responses in a changing healthcare environment. The objectives are: 1) to describe how patients use requests to influence physician behavior under managed care; and 2) to compare patients' uses of requests and physicians' responses to them in different interpersonal and organizational contexts. Information derived from this study will help

physicians develop successful strategies for clinical negotiation and help policymakers assess the impact of managed care arrangements on the request-response process.

Data collection for this project finished in late 1999. Survey data were collected from patients before, immediately after, and two weeks following an index visit with 45 internists, family physicians, and cardiologists. All visits were audiotaped, and physicians supplied supporting clinical information. Survey data analysis is well underway, and two-thirds of the audiotapes have been coded. A synopsis of the results was fed back to participating physicians during a June 8, 2000, CME symposium. Additional analyses will look at patients who consider

but do not explicitly make requests, the role of physician-patient trust in office practice, and the prevalence medically inappropriate requests.

2. Conditions of Practice and Quality of Care: Physicians' Perspective (PI: Richard Kravitz, MD)

Funded by the Robert Wood Johnson Foundation (Alpha Center), this project aims to generate nationally representative estimates of physicians' self reported career satisfaction, ability to provide care and ability to obtain needed services for patients; to estimate the community level effects of managed care, physician supply and other community characteristics on community-wide levels of physician career satisfaction and perceived quality; and to estimate the individual level effects of physician specialty, practice arrangements, scope of practice, gate-

keeping responsibilities, revenue sources, compensation arrangements and income on physicians career satisfaction and perceptions of quality. The underlying theme of the project is that certain conditions of practice facilitate the delivery of high quality care whereas others impede it, and that physicians are in the unique position to assess some of these effects.

During the first six months of the project, investigators procured the confidential dataset needed to perform the analyses. The data has been cleaned and organized. Preliminary analysis is focused on physician satisfaction. On average, 38% of US physicians describe themselves as being very satisfied with their careers in medicine. The proportion exceeds 50% among only a very few small subgroups. There is no medical specialty in which more than half of physicians are very satisfied with their careers. Further analysis will emphasize the talents of the multi-disciplinary team which includes a health economist (Paul Leigh, PhD) and a survey statistician (Steve Samuels, PhD).

3. Improving End-Of-Life Care for Selected Populations Project (PI: Frederick J. Meyers, MD)

Under a grant from the Robert Wood Johnson Foundation, the aim of the Improving End-Of-Life Care for Selected Populations project is to enhance knowledge and improve clinical practice of palliative care, resulting in expanded access for underserved populations—residents of rural areas and women in correctional facilities. One component of this project includes recruiting patients with life-threatening malignancies from a clinical trial program at the UCD Cancer Center. One group of patients receives palliative care from a nurse and social worker; the other group obtains traditional disease-directed therapy only. Repeated measures provide the “simultaneous care” team with information to make treatment decisions, and will be used to compare quality of life over time between the two groups of terminally ill study participants. Over the three-year project period, the investigators hope to enroll 30 patients in simultaneous care, and a comparable number of comparison group patients. Since April, 15 patients (11 simultaneous care, 4 comparison) have been recruited in this project.

4. Improving the Quality of Care among Multiethnic Urban Trauma Victims (PI: Douglas Zatzick, MD)

The goal of this longitudinal research is to assess and follow the self-described needs and expectations for care, psychiatric symptoms, functional impairments, and patterns of post-traumatic health services of multiethnic urban trauma victims. One hundred and seventeen patients were recruited from the trauma ward at the UC Davis Medical Center. All subjects consented were initially interviewed on the ward and then followed by telephone interviews at 1 month, 4 months and 1 year. A manuscript describing the results is now under second review at *Medical Care*.

5. A Taxonomy of Patient Requests and Physician Responses under Managed Care (PI: Richard Kravitz, MD, MSPH)

Dr. Kravitz received funding by NIH (AHCPR) in March 1998, a no-cost extension permitted work to continue through February 2000. The purpose of the project was to refine an empirical content analysis system for coding patients' requests, to estimate the prevalence of different request types and physician responses, and to elucidate the antecedents and consequences of problematic requests in managed care settings. These objectives were accomplished by: 1) adding new codes to enhance TORPs relevance to managed care; 2) producing additional evidence for TORP's reliability; and 3) performing a series of analyses designed to assess the concurrent, construct, and predictive validity of the enhanced taxonomy.

6. Patient Preferences for Physician Characteristics and the Quality of Patient Care (PI: Jorge Garcia, MD)

This project funded by Hibbard E. Williams Research Funds examines whether ethnic or cultural differences between patients and their physicians have a negative impact on patient satisfaction and on the perceived quality of care. The project involves two phases: (1) the development of a reliable and valid telephone survey from findings obtained in 8 patient focus groups, and (2) the administration of this survey to 524 primary care patients (Caucasians, African-American, and Latinos) to identify variations of preferences among ethnic groups.

All 8 focus groups have been completed and transcripts prepared from the audiotapes of all groups. Preliminary analysis of the transcripts from the 6 English-speaking groups has shown no uniform qualitative preferences for either a gender- or ethnically-concordant primary care physician among the groups studied. In the coming year we will complete formal qualitative analyses of focus group data and use the results to finalize our quantitative telephone survey. We will then enroll established primary care patients from each of four patient groups: (1) African-Americans, (2) Caucasians, (3) English-proficient Latinos, and (4) non-English-speaking

Latinos. Data from the surveys will provide insight into whether ethnic or cultural differences between patients and their physicians affect patient satisfaction and the perceived quality of care.

7. HEALTH Project (PI: Richard Kravitz, MD; Co-PI: Fred Molitor, PhD)

The mission of the Healthcare Empowerment Alliance for People Living in Transitional Housing (HEALTH) project is to meet the healthcare needs of formerly homeless persons living in transitional housing facilities (THF). To this end, an Integrated Service Team (IST), consisting of a medical director, nurse practitioner, and medical clerk, will provide direct medical and healthcare services and referrals to residents of four THF in the Sacramento area. In evaluation of the HEALTH Project, the CHSR/PC is collecting interview data before and during implementation of IST services. To monitor the perceptions of those involved in the project, as well as those expected to benefit from it, the CHSR/PC conducted semi-structured interviews with HEALTH Board members, and staff and residents of the THF. With the recent hiring of the IST, the CHSR/PC is in the process of preparing to collect baseline survey data from the residents of the four intervention THF. These qualitative and quantitative measures will be collected at 6-month intervals to determine changes in health care access, knowledge, behavior, and status.

8. Improving Palliative Care in Assisted Living (PI: Anthony Jerant, MD)

With the advent of managed care, health systems are experiencing increased pressure to reduce costs for providing care to patients with chronic diseases. This study identifies Congestive heart failure (CHF) as a chronic disease amenable to home management to reduce hospital re-admission costs, however the cost of traditional home nurse visits are high as well. Telemedicine home calls have been suggested as a lower-cost alternative to in-person nursing visits. However, although recent pilot studies of home telemedicine disease management protocols have yielded promising results, no rigorously designed trials have been conducted. Funded by a UC Davis Hibbard E. Williams Research Award, this study is a randomized trial comparing three care-delivery models (video telemedicine, telephone care, outpatient care) for reducing CHF related hospital re-admission costs.

Thus far, 38 elderly patients with CHF have been enrolled and followed for six months. Data analysis is pending. Preliminary analysis suggests that both the telephone and telemedicine groups had trends towards fewer hospitalizations and emergency department visits than the usual care groups, but this was based on very small numbers and not statistically significant.

9. Impact of Socioeconomic Status on Injury Severity and Mortality (PI: James Marcin, MD)

Funded by the Children's Miracle Network, the primary aims of this study are to investigate the relationship of pediatric trauma patients' socioeconomic status (SES) to their severity of injury on presentation to the emergency department and to their severity adjusted standardized hospital mortality rates. Many studies have documented an increased mortality rate from injury among children of lower SES compared to children of higher SES, however previous studies have failed to correct for severity of injury. This study will examine the severity of injury and severity adjusted mortality rates compared between pediatric patients from low socioeconomic neighborhoods to patients from high socioeconomic neighborhoods (using socioeconomic indicators from 1990 US Census).

Trauma data has been collected from the UCDMC trauma registry, and linked to address information from the Hospital Information Service, and then geocoded. The trauma data was then linked to 1990 US Census indicators of socioeconomic status. The next phase will be developing a mortality prediction model for the pediatric trauma patients so that we can comment on the association between their socioeconomic status and severity of injury and severity adjusted mortality rates.

10. Tamoxifen Prevention: Is it acceptable to women at risk? (PI: Joy Melnikow, MD, MPH)

Breast cancer is the second leading cause of death from cancer among women in the U.S. Interest in methods of preventing breast cancer is high. In 1998, the National Cancer Institute reported a 50% reduction in the incidence of breast cancer in women taking tamoxifen enrolled in the tamoxifen for breast cancer prevention trial. Numerous concerns remain regarding tamoxifen, including whether this preventive approach is acceptable to women at risk. In July of 1999, the Breast Cancer Research Program (BCRP) funded "Tamoxifen Prevention: Is it acceptable to women at risk?" to develop a deeper understanding of how a diverse group of high-risk women weigh risk versus benefits in considering tamoxifen prevention. The study explores

how information such as self-perceived breast cancer risk, NCI screening tool determined breast cancer risk, and education affect and influence women's decisions.

Focus groups were held in September and October of 1999 in which women were educated about the benefits and risks of tamoxifen prophylaxis and then participated in discussion about their feelings and considerations towards tamoxifen. From this a multi-faceted interview was designed in English and Spanish. Components of the interview include self-administered questionnaires, a nurse facilitated educational intervention and computer based interview, a visual analogue rating scale, and a modified standard gamble. Over thirty pilot interviews were completed by mid-February 2000. Data collection began in mid-March and will continue until June 2001. The Women's Health Initiative and the Health Education Council are recruiting participants. The Health Education Council makes particular efforts to recruit primarily African American and Latina women. The study will interview between 300 and 400 women.

11. Tamoxifen Prevention of Breast Cancer: Acceptance/Cost Effectiveness (PI: Joy Melnikow, MD, MPH)

Funded in April of 2000 by the National Cancer Institute (NCI), this project will make use of data generated in the Tamoxifen Prevention Interview study to determine the marginal cost-effectiveness of tamoxifen prophylaxis for reduction of breast cancer mortality compared with annual screening by clinical breast exam and mammography. To increase generalizability, costs and utilities will be derived from clinical settings outside of randomized controlled trials.

Utilities and patient preferences will be based on original data presently being collected from women participating in "Tamoxifen Prevention: Is it acceptable to women at risk?" interview. Costs will be derived from Medicare reimbursements, and probabilities will be derived from previously conducted trials and systematic reviews of the literature. All of this information will be incorporated into a computerized cost-effectiveness model. Sensitivity analyses will be used to identify important sources of variation in the projected outcomes. We anticipate that study findings will be useful for health policy makers in considering the impact of tamoxifen for breast cancer risk reduction on public health and medical care resources.

12. Evaluation of the HIV Transmission Prevention Project (HTPP) (P.I. Fred Molitor, PhD)

The HIV Transmission Prevention Project (HTPP) is a three-year program of the California Department of Health Services, Office of AIDS (OA). The goal of the HTPP is to prevent the transmission of HIV by addressing the multiple factors that affect sexual and drug use behaviors among high-risk HIV-positive and HIV-negative individuals. Twelve sites affiliated with the OA Early Intervention Program (EIP) are participating in the HTPP. The Center for Health Services Research in Primary Care (CHSR/PC) has been awarded the contract to conduct the evaluation of the project. The HTPP intervention relies on the skills and activities of a "Risk Reduction Specialist" (RRS). The RRS recruits eligible clients for meetings to discuss issues related to each client's individual risk behaviors. The objective is to periodically negotiate an individualized risk-reduction plan-of-action (modeled after the "harm reduction" theory), which should, over time, substantially reduce client's risk of HIV transmission.

The primary objectives of the evaluation of the HTPP is to document the development and programmatic activities of the HTPP and to systematically measure clients' sexual and drug use

behaviors over the course of the intervention. The secondary purpose of the evaluation is to assess adherence to highly active antiretroviral therapies (HAART) among HIV-positive clients, and investigate the relationship between levels of risk behavior and HAART adherence. To date, the baseline, semi-structured interviews of the RRS have been completed; approximately 30 clients have been enrolled in the evaluation.

13. PC-AWARE (PI: Richard Kravitz, MD; Executive Director: Richard Pan, MD)

Primary Care Area-Wide Affiliates for Research and Education (PC-AWARE) is a primary care practice-based research network developed to build links between the University and primary care physicians in the Sacramento region and to pursue the academic missions of research and education. In the past year, PC-AWARE has achieved several milestones. The network obtained its first extramural grant from the American Academy of Pediatrics to study the use of alternative therapies in children. In response to a growth in research activities PC-AWARE hired Dinnie Chao, Ph.D., in February 2000 as the Network Research Coordinator. PC-AWARE also conducted a survey of member practices, which includes 28 pediatricians, 10 family physicians, 17 internists, and 15 physicians practicing other specialties. The data from the survey will help support future grants and research.

PC-AWARE focused on three research projects last year. First, the Childhood Anemia study involving eight practices concluded data collection. Second, the Alternative Therapies in Children study is being piloted at two practices, and several practices are slated to participate this fall. This study involves surveys of physicians and families concerning their knowledge and attitudes toward using alternative therapies in children and barriers to communication about alternative therapy use. Finally, the patient problem list program for the Physician Reminder System is nearing completion. A study of the system is anticipated for this coming year.

14. Impact of Minority Racial/Ethnic Background on Morbidity/Mortality of Children with Congenital Heart Disease (PI: Jeanny Park, MD; Patrick Romano, MD)

For the year July 1, 1999, through June 30, 2000, we have completed the majority of the data linkage required. This research project requires the linkage of several large datasets including the California Patient Discharge Dataset (CPDDS), California Birth Defects Monitoring Program (CBDMP), Vital Statistics Death Statmaster, and Multiple Cause of Death Files. This linkage must be performed probabilistically as these datasets do not contain unique personal identifiers. We have identified approximately 10,000 infants that were born between 1986 and 1993 and identified as having congenital heart disease from the CBDMP. We have subsequently linked their hospitalizations using the CPDDS. We are completing the final linkage to the Vital Statistics Death Files. Once this information is complete, statistical analysis will then be performed.

15. Miscellaneous Consultation

In addition to the formal projects listed above, Center staff provided both paid and unpaid research and statistical consultation to John Lee (Gastroenterology); Susan Murin (Pulmonary); Gregory Marelich (Pulmonary); Donna McKenzie (Clinical Resource Management); Tom

Nesbitt (Telemedicine); and Carolyn Chantry (Pediatrics).

E. Education Activities

One of the fundamental aims of the Center is to enhance the intellectual environment for health services research at UC Davis and to help faculty and trainees develop the skills to conduct first-class health services research projects. To this end, the Center continued its successful weekly noontime seminar series. Convened under the leadership of Patrick Romano, M.D., M.P.H., seminars are open to all Center members and other interested individuals. Continuing Medical Education credit is available to practicing physicians, and graduate students in Epidemiology can earn 1 unit of course credit for each quarter of regular attendance. During the past year, 39 seminars were held, covering a broad range of topics. A list of these seminars can be found in Appendix 4.

During the past year the Center continued its effort to support the growth of junior faculty conducting health services research. This *Health Services Research Journal Club* is held Thursdays from 9-10 a.m. in Room G032 PSSB. This seminar uses guided discussion of recent articles in the health services research literature to illustrate important methodological or policy principles. Led by Richard Kravitz, MD, MSPH, and Patrick Romano, MD, MPH, the Journal Club has attracted the regular participation of Jorge Garcia, MD (Internal Medicine); Donald Hilty, MD (Psychiatry); James Marcin, MD (Pulmonary Medicine); Maria Enrione, MD (Pediatrics); Steve Samuels, PhD (Epidemiology and Preventive Medicine); Fred Molitor, PhD(CHSR/PC); Shagufta Yasmeen, MD (Medicine/Gynecology Fellow); Jonathan Neufeld, Ph.D. (Psychology Fellow at the Behavioral Health Center); Victoria Handa, MD (OB/GYN); J. Paul Leigh, PhD (CHSR/PC); Rahman Azari, PhD (Statistics); and William Seavey, MD(Geriatrics Fellow). Following a summer break, the seminar will resume in September, 2000. A list of Journal Club articles can be found in Appendix 5.

As part of the New Initiative Reserve-funded project to develop a practice-based research network (PBRN), the Center is developing a framework for research training in primary care settings. This effort is expected to draw undergraduate and graduate students into multi-disciplinary projects conducted within the PBRN.

One of the Center's strategies for accomplishing both its research and educational missions has been to encourage involvement of UC Davis students in all aspects of its research endeavors. Students work on Center projects as paid staff, unpaid volunteers, and academic interns who receive course credit. A list of students involved in Center projects this past year is provided in Appendix 6.

F. Faculty Recruitment

The establishment of the Center in 1995 was accompanied by the promise of two University 19900 FTEs. Recruitment began in earnest that year and concluded in summer, 2000. With J. Paul Leigh, PhD (0.50 Center FTE, with joint appointment in Epidemiology), and Patrick Romano, MD, MPH (0.50 Center FTE, with joint appointments in Internal Medicine and

Pediatrics), filling one of the FTE, the recruitment continued over the past year. The Center received several outstanding applications for the remaining FTE position. After discussing all the options for filling the FTE, the Search Committee offered the open FTE to Peter Franks, MD, a physician and one of the leading primary care health services researchers in the country. Dr. Kravitz has worked to bring two of the other candidates, Debora Paterniti, PhD, and Colleen McHorney, PhD, to UC Davis utilizing other support resources. Dr. Debora Paterniti accepted an appointment as an Assistant Adjunct Professor with salary support coming from research funds and a limited amount of core support. Negotiations continue to put together an acceptable offer for Dr. McHorney.

G. Publications

Appendix 7 represents the scope of our faculty's publications in health services research. They demonstrate the multidisciplinary nature of our research with representative publications from all areas of expertise. Thirty-eight of our 69 members have authored these publications.

II. Long-Term Strategic Planning

The Center continues to focus on three areas of perceived competitive advantage: proximity to state government, location in north central California, and access to a large network of primary care physicians. In follow-up to its 1998 State Health Symposium, the Center plans to sponsor another joint UC Davis State Research Conference which will focus on issues of fundamental importance to State Health Policy development. Plans are also underway to create a Primary Care Outcomes Research Fellowship. This unique fellowship will prepare clinically trained physicians to assume faculty positions in divisions of academic primary care. The fellowship structure includes opportunities to earn an MPH degree, a series of core didactic lectures and courses, and a mentored research project. Both intramural and extramural sources of funding are being sought to support the fellowship.

III. Financial Reporting

For the year 1999-2000, the Center expended \$203,614 in core funds and over \$615,000 in direct support of Center-related research projects. In 2000-01, project expenditures of \$1,650,000 in research funds and \$260,000 in core funds are anticipated.