HAYA R. RUBIN, M.D., Ph.D., F.A.C.P.

March, 2011

CURRENT POSITIONS:

Owner, primary care practice in Mountain View CA, 2011-. Primary care internal medicine practice and consultation,

including preventive care and chronic disease care coordination.

My Advice Doctor, 2009-. Internal medicine consultant providing supplemental advice and support for adults with

serious and/or complex problems.

Research and Evaluation, Palo Alto CA, 1980-. Consulting practice in quality improvement research.

Adjunct Professor of Medicine, The Johns Hopkins University School of Medicine, 2005-present.

Adjunct Associate, Stanford University's Center for Health Policy/Center for Primary Care and Outcomes Research

(CHP/PCOR)

PERSONAL DATA:

Place of Birth: Pittsburgh, PA

Citizenship: USA

EDUCATION AND TRAINING:

B.A./1975 Oberlin College (Chemistry)

M.D./1982 Case Western Reserve University

Ph.D./1982 Case Western Reserve University (Pathology/Cellular Immunology)

Internal Medicine Residency, The Mount Sinai Medical Center, New York City, 1982-85.

Robert Wood Johnson Clinical Scholar, UCLA, 1986-88.

Internal Medicine Fellow, UCLA, 1986-88.

M.S.P.H./1989 School of Public Health, UCLA

Business of Medicine Certificate/2003 The Johns Hopkins University

PROFESSIONAL EXPERIENCE:

Director, Research and Evaluation, Palo Alto CA, 1988-present.

Consultant in quality improvement and outcomes research. Clients include universities, medical centers, and corporations interested in conducting studies to evaluate whether specific interventions improve the quality of medical care delivered. Provide assistance with research design, development and identification of measures, analysis, presentation and dissemination of results.

Vice President of Research, Director, Research Institute, and Leonard S. Ely Endowed Professor of Quality Improvement Research, Palo Alto Medical Foundation, 2005-2007.

Oversaw all Research Institute functions. Established Department of Health Care and Policy Research. Established joint fellowship program in health care policy and research with University of California San Francisco and in Quality Improvement Research with Stanford. Member of the Foundation's Board of Trustees, Finance Committee, Funds Management Committee, and Quality Improvement Steering Committee.

HMSA Chair, Health Services and Quality Research, and Professor of Medicine, John A. Burns School of Medicine, University of Hawaii at Manoa, 2003-2005.

Reporting to the Dean of the School of Medicine, provided research infrastructure, resources, training and mentoring for health care researchers across the university. Directed training core of NIH-funded EXPORT Center, mentoring and training researchers to conduct investigations that would help to eliminate health disparities for Native and Pacific Peoples.

Director, Quality of Care Research, Johns Hopkins School of Medicine and Johns Hopkins Medical Institutions, Assistant Professor, Associate Professor and Professor of Medicine and Health Policy and Management, 1990-2005.

Over a 15 year academic career at Johns Hopkins, initiated and directed Quality of Care Research at Johns Hopkins Schools of Medicine and Public Health, building a new research discipline in the institution, obtained internal and external funding for this research program and trained dozens of trainees. Established and led Clinical Quality Research Initiatives partnership with Johns Hopkins Medical Institutions, which evaluated many clinical and service interventions, including triage changes in emergency rooms that resulted in improved throughput, discharge management that reduced readmission rates in congestive heart failure, training, equipment, and administrative changes which prevented bloodstream catheter infections in ICUs, remote intensivist monitoring of surgical ICUs that reduced mortality and complications, and measuring and giving feedback to physician and units about quality and patient satisfaction which resulted in improved quality of care. Later, as Senior Advisor for the Center for Innovations in Quality Patient Care, Johns Hopkins Medicine, assisted with developing research proposals for funding evaluations of quality improvement interventions. Assisted all clinical departments in developing and evaluating quality measures. Established patient satisfaction measurement at Johns Hopkins Hospital and assisted in its implementation. Chaired Johns Hopkins Hospital's Metrics Committee for Performance Measurement, establishing medical institutions' approach to performance measurement. Taught Research Methods and Quality of Care Research classes to Robert Wood Johnson Clinical Scholars. Internal Medicine and Pulmonary fellows, and graduate students in the school of public health.

Attending Physician, The Johns Hopkins University Health Service and The Johns Hopkins Hospital, 1990-2005.

Internal medicine practice including continuity care and student health service caring for medical students, public health students and their adult family members.

Associate Physician, Institute for Health Policy Studies, UCSF, 1990.

Conducted health policy research on patient satisfaction with care delivered under different payment systems as part of the Medical Outcomes Study.

Associate Physician, UCSF Internal Medicine Group Practice and Ambulatory Care Screening Clinic, 1988-90.

Internal medicine continuity practice and urgent care.

Instructor and Assistant Clinical Professor of Medicine, UCSF, 1988-90.

Taught internal medicine to trainees as a clinic preceptor.

Assistant Physician, UCLA Medical Center Medical Service and Medical Ambulatory Care Center (MACC), 1986-88.

Internal medicine hospital and outpatient practice.

Instructor in Medicine and Assistant Physician, Mount Sinai Medical Center and Internal Medicine Associates, 1985-86.

Internal medicine practice and evening attending physician, emergency department, taught and supervised residents in internal medicine practice and emergency care.

Consultant, RAND Corporation, 1989-90.

Directed PRO Quality Review Validation Study and Canadian Hospital Quality Study.

Attending Physician, Internal Medicine, The Johns Hopkins Hospital, 1990-2005.

Continuity practice in Internal Medicine serving internal medicine patients at Johns Hopkins, and in University Health Service, providing care to medical and public health graduate students and their adult family members.

Visiting Scientist, Gertner Institute for Health Policy and Health Services Research, Sheba Medical Center, Tel Hashomer, Israel, 1996.

Conducted quality of care research with colleagues at Gertner and mentored various investigators in clinical and health care research studies.

Associate Professor of Epidemiology, The Johns Hopkins Bloomberg School of Hygiene and Public Health, 2000-2003.

Assisted in teaching quality of care research methods to trainees in Graduate Clinical Program in Clinical Investigation.

RESEARCH GRANT AND CONTRACT PARTICIPATION

Principal Investigator on 14 grants and contracts at Johns Hopkins University, RAND, and PAMFRI:

Impact of Physician Level Pay for Performance (Agency for Healthcare Research and Quality, AHRQ), Mentoring in Quality Assessment and Improvement for Secondary Prevention of Cardiovascular Disease (National Heart Lung and Blood Institute, NHLBI), Cardiovascular Health Community Health Improvement Program (National Business Coalition on Health), International Indicators Summit (AHRQ), Initiatives to Help Asthmatics Live Easier (AHRQ), Managed Care Organization Survey (American Academy of Neurology), Effects of Healthcare Environment on Patient Medical Outcomes (Center for Health Design), Evaluation of Telemedicine Outcomes and Costs (Johns Hopkins Hospital), Developing Information for Consumers Comparing Israeli Health Plans (Ministry of Health, Israel), Maryland Medicaid Recipient Satisfaction Survey (Robert Wood Johnson Foundation), Mothers on Medicaid Survey (Pew Charitable Trust), Canadian Hospital Quality Project (Canadian Committee on Hospital Facilities Accreditation), and Comparison of the Accuracy of Screening Systems for Hospital Quality Assessment (Health Care Financing Administration, now CMS), and How Zidovudine Affects Quality of Life in HIV-infected Patients (National Institute for Allergy and Infectious Diseases, NIAID).

Co-investigator or consultant on 25 additional grants and contracts with principal investigators at Johns Hopkins, Harvard, University of Hawaii, RAND, UCLA, UCSF, University of Hawaii, Queen's University, including:

CHOICE study (NIH and AHRQ), HIV Network (AHRQ), EQUAL study (NIH), Medical Outcomes Study (National Center for Health Services Research, now AHRQ), Development of a Patient Survey to Assess the Quality of Care in Office Based Practice (Commonwealth Fund).

RESEARCH PUBLICATIONS

Over 80 publications in peer-reviewed journals, see Collexis Biomed Experts <u>www.collexis.com</u> for profile. Also case reports, letters and invited editorials available upon request.

EDUCATIONAL ACTIVITIES:

Clinical Teaching: Preceptor, JHIMA, (Johns Hopkins Internal Medicine Associates) (internal medicine housestaff group practice), 1991-1995. Development of ambulatory medicine curricular materials for internal medicine housestaff, Johns Hopkins Medicine, 1991-1995, Attending Physician, University Health Services, the Johns Hopkins University, precepted internal medicine fellows, 1996-2004. Preceptor, Internal Medicine Associates, Mount Sinai Medical Center and Attending, Emergency Room, 1985-6.

Mentored Trainees: 36 mentored trainees in quality improvement research, available upon request. Women's leadership award, Johns Hopkins Unviversity, 2004.

Editorial Board Appointments: Editorial Committees, Medical Care Research, 1995-2000, International Journal for Quality in Health Care 1997-.2005 American Journal of Medicine, 2001-. Associate Editor, Journal of General Internal Medicine, 1998-2002. Guest Editor, Proceedings, International Indicators Summit, International Society for Quality in Healthcare, International Journal of Quality in Healthcare, 2002-2003. Guest Editor, Supplement on OECD Quality Indicators, International Journal for Quality in Health Care, 2006.Deputy Editor, International Journal for Quality in Health Care, 2005-2007. SGIM Forum, Associate Editor, Innovations in Medical Practice, 2005-2007.

Journal Peer Review: Reviewer, New England Journal of Medicine, Journal of the American Medical Association (JAMA), Annals of Internal Medicine, Journal of Clinical Epidemiology, American Journal of Medicine, Archives of Internal Medicine, Archives of Ophthalmology, Journal of General Internal Medicine, Medical Care, Medicine, Milbank Memorial Fund Quarterly, Inquiry, Health Services Research, International Journal for Quality in Health Care, Joint Commission Journal on Quality Improvement, Medical Care Research and Review, multiple others too numerous to mention.

CLINICAL ACTIVITIES:

Certification and Licensure: Diplomate, American Board of Internal Medicine, 1985., Medical Licensure: California 1986-present, Maryland (1990-2005), New York (1982-1986), Hawaii (2003-2005).

Practice Experience: Instructor in Medicine, The Mount Sinai School of Medicine. Full-time ambulatory internal medicine practice and clinical precepting of housestaff and medical students. 1985-86. Associate Physician, UCLA Medical Ambulatory Care Center, 1986-1988. Ambulatory internal medicine practice, assistant attending on inpatient services. Clinical Instructor of Medicine, 1988 1990, University of California, San Francisco. Acute and continuity primary medical care and precepting of residents and medical students. Clinical Associate Professor of Medicine, 1990. University of California, San Francisco. Acute and continuity primary medical care and precepting of residents and medical students. Attending Physician, Nelson-Baker Service, internal medicine, 1990-1995. Inpatient medical care and supervision and teaching of housestaff. Attending Physician, The Johns Hopkins University Health Service, 1995-2005. Primary and acute medical care provided to trainees at Johns Hopkins Medical Institutions and their spouses. Internal medicine practice in Palo Alto providing independent medical advice to assist patients and family members to improve their medical care and treatment for acute care, chronic disease and prevention, 2009-. Solo primary care internal medicine practice in Mountain View CA, April, 2011-.

ORGANIZATIONAL ACTIVITIES:

Institutional Administrative Service: Director, Quality of Care Research, the Johns Hopkins Medical Institutions, 1990-2005. Quality Management Steering Committee, The Johns Hopkins Hospital, 1990 1993. Director, Clinical Quality Assessment & Research Initiative, Johns Hopkins Medical Institutions, 1990-1993. (Managed operating budget under Medical Affairs for development of quality measures). Quality Management Board, The Johns Hopkins Health Plan, 1991 1992. Ad Hoc Committee for the Evaluation of Residency Training in Internal Medicine, Johns Hopkins University Department of Medicine, 1991. Internship Selection Committee, Johns Hopkins University Department of Medicine, 1992-1995. Director, Performance Improvement Initiatives, Johns Hopkins Program for Medical Technology and Practice Assessment, 1995-. Service Performance

Improvement Committee, The Johns Hopkins Hospital, 1995-1999. Performance Improvement Committee, Department of Medicine, 1995-1999. Osler Way Inpatient Services Management group. Department of Medicine, 1995, 1997-1999. Performance Improvement Council, Johns Hopkins Medicine, 1997-. Service Excellence Action Group, Johns Hopkins Medicine, 1997-. Chair, Metrics Committee, Service Excellence Action Group, Johns Hopkins Medicine, 1997-1999, Performance Profile Committee, Johns Hopkins Medicine, 1999-. External Relations Work Group, The Johns Hopkins University Clinical Practice Association, 1999. Osler Way Management Team. The Johns Hopkins School of Medicine, 1999-2000. Department of Medicine Task Force on Women's Academic Careers in Medicine, The Johns Hopkins School of Medicine, Member, 1996-present, Chair, Culture Change Subcommittee, 1999-2001. Service Excellence Coordinating Group, Johns Hopkins Bayview Medical Center, 2002-. Senior Advisor for Research, Center for Innovations in Patient Care, Johns Hopkins Medicine, 2002-. Curriculum Committee, Internal Medicine Residency Program, John A. Burns School of Medicine, University of Hawaii, 2003-2005. Chair, Subcommittee on Practice-Based Learning and Improvement, Task Force on Graduate Medical Education Competencies, Johns Hopkins University School of Medicine, 2003-. Task Force on Malpractice Insurance, Department of Medicine, Johns Hopkins University, 2004-. HMSA Chair, Healthcare Services and Quality Research, the John A. Burns School of Medicine, University of Hawai'I, 2003-2004. Director, Palo Alto Medical Foundation Research Institute, 2005-2007. Vice President for Research, Palo Alto Medical Foundation, 2005-2007. Board of Trustees, Palo Alto Medical Foundation, 2005-2007. Finance Committee, Palo Alto Medical Foundation, 2005-2007. Fund Management Committee, Palo Alto Medical Foundation, 2005-2007. Shared Medical Appointment Steering Committee, Palo Alto Medical Foundation, 2005-2007. Quality Improvement Steering Committee, Palo Alto Healthcare Division, Palo Alto Medical Foundation, 2005-2007. See also Professional Societies, below.

Professional Societies, Leadership and Participation:

Member, International Society for Quality Health Care, Society of General Internal Medicine, American College of Physicians, AcademyHealth.

President, Society of General Internal Medicine, Mid-Atlantic Region, 1994-5. Society of General Internal Medicine, National Committee appointments: Research Subcommittee, Workshop Selection, 1990. Co Chair, Abstract Selection Committee, 1991; Abstract Selection Committee, 1993, 1998, 1999, 2000; Health Policy Committee, 1993-1996; Workshop Selection Committee, 1994, 2007, Glaser Award Selection Committee, 1995, 2000, 2001; Founders' Award Selection Committee, 2007, 2008, Selection Committee for Associate and Junior Faculty Awards, 1988, 1991, 1992; Research Committee, 1993-; Chair, Provider/Organization Centered Abstract Selection, 1999; One-on-one Mentoring Program, 2003, 2004, Chair, Quality of Care Abstract Selection Subcommittee, 2004, Distance Mentor, 2004-, Program Committee, Chair, Innovations in Practice Management, 2005, Meet the Professor, 2006, Chair, Quality Improvement Curriculum Cluster, 2003-2007, SGIM Forum Associate Editor for Innovations in Medical Practice, 2005-2008.

Quality Improvement Committee, Medical Care Section, American Public Health Association, 1993-1997.

American College of Physicians: Fellow, 1995-present, Governors' Council, Health Policy Committee, American College of Physicians, Maryland Chapter, 1999-2003. Coordinator, Leadership Day on Capitol Hill Delegation; American College of Physicians, Maryland Chapter, 2003, 2004. Federal Legislative Liaison, American College of Physicians, Maryland Chapter, 2004-2005. Health Policy Committee, American College of Physicians, Northern California chapter, 2008-.

International Society for Quality in Health Care: Quality Indicators Steering Committee, Chair, International Summit, 2002, Journal deputy editor, 2005-2007.

Conference Organizer or Session Chair: Chair or organizer of 40 workshops or precourses at professional meetings, including:

"Common Problems in Survey Research," National Meeting of Society for General Internal Medicine, Washington DC, Instructor, "Measurement Issues in Clinical Research," Precourse on Basic Issues in Research Design and Planning, Society for General Internal Medicine, "Using Patient, Physician and Purchaser Expectations to Improve Quality," conference on "Rethinking Quality: Today's Challenge, Tomorrow's Reward," Foundation for Health Care Quality, "A Tutorial on Structured Implicit Peer Review," American Medical Peer Review Association (AMPRA) in Health Care Quality Improvement: Putting Theory into Practice, Annual Session and House of Delegates Meeting, Washington DC. "Improving the Science of Quality Assurance and Quality Improvement," agenda-setting conference on Research in Quality Improvement, Agency for Health Care Policy and Research, "Managed Care and Patient Satisfaction," National Academy of Social Insurance, invitational workshop on Current Research in Managed Care: What Can We Say About Perinatal Services?, Washington, DC, "Measuring Provider Performance: Techniques and Challenges." American Public Health Association Annual Meeting, Atlanta, "Quality Assessment and Improvement," Society of General Internal Medicine Annual Meeting,, "Anatomy of a Healthcare Design Experiment", Tenth Symposium on Healthcare Design, "Quality Improvement in the Real World: The Role of the Internist,"

Society of General Internal Medicine, Annual Meeting, "Quality of Care", Opportunities for Cooperation in Health Services and Policy Research: A U.S.- Israel Bi-National Conference, Washington DC, "Quality Improvement: Promoting Change". Society of General Internal Medicine, "Health Services Research", Society of General Internal Medicine, "Quality of Care and Patient Satisfaction," Society of General Internal Medicine, "Risk Management", International Society for Quality in Health Care, International Conference, Amsterdam, "Quality Improvement: Promoting Change". Society of General Internal Medicine, Annual Meeting, "Quality Indicators: Provider Perspectives". International Society for Quality in Health Care, International Conference, Dublin, "Patient Satisfaction with Care." International Society for Quality in Health Care, International Conference, Dublin, "Quality Improvement: Promoting Change and Reducing Error". Society of General Internal Medicine, Annual Meeting, Chair, International Indicators Summit, "Quality Indicators: Medication Safety", International Society for Quality in Health Care, International Conference, Buenos Aires, Chair, Oral Abstract Session, "Patient Safety and Error Reduction", International Society for Quality in Health Care, International Conference, Paris, Steering Committee, International Indicators Summit, International Society for Quality in Health Care, International Conference. Chair, Poster Session, "Utilization of Quality Indicators", International Indicators Summit, International Society for Quality in Health Care, International Conference, Paris. Chair, Poster Session, "National Quality Indicator Programs," International Indicators Summit, International Society for Quality in Health Care, International Conference, Paris, Chair, Poster Sessions, International Indicators Summit, International Society for Quality in Health Care, International Conference, Dallas. Steering Committee, International Indicators Summit, International Society for Quality in Health Care, International Conference, Dallas. Chair, Oral Presentation Session, "Patient Satisfaction", International Society for Quality in Health Care, Dallas, Chair, Special Panel, "Nurse Staffing and Quality", International Society for Quality in Health Care, International Conference, Dallas. U.S. Advisory Committee, International Society for Quality in Health Care, International Conference, Dallas. Program Chair, Research Track, Society for Arts in Healthcare Annual Meeting, Washington DC, Workshop Chair, Methods for Health Care Quality Improvement Research. AcademyHealth Annual Research Meeting, San Diego. Steering Committee, International Indicators Summit, the International Society for Quality in Health Care, Amsterdam, Chair, Innovations in Practice Management and Member, Program Committee, Society for General Internal Medicine, Annual Meeting, New Orleans, LA. Facilitator, "Point Counterpoint: Research Studies on Visual Arts and the Built Healthcare Environment," Charting the Course of Arts, Health and Medicine, International Society for the Arts in Healthcare (SAH) Conference, Northwestern Memorial Hospital Conference Center, Chicago. "Triangulating for Truth: Using Qualitative Research Methods to Understand Quality Improvement," Annual Research Meeting, AcademyHealth, Seattle, WA, "Quality Improvement Research Methods: Evaluating Physician Practice," Annual Research Meeting, AcademyHealth, Orlando, Florida, "Quality Improvement Research Methods: The Blind Men and the Apples and Oranges", Annual Research Meeting, AcademyHealth, Washington DC

Advisory Committees and Review Groups: Reviewer, Agency for Health Care Research and Quality (AHRQ) small grant programs and ad hoc review groups in quality and safety of care, 1992- present. Reviewer, Department of Veterans Affairs Health Services Research & Development Service Ad Hoc Advisory Group, 1992. Reviewer, Health Care Financing Administration Research and Demonstration grant program, 1992. Chair, Tools Committee, and Member, Executive Committee, Academic Medical Center Consortium, Quality Measurement and Management Initiative, 1992-1993. Reviewer, Center for Medicare and Medicaid Services (formerly Health Care Financing Administration), PRO Innovation Awards, 1992. VA Peer Review Task Force, 1993. Steering Committee, Medical Quality Indicators System, Health Care Financing Administration, 1994-1996. Reviewer, Israeli Institute for Health Policy and Health Services Research, 1997-2004. Complementary and Alternative Medicine Steering Committee, The Johns Hopkins University School of Medicine, 2000-2005. Co-Chair, MEDSAFE Panel, Maryland Hospital Association, 2000-2004. Advisory Board, Society for Arts in Health Care, 2002-2006. Policy Planning Group, Use of Arts in Health Care, National Endowment for the Arts, 2003. Reviewer, the Nuffield Trust, United Kingdom, 2003. Reviewer, Special Emphasis Panel, Use of Medical Informatics for Quality Improvement, Agency for Healthcare Research and Quality (AHRQ), 2007. External Scientific Advisory Committee, Center for Health Disparities in Pacific Peoples, University of Hawai'i, John A. Burns School of Medicine, 2007-

Consultancies (Selected):

Center for Medicare and Medicaid Services, Quality Review Task Force. Developed peer review methods and training procedures for Quality Improvement Organizations. Queen's University, Ottawa, Canada. Implicit review of random samples of hospital records to measure variations in the quality of care at 29 Canadian hospitals. University of Michigan Hospitals. Review of utilization management and quality review programs. Massachusetts General Hospital, Division of General Internal Medicine. External reviewer for ambulatory care quality measures. University of Illinois. Assisted with design of patient satisfaction questionnaire for mothers on Medicaid receiving prenatal care. Center for Health Design. Conducted literature review on the effects of the built healthcare environment on patient medical outcomes, suggested healthcare design applications from this literature, made recommendations for a research agenda. Pacific Business Group on Health, UCLA. Consultation on validation of patient reported health status changes as measures of physician practice quality of care. University of California, San Francisco; Improving the Doctor-Patient Relationship. Grant review for Robert Wood Johnson Foundation grant program. The Delmarva Foundation for Medical Care (CMS Quality Improvement Organization). Assisted in redesigning peer review procedures and in designing an instrument and procedures for organizational assessment of hospitals' performance improvement efforts relevant to Medicare quality indicators. Johns Hopkins Bayview Medical Center. Assisted Department of Medicine in designing quality improvement initiatives; assist in planning service excellence initiatives to mprove patient satisfaction. Stanford

University. Reviewed Health Services Research Program master's degree program. Voluntary Hospitals of America. Consultation to assist in design of quality measures for intensive care units. Maccabee Health Plan, Tel Aviv, Israel. Provided assistance to quality of care improvement program. Pacific Business Group on Health. Reviewed quality of care measures submitted to the National Quality Forum on behalf of the consumer and purchaser community. Chair, Methods Design Committee, Cholesterol Community Health Improvement Project, National Business Consortium on Health. Advised on appropriate research methods for studying effectiveness of quality improvement interventions. Moderated expert panel on cholesterol treatment.

Rockburn Institute. Assisted a large IPA to demonstrate its impact on social goals of healthcare cost containment and quality improvement. American Institutes for Research, Patient Satisfaction with Physicians. Assisted AIR in designing and analyzing studies of patient satisfaction with office physicians, studies of end stage renal disease patients' satisfaction with care. Quroum Consulting, Literature Review on Cost-Effectiveness Studies in Alzheimer's Disease, Stanford University, Development of General Internal Medicine Research Agenda. Peoplechart, assistance with evaluation research studies of personal health records. John A. Burns School of Medicine, University of Hawaii, teaching and mentoring in research methods, assistance with outcome measures for clinical trial of inter-island telemedicine for diabetes education. Weill School of Medicine, Cornell University: Provided ratings of quality measures usable with community or regional health information exchange systems.

RECOGNITION

Honors, Awards, and Named or Honorary Lectures:

NIH National Research Service Award (Medical Scientist Training Program), 1976-82. Dr. Harry Goldblatt Award for talent in experimental medicine, CWRU School of Medicine, 1981. Harry Resnick Memorial Fund Award for unusual accomplishment, CWRU School of Medicine, 1982. Alpha Omega Alpha Medical Honor Society, elected 1982. Delta Omega Public Health Honor Society, elected 1988. Clinician Scientist Award, Johns Hopkins University School of Medicine, 1991 3. Shirley Sohmer Nursing Research Award, Johns Hopkins Hospital Department of Nursing, 1992. Society of General Internal Medicine Award for Excellent Original Investigation in General Internal Medicine, 1993. Alternate, Picker/Commonwealth Scholars Program, "Patient Ratings of Quality of Care and Access to Care for Comparing Competing Health Plans," 1994. Finalist, National Institute for Health Care Management Research Award, 1994. Fellow, Academy Health, 1996-. Frederick S. Caldwell, M.D. Memorial Lecture, "Improving Patient Satisfaction", Suburban Hospital, Bethesda MD, 2000. Fellow, American College of Physicians (ACP), 2000-. Leadership Award, Johns Hopkins University, 2004. Anna Borun and Henry Borun Foundation Visiting Professor in Cardiology, UCLA, 2004. Article of the Year, 2007, American Society of Teachers of Family Medicine.

Workshop Coordinator and Presenter, "Reference Databases for Keeping Track of the Medical Literature", New

Invited Talks, National and International: Over 45 invited presentations, including:

York Society for Research and Education in Primary Care Internal Medicine. Workshop Co Organizer and Presenter, "Common Problems in Survey Research," National Meeting of Society for General Internal Medicine. .Instructor, "Measurement Issues in Clinical Research," Precourse on Basic Issues in Research Design and Planning Society for General Internal Medicine. Workshop Leader and Presenter, "Using Patient, Physician and Purchaser Expectations to Improve Quality," conference on "Rethinking Quality: Today's Challenge, Tomorrow's Reward," Foundation for Health Care Quality. Keynote Speaker, "Variations in Hospital Quality," expert panelist on measuring quality and outcomes of care, and workshop facilitator, conference on National Health Care Quality Management, JHU School of Hygiene and Public Health and The Traveler's Corporation, Washington, DC. Workshop Leader and Presenter, "A Tutorial on Structured Implicit Peer Review," American Medical Peer Review Association (AMPRA) in Health Care Quality Improvement: Putting Theory into Practice, Annual Session and House of Delegates Meeting, San Francisco, CA. Discussant, "Patient Judgment of HMOs and Managed Care," Conference on HMOs and Other Health Care Systems for the Elderly, Institute for Health Policy Studies, University of California, San Francisco, CA. Keynote Speaker, "For What Should Hospitals be Publicly Accountable," workshop on Public Accountability of Hospitals Regarding Quality: Future Directions, Thomas Jefferson University/Jefferson Medical College. "Outcomes Measurement: State of the Art," University Hospital Consortium, Clinical Evaluative Sciences Council Meeting, Oak Brook, IL. Briefing to Congressional Staff, "Measuring Outcomes and Quality of Care: State of the Art and Implications for Health Care Reform," The Johns Hopkins University School of Hygiene and Public Health (Capitol Associates, Inc.), Washington, DC. "Health Care Quality Improvement: Mechanism to Improve Review Reliability," PRO Leadership Conference (HCFA), Baltimore, MD. "Managed Care and Patient Satisfaction," National Academy of Social Insurance, invitational workshop on Current Research in Managed Care: What Can We Say About Perinatal Services?. Plenary Speaker, "Measuring Outcomes: Methods and Strategies." Prevention 95*. The Twelfth Annual National Preventive Medicine Meeting, New Orleans, LA. "Findings from the Medical Outcomes Study." Grand Rounds, the University of Michigan. "For What Should Hospitals Be Accountable: Evaluating the Evaluators." American Medical Review and Research Center, Washington, DC. Invited Panel Presenter. "Medicaid Recipients Ratings of Prenatal Care by HMOs and Other Providers in Maryland." Association for Health Services Research (AHSR), Chicago, IL. "Outcomes Assessment: State of the Art." Medical Grand Rounds, University of Massachusetts, Worcester, MA. "Maryland Medicaid Recipients Ratings of Prenatal and Pediatric Care." Brown Bag Seminar, Health Outcomes Institute, New England Medical Center. "The Relationship between Environmental Design and Patient Medical Outcomes," Center for Health Design's Ninth Symposium on Healthcare Design, Boston, MA. "Patient Satisfaction: Comparing Israel's Health Plans," Ben Gurion University, Beersheva, Israel. Plenary Speaker, "Status Report: An Investigation to Determine Whether

the Built Environment Affects Patients' Medical Outcomes", Tenth Symposium on Healthcare Design, San Diego, CA. Workshop Leader and Presenter, "Anatomy of a Healthcare Design Experiment", Tenth Symposium on Healthcare Design, San Diego, CA. "Consumer Satisfaction with Israel's Health Plan: Quality Assessment and Improvement Under National Health Insurance," Israel National Institute for Health Policy Research, Tel Hashomer, Israel.. Precourse Director and Presenter, "Quality Improvement in the Real World: The Role of the Internist," Society of General Internal Medicine, Annual Meeting, Chicago, IL. Panelist, "Important Research Questions for the Field of Patient-Centered Care in the Future: Future Ouestions in Patient-Oriented Research", Picker/Commonwealth Scholars Program National Meeting, Washington, DC. Discussion Leader, "Quality of Care", Opportunities for Cooperation in Health Services and Policy Research: A U.S.- Israel Bi-National Conference, Washington, DC. Plenary Speaker, "Status Report: An Investigation to Determine Whether the Built Environment Affects Patients' Medical Outcomes", Eleventh Symposium on Healthcare Design, San Francisco, CA. Precourse Director and Presenter, "Quality Improvement: Promoting Change". Society of General Internal Medicine, Annual Meeting, San Francisco, CA.Precourse Director and Presenter, "Quality Improvement: Promoting Change". Society of General Internal Medicine, Annual Meeting, Boston, MA.Oral Presentation:: "Developing Quality Indicators from the Provider Perspective: The Johns Hopkins Experience", Quality Indicators Workshop, International Society for Quality in Health Care, International Conference, Dublin. Presenter, "Summit Overview", International Indicators Summit, International Society for Quality in Health Care, International Meeting, Buenos Aires. Speaker, "What is Good Research?" Society for the Arts in Healthcare, Durham NC. Discussion Moderator, Poster Sessions on Utilization of Quality Indicators and National Quality Indicator Programs, International Indicators Summit, International Society for Quality in Health Care, International Meeting, Paris. Invited Blue Ribbon Panelist, The Role of the Arts in Heathcare, National Endowment for the Arts and the Society for Arts in Healthcare, Washington D.C. "Distraction Therapy with Nature Sounds: A Randomized Trial at Johns Hopkins". Society for Arts in Healthcare, San Diego. "Physician Adherence to Treatment Guidelines", An international symposium hosted by Wake Forest University Health Sciences, in collaboration with the Agency for Healthcare Research and Quality, Winston-Salem, North Carolina. Precourse Presenter, "Institutional Quality Improvement", Society of General Internal Medicine, Annual Meeting, Vancouver. Keynote Speaker, "Improving the Quality and Safety of Our Care", American College of Physicians, Hawai'i Chapter Scientific Meeting. Precourse Presenter, "Evaluating Arts in Healthcare Interventions", Society for Arts in Healthcare, Washington, D.C. Forum Leader, "Representational vs. non-Representational Art for Healthcare Environments: Resolve the Controversy through Research." Society for Arts in Healthcare, Washington D.C. Meet the Professor, "The Road Less Traveled: Academic Careers in Quality Improvement", Society of General Internal Medicine Annual Meeting, Chicago. Presenter, "A Community Discussion about the Fitness Research Agenda" Fifty-Plus Fitness Annual Conference, Stanford, CA. Plenary Speaker and Facilitator, "Visual Arts and the Built Healthcare Environment - Point Counterpoint:" Northwestern Memorial Hospital Conference Center, Society for the Arts in Healthcare. Speaker, "The Manuscript Publications Process", at He Huliau: Conference on Eliminating Health Disparities in Native Hawaiians and Pacific Peoples: Cardiovascular Disease 2006," Department of Native Hawaiian Health and Hawaii EXPORT Center, Honolulu, HI, "Getting the Best Health Care: The Top 10", JCC Seniors program, Oshman Family JCC, Palo Alto CA, and Deborah's Palm, Palo Alto CA.