Northwestern University-Patient-centered Intervention and Engagement Training (NU-PATIENT) K12 Scholars Program

(AHRQ K12HS023011, David Cella, PhD PI)

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1. ABSTRACT

The Northwestern University-Patient-centered Intervention and Engagement Training (NU-PATIENT) K12 Scholars Program will promote a rich environment to train tomorrow’s leading scholars to conduct high-impact patient-centered outcomes research (PCOR). We will teach and enable scholars to conduct comparative effectiveness research (CER) across two critically-important research themes: Patient-centered intervention research and Patient engagement and activation. These unique themes comprise areas that reflect a national training need, and in which NU is particularly strong. NU-PATIENT will provide a new paradigm for fostering the next generation of PCOR Scholars with the range of technical, methodological and strategic skills necessary to break new ground in its impact and application. We propose a CER network, linking methodologists, clinical researchers and stakeholders across Centers of the Institute for Public Health and Medicine (IPHAM), its partner departments of Preventive Medicine and Medical Social Sciences, and the Quantitative Methods (Q) Center of the Institute for Policy Research. Our combination of research themes and training resources will be directed toward integrated, high-impact training in PCOR, launching 10 independent scholars over 5 years. Scholars will choose concentrations in Patient-centered Intervention Research (Patient Reported Outcomes, Clinical Trials or Health Systems Change), where we propose a mentoring environment to help scholars fully integrate the patient’s perspective into the interpretation of clinical trial data and the implementation of improvements in health care delivery; or 2) Patient Engagement and Activation (Health Literacy and Communication, Risk Analysis and Decision Science, and e-Health / m-Health), where we will provide models of patient and other stakeholder engagement that help people make good decisions with full knowledge of risks and benefits, and fully engage in implementing those care decisions with the help of novel technology. Our emphasis on health literacy and communication helps reduce health disparities. Scholars will choose a concentration area and cross-train in other areas, including didactic training led by IPHAM & Q Centers and the NU Clinical and Translational Sciences (NUCATS) Institute: Stakeholder Partnership, Health Equity, and Dissemination Planning, Comparative Effectiveness Methodologies, Engineering and Technology in Health Care, and Pathway to Scientific Independence. We have identified 75 committed faculty whose work centers on PCOR and CER outlined in the proposal and focus on AHRQ priority populations. Scholars’ programs will be tailored to include coursework, topical seminars, and experiential (mentored research) training, rotations in ongoing research programs and stakeholder contexts, and career development seminars. This program will be conducted under the leadership of an executive committee of senior PCOR leaders working closely with an external advisory board of scientists and stakeholders, and an evaluation committee which will oversee rigorous evaluation of program quality, scholar experience, and long-term scholar success.
2. PROGRAM INFORMATION

The Northwestern University-Patient-centered Intervention and Engagement Training (NU-PATIENT) K12 Faculty Scholars Training Program is an AHRQ funded career development training grant designed to support the early research career development of junior faculty who will be engaged in comparative effectiveness and patient-centered outcomes research (PCOR).

Research Themes: By learning to apply comparative effectiveness and patient-centered outcomes research methods, NU-PATIENT scholars will conduct high impact research in one or more of the following areas:

I. Patient-centered intervention
   a. Patient-centered outcomes measurement and application
   b. Clinical trials
   c. Health systems change

II. Patient engagement and activation
   a. Health Literacy and Communication
   b. Risk analysis and decision science
   c. E-health & M-health

Training Environment: Scholars will be supported in a rich training environment including a mentoring team (primary mentor, co-mentor and patient advisor), and four training cores built around existing centers of IPHAM, NUCATS and the IPR Q-Center:

- Stakeholder partnership, health equity and dissemination planning
- Comparative effectiveness methodologies
- Engineering and technology in healthcare
- Pathways to scientific independence

Support provided:

- Scholars must devote a minimum of 75% effort for two years. Up to $90,000 in salary (plus fringe). Additional salary appropriate to compensating the scholar for the amount of time protected by the grant is the responsibility of the Department and must be provided by non-federal sources.
- The two year tailored training program includes didactic and experiential training and mentored independent research.
- Renewal of the second year is contingent on success at meeting first year goals, with the possibility of a third year of training for some scholars.
- Research development and training support of up to $25,000 per year for each scholar.
- A central goal of the award is for scholars to successfully obtain federal funding by the end of the scholar period.
Individuals are eligible if they are:

- Faculty with demonstrated commitment to career in clinical research including (a) previous research training clinical research (e.g. PhD, clinical research master’s degree or research fellowship); (b) high caliber scholarship and scientific productivity and (c) a history of academic distinction
- Faculty who are pursuing a clinical research career and who wish to acquire additional mentored research experience in comparative effectiveness and patient-centered outcomes research
- US citizens or have permanent resident status
- Have a full time faculty appointment at NU (by 9/1/14)
- Have a clinical or research doctorate
- Have been PI of an “F” grant or an R21 or R03
- Women, minorities and individuals with disabilities are encouraged to apply

Individuals are not eligible if they:

- Have a federal “K” or R01 grant
- Have a non-federal application pending or funded for research grant or contract with more than $100,000 per year
- Have been funded on any other federally funded institutional K12/KL2 or an individual K award

K12 Leadership:

The K12 is led by an Executive Committee chaired by David Cella, PhD (PI), and including David Baker, MD, MPH (Research Director); Jane Holl, MD, MPH (Didactics Training Director); Frank Penedo, PhD, (Experiential Training Director); Clyde Yancy, MD; Rowland Chang, MD, MPH; Ron Ackermann, MD, MPH; and Laurie Wakschlag, PhD (Evaluation Committee Chair).

Application Process:

There is a two stage application process. Interested individuals should submit a letter of intent by April 20th, 2014 which will be reviewed by the PI and members of the Executive Committee. Individuals invited to submit a full application based on the fit of their interests with the goals of the NU-PATIENT career development program will be notified by May 10th, 2014. Full applications will be due June 30th, 2014.

- Letter of intent (2 page maximum): (Due April 20, 2014)
  - Project title
  - Brief description of candidate background/ qualifications/fit with the K12 goals
  - Research plan that identifies a theme(s) area of focus,
  - 2-3 potential mentors from the attached list
  - Current copy of the applicant’s cv
Application: (Due June 30, 2014)

- Applicant Data form
- Specific Aims (1 page)
- Proposal (6 page limit)
  - Candidate background
  - Career goals/objectives
  - Career Development Plan
  - Research strategy
  - Letter of support/commitment from Department chair addressing candidate qualifications and institutional commitment
  - Two additional letters of reference
  - Budget
  - NIH biosketch
  - Additional materials
    - Protection of human subjects
    - Inclusion of women, minorities and children
    - Vertebrate animals
    - Biohazards

LOI to be submitted to: julie-kay@northwestern.edu

Full application materials: To be submitted via NUCATS Assist

Approximate notification date: July 30, 2014

Award begins: September 1st, 2014

Questions: Please contact Ms. Julie Kay (312 503-1725; julie-kay@northwestern.edu)
3. NU-PATIENT K12 MENTOR OVERVIEW

PRIMARY MENTORS

Ronald Ackermann, MD, MPH. Dr. Ackermann is a leading researcher in stakeholder-engaged approaches to health-care effectiveness and implementation. He has an advanced understanding of epidemiologic and natural experimental methods, public health research, and health economic evaluation, particularly when applied to the challenging areas of healthcare-community coordination. He was the lead expert technical consultant to Medicaid policy offices and medical directors in 20 states comparing the effectiveness of various care management and coordination initiatives. As Director of the IPHAM CCH, he oversees the development and integration of resources and services to support community stakeholder engagement in a wide array of research typically designed to address social determinants of health and strategies to improve health equity. He also directs a robust portfolio of research involving quasi-experimental and pragmatic trial designs to evaluate multi-level interventions to prevent and manage type 2 diabetes and obesity. Dr. Ackermann will assist each Scholar to successfully engage primary care providers, community organizations, public health leaders, and patients in the design and conduct of their research.

David Baker, MD, MPH. As a leading health equity researcher, Dr. Baker has scientific strength in both research themes, having done intervention studies that measured patient-centered outcomes (e.g., heart failure) and patient engagement and activation (i.e., health literacy and communication). He has conducted many CER projects, including studies randomized at the patient, provider, and hospital level. He also led an AHRQ-funded comparative effectiveness study of electronic health record quality improvement tools that used time-series modeling. He is the PI of the Center for Advancing Equity in Clinical Preventive Services, an AHRQ-funded Center of Excellence, which includes two CER studies examining multifaceted interventions to improve colorectal cancer screening, and primary prevention of coronary artery disease among historically underserved populations. He has a strong record of extramural grant support from NIH and AHRQ including four R01s (AHRQ and NIH), one R18 (an AHRQ Implementation and Dissemination Grant), and his current AHRQ P01. He has mentored over a dozen MD-PhD students, health services research fellows, and junior faculty, including 7 who have received K awards with him as primary (4) or secondary (3) mentor. Dr. Baker will help K12 Scholars develop their scholarly concentration area and their tailored training programs.

C. Hendricks Brown, PhD., Professor, FSM Department of Psychiatry and Behavioral Sciences, directs the NIDA and OBSSR funded Center for Prevention Implementation Methodology (Ce-PIM) for Drug Abuse and Sex Risk Behavior, (P30) salient to our Patient Centered Intervention Research theme. His area of research concentration is in Health Systems Change. His most recent publication focuses on using technology to deliver and improve implementation of effective interventions for minorities. He also directs an NIMH grant that synthesizes findings from 42 randomized trials for depression to ensure that there is "scientific equity" in producing and applying scientific evidence to address health and health service disparities. Dr. Brown has mentored several post-doctoral fellows and junior faculty.
Kenzie Cameron, PhD, MPH, Research Associate Professor, FSM Department of Medicine, GIM, has a research focus on designing health communication interventions related to promoting preventive health behaviors. She is a communication scholar and health services researcher with extensive expertise in theory-based message design, persuasion research, and innovative studies of multimedia interventions promoting behavior change. Using both quantitative and qualitative methods, she has worked in social influence and health communication for 15 years. She has mentored multiple medical and graduate fellows, and faculty. She has collaborated on numerous studies focused on: (1) message design, and (2) instrument and protocol development, implementation, and analysis, via interviews, focus groups, in-person and on-line surveys.

David Cella, PhD. Dr. Cella is Professor and Chair of MSS. He has been involved in PCOR for over 30 years. As a measurement scientist with expertise in applied health status measurement, he has led the development and validation of numerous questionnaires, item banks and other tools used to measure outcomes in both normal and clinical populations including paper-and-pencil and computer administered instruments. He is the PI of the trans-NIH PROMIS Statistical Center and the related Neuro-QoL project. Since the onset of PROMIS in 2004, he has been PI of the PROMIS Statistical Center (PSC), and chair of the PROMIS Steering Committee, which is its governing body. Under his leadership, the research team coordinated all activities of this large multicenter project and developed Assessment Center, web-based software for administering instruments and Computerized Adaptive Tests. He has also led and collaborated on work in outcome science which is designed to provide standardized measurement of health and disease processes that can be applied across a range of conditions and enables rapid, high impact translation from discovery to application. This has included extensive participation in clinical research, from observational studies of disease burden and treatment impact, to clinical trials, ranging from Phase I to Phase IV, including randomized controlled trials and pragmatic trials. For three decades, the driving theme of Dr. Cella’s research has been to ensure that the voice of the participant is reflected in study design, measurement and interpretation of results. A major focus of his work has been ensuring that measurement is sensitive to diverse populations, including low literacy and underserved populations, and developmentally-sensitive measurement across the lifespan.

Rowland Chang, MD, MPH. Dr. Chang has been engaged in the research training of postdoctoral fellows and junior faculty for more than 30 years. He has conducted observational studies and clinical trials, studying the effect of physical activity on health status, disability, and economic outcomes of persons with arthritis. He is also the PI on the NU MCRC in Rheumatology’s Methodology and Data Management Core, which provides teaching for and collaboration with post-doctoral fellows and faculty members engaged in rheumatic disease research. He has co-mentored several post-doctoral fellows in the FSM health services research and rheumatology training programs, and 5 junior faculty members funded by K23 awards.
Dorothy Dunlop, PhD., Professor, FSM Department of Medicine (Rheumatology), is a health services researcher with expertise in statistical methodology. Her applied research interests include the investigation of physical activity to prevent disability in older adults and consequences of arthritis and other musculoskeletal disorders. She has published and applied statistical methods for analyzing longitudinal data. Dr. Dunlop is the PI of an NIH-funded epidemiologic study on the relationship of physical activity to reduce disability, and one to evaluate cost effectiveness of a physical activity intervention. She has served on data safety monitoring boards, and executive committees of federally funded clinical trials. She has trained 14 postgraduate trainees (9 MD; 5 PhD) on statistical issues for a range of clinical research training objectives.

Phillip Greenland, MD., FSM Harry W Dingman Professor, DPM (DPM), Director of the IPHAM Center for Population Health Sciences, immediate past Director (PI) of NUCATS, and former Chair of DPM (1991-2005). He has been PI or co-PI on numerous epidemiologic observational studies and preventive intervention trials. His research is in the area of risk factor identification and cardiovascular risk prediction. His most recent research has been in the area of coronary calcium measurement for CVD risk assessment. He is a member of the Board of External Experts for NHLBI and a member of the DSMB for the Framingham Heart Study. Most relevant to this K12 program, is his leadership role in several previous K12 programs, including an NCCR K12 (as PI), a vascular medicine K12 (as mentor and Advisory Committee member), and KL2 (as NUCATS PI). He also serves as co-PI of a T32 in Cardiovascular Disease Prevention.

Allen Heinemann, PhD., Professor, FSM Department of Physical Medicine and Rehabilitation, directs a rehabilitation outcomes research center at Rehabilitation Institute of Chicago. He co-chairs the executive committee of the integrated post-doctoral fellowship program in IPHAM’s CEHS. He has mentored over a dozen health services research fellows and junior faculty. He has strength in both major research themes, including intervention studies measuring patient-centered outcomes, particularly related to chronic illness and disability, and patient engagement and activation in health literacy. His relevant methodological expertise includes the use of PROs in survey development and implementation; and rehabilitation outcomes at the level of providers and patients. He leads a large, multi-site study of patient outcomes following stroke, spinal cord injury and traumatic brain injury. He is PI of the Rehabilitation Research and Training Center on Improving Measurement of Rehabilitation Outcomes and co-PI of the Midwest Regional Spinal Cord Injury Care System. He is PI of a PCORI grant (Cella, Co-I) to develop PRO quality metrics for rehabilitation treatment settings.

Jane Holl, MD, MPH. As a pediatric outcomes researcher and expert in health research training, Dr. Holl is able to offer specific research expertise in multiple clinical contexts (including obstetrics, emergency medicine, pediatrics, transplantation, and surgery), in maternal-child health services and outcomes (including asthma and food allergy, well-child care, immunizations) and for a broad range of patient safety and healthcare quality topics (including risk assessments, teamwork and communication, simulation training) and implementation science, given her substantial clinical experience as the Medical Director for Patient Safety at the affiliated Ann and Robert H. Lurie Children’s Hospital of Chicago. Her role as Co-PI of the National Children’s Study health measurement program affords her access to a wide range of maternal, infant and child health assessment opportunities for Scholars interested in research theme 1 (PRO measurement and application). She also has substantial grant
writing and peer review expertise, as evidenced in her role as Chair of the Health Systems and Value Research Study Section, AHRQ.

**Donald Lloyd Jones, MD, ScM, Eileen M. Foell Professor, and Chair, DPM, Senior Associate Dean for Clinical and Translational Research, and NUCATS PI**, has a longstanding interest in mentoring and career development of clinical researchers. His research focuses on risk assessment for cardiovascular diseases (CVD) using short- and long-term risk models, and evaluating the utility of novel biomarkers and of subclinical disease imaging in refining risk estimation. He has pioneered many novel approaches to CVD risk assessment and communication. He is actively involved in the assessment of diverse approaches to promoting shared decision-making and improved patient-centered outcomes using diverse platforms for cardiovascular risk communication and decision support. He is also an expert in process-of-care and outcomes research in CVD. He has participated in numerous clinical trials in CVD prevention and treatment, and overseen many more in his former role as director of the Cardiovascular Clinical Trials Unit. He has mentored many junior investigators; in the last 5 years alone, his primary mentees have first-authored 36 original manuscripts with him, in many high profile journals. In his role as NUCATS PI, which includes KL2 and TL1 programs in clinical investigation and translational research, he will ensure alignment of NU-PATIENT with NUCATS resources.

**Mary McGrae McDermott, MD.**, Professor, FSM Department of Medicine (GIM), focuses on lower extremity peripheral arterial disease (PAD). Dr. McDermott was the first investigator to demonstrate that patients with asymptomatic PAD and those with atypical exertional leg symptoms have significantly greater functional impairment, faster functional decline, and greater mobility loss than patients without PAD. Work led by Dr. McDermott demonstrated that the degree of functional impairment predicts mobility loss and mortality in patients with PAD. In 2009, Dr. McDermott and colleagues published the first RCT demonstrating that supervised treadmill exercise training significantly improves brachial artery flow-mediated dilation (FMD), and quality of life in PAD patients. Dr. McDermott is currently PI of four NHLBI R01s, and the NIH-funded LIFE study, a randomized controlled clinical trial that will establish whether a physical activity intervention prevents mobility loss in older frail men and women. NU is one of eight sites recruiting participants for the LIFE study. Two hundred participants will be randomized at NU. All of these projects provide opportunities for Scholars to link their research questions to in an efficient way, with modest incremental cost.

**Sanjay Mehrotra, PhD.** Mehrotra is well-known for his methodological modeling and solution algorithm breakthroughs in a wide span of mathematical modeling based optimization problems that involve dichotomous, discrete, continuous, and random decision variables and data; and situations that require further specification of the decision problems though mathematical constraints. One of the decision science methods for solving linear optimization problems is named after him ("Mehrotra’s Predictor-Corrector" method). Dr. Mehrotra’s decision science methodological research on linear, convex, mixed integer, stochastic, multi-objective, distributionally robust, and risk-adjusted optimization has been funded by NSF, Office of Naval Research, and Department of Energy. He has applied his methodological expertise to many problems in healthcare, from genetic modeling, to care delivery process optimization and health disparity. He has developed predictive modeling and machine learning techniques for instrumental calibration, resource demand, networks and pathway extraction from data. Application examples include his NSF-funded work on resource allocation and assigning residents to
surgical rotations to achieve well-balanced and equitable training and ensure continuity of care, and health policy modeling to address geographic disparity in kidney transplant allocation within the national transplant system.

David Mohr, PhD., *Professor, FSM DPM, and Director, Center for Behavioral Intervention Technologies (CBITs)*, conducts research at the intersection of behavioral science, technology, and clinical intervention research. He develops and evaluates interventions that harness Internet and wireless technologies to promote health and mental health, including (1) a context-sensing mobile application harnessing indwelling sensor data to identify patient states in mobile interventions; 2) integrating internet intervention and peer networking tools using principles of online collaborative learning and supportive accountability to enhance learning and adherence; 3) the development of conversational agents (virtual humans) that can be used in web-based interventions, and 4) the creation of a mobile intervention that monitors adherence to medications. Brian Mustanski, PhD, *Associate Professor FSM MSS and Director, MSS IMPACT Program*, conducts translational research on LGBT health and development. For the past decade, a central focus of his work has been the study of HIV risk and protective factors among young gay men and translation to prevention. He has been the PI of 6 NIH grants, a site PI for 2 CDC grants, 3 foundation grants, and Co-I on many others. Several of his studies investigate the use of the Internet as an intervention setting. He received the APA award for Distinguished Scientific Contribution to LGBT Psychology (Div 44), a WT Grant Scholars Award, and is advisor to multiple NIH and CDC committees. He serves on the IRB, and has expertise in ethnical and regulatory issues. He have served as a mentor on two NIH Diversity Supplements, and mentored several post-doctoral scholars, and five junior faculty (including two with ASTART grants).

Frank Penedo, PhD, is a leading biobehavioral and disparities researcher. Dr. Penedo has served as PI, co-PI or project leader on multiple NIH-funded studies addressing psychosocial and bio-behavioral correlates of adjustment and the efficacy of psychosocial interventions in improving HRQOL and health outcomes. He is Psychosocial Investigator for the NHLBI-funded Hispanic Community Health Study (HCHS)—a cohort study of 16,000 Hispanics across four major US cities, and the PI of an ancillary project for the HCHS evaluating the impact of psychosocial and sociocultural processes on intermediate risk factors (e.g., metabolic syndrome) for CVD. Currently, he is the PI of an NCI health disparities Community Network Program study addressing psychosocial, ethnic and bio-behavioral determinants of HRQOL and adjustment in recently treated Hispanic cancer survivors. He is lead (PI) an NCI RO1 evaluating the efficacy of a web-based psychosocial intervention on reducing hormone treatment-related symptoms via intervention-associated changes in psychological adaptation and neuroimmune regulation. Dr. Penedo has significant expertise in community based, cohort and intervention studies that target ethnic minorities and involve collection and analyses of biological mechanisms. He has served on 17 thesis committees and 39 dissertation committees, and has mentored 12 pre-doctoral and 13 postdoctoral fellows.

Bonnie Spring, PhD., *Professor FSM DPM, and Director, IPHAM Center for Behavior and Health*, is recognized internationally for her research on interventions to improve risk behaviors for chronic disease. Her research on smoking, physical inactivity, and obesity has been funded continuously since 1976 primarily by grants from the NIH (NHLBI, NIDDK, NCI, NIMH), American Heart Association, American Cancer Society, and Department of Veterans Affairs. She has been PI of a number of clinical
trials fostering smoking cessation and reduction of weight gain via pharmacological and behavioral treatments. A NIDA-funded effectiveness trial that delivers her intervention using the nationwide tobacco telephone quit lines is currently ongoing. She has also been PI of several trials using technology-supported interventions to foster change in weight loss. Her current clinical trials research implements novel research designs adapted from engineering science to optimize and increase the efficiency of behavioral intervention development. She is also a nationally-recognized expert in the science of team science, and a noted expert in translational behavioral medicine, and has mentored many pre-doctoral, post-doctoral and faculty scholars.

**Mark Williams, MD.**, *Professor, FSM Department of Hospital Medicine*, has expertise in health literacy, quality improvement and care coordination to reduce rehospitalizations. He has mentored eight hospitalist researchers, most of whom have subsequently received Foundation, K, R01, R03 and R18 awards. A Past President of the Society of Hospital Medicine (SHM) and the Founding Editor of the *Journal of Hospital Medicine*, he actively promotes the role of hospitalists as leaders in delivery of health care to hospitalized patients. Dr. Williams’ research focuses on quality improvement, care transitions, teamwork, the role of health literacy in the delivery of healthcare, and enhancing care delivery at the transition of hospital discharge to reduce re-hospitalizations. He is PI on the Preventing Readmissions through Effective Partnerships (PREP) initiative with the Illinois Hospital Association and SHM, which is disseminating Project BOOST (Better Outcomes by Optimizing Safe Transitions), the Communication and Palliative Care program and the Hospitalist Program Peak Performance (HP3) initiative to over 60 hospitals.

**Michael Wolf, PhD.**, *Professor of FSM Department of Medicine (GIM), and Associate Division Chief for Research*, is a health services researcher and cognitive/behavioral scientist with expertise in adult literacy and learning in healthcare, patient education, medication safety and adherence, and the use of health technologies to support chronic disease self-management. Dr. Wolf founded NU’s Health Literacy and Learning Program (HeLP) - a joint entity linking FSM and the School of Education and Social Policy, whose mission is to develop innovative strategies to support patients’ in promoting, protecting, and managing health. Over the past 15 years, Dr. Wolf’s work has been funded by AHRQ, CDC, NIH and a variety of other public and private sources interested in health literacy and medication safety, receiving widespread recognition and many awards. Dr. Wolf has long studied the extent and association of limited literacy with various health outcomes, its meaning and measurement, and the development and testing of interventions to reduce literacy’s impact on health. Under his current NIA-funded work, Dr. Wolf focuses on how to deconstruct and simplify complex health tasks and offer support to patients to optimize successful engagement.

**Clyde Yancy, MD, MSc.** In his role as a mentor for this K-12 application, Dr. Yancy will bring decades of experience in cardiology clinical trial design and operation, health disparities in cardiovascular diseases, quality of care in heart failure, evaluation of evidence, and generation of clinical practice guidelines. His major recent research focus has been sharply attuned to quality of care in heart failure. Having led and/or participated in several major national registries/performance improvement initiatives, he has generated seminal data to demonstrate that performance improvement interventions are associated with better quality of care and improved outcomes for patients with heart failure. His work has led to an incorporation of Bayesian methodology in the evaluation of evidence needed to inform
clinical practice guidelines. His varied experiences in registry data, performance improvement, quality of care, health care disparities, evidence evaluation and clinical practice guideline generation have created a repository of experiences to serve as models for Scholars who wish to acquire the skills to achieve best outcomes in human health and disease. Via his participation in the PCORI Methodology Committee, he has developed a deeper awareness and operational skill-set in CER, patient engagement, shared decision making and qualitative methodology. These collective experiences will inform his mentorship of incipient clinical researchers.

CO-MENTORS

Karl Bilimoria, MD is a surgical oncologist focused on the quality cancer care delivered in the U.S. and on providing hospitals with their risk-adjusted surgical outcomes to spur quality improvement when performance is suboptimal compared to other hospitals, and hospitals have shown improvement.

Zeeshan Butt, PhD, is a clinical psychologist whose research focuses on the development and application of PROs in the post-surgical context, with emphasis on organ donation and transplantation.

Craig Garfield, MD, MAPPS is a practicing pediatrician and health services/outcomes researcher who uses m-health/e-health to support parents in caring for themselves and their children during the transition to parenthood, a particularly vulnerable but highly motivational developmental stage in which to create change.

Elisa Gordon, PhD, MPH is a medical anthropologist who focuses on determinants of disparities in healthcare and health outcomes, self-care, health literacy and bioethics.

Neil Jordan, PhD is a health services researcher and health economist, whose research focuses on care outcomes associated with high value services and systems of care for persons with chronic illness. He directs the Mental Health Services and Policy Research Program at NU.

Abel Kho, MD is an internist with training in biomedical informatics. He develops and deploys electronic data infrastructure to enable community-based and multi-institutional research.

Lee Lindquist, MD, MPH, MBA is a geriatrician with research interests in health literacy, transitional care/medication understanding, and improving the home care of seniors by paid caregivers.

Stephen Persell, MD, MPH is a health services researcher and internist whose research focuses on intervention studies of how to best use care team redesign, health information technology, provider feedback, and patient-directed interventions to improve the quality of care delivered in routine practice.

James G. Adams, MD, is the Chief Medical Officer for Northwestern Medicine, overseeing quality and safety for the health system. He is an expert in emergency medicine education and ethics, and has chaired national committees on ethical dilemmas in emergency medicine, including informed consent in research.
Estella Alonso, MD, is the medical director of the Pediatric liver transplant program at Northwestern University. Dr. Alonso is a widely recognized expert in the medical management of children with liver disease.

Pedro Avila, MD, is a clinical researcher who conducts clinical research in airway diseases where there are many needs for development of new tools to assess PCOR.

Jeffrey Barsuk, MD, has investigated the use of mastery learning with simulation-based technology to improve trainee skills in performing thoracentesis, paracentesis, lumbar puncture, central venous catheter insertion, advanced cardiac life support, patient “hand-offs,” and end of life discussions.

Marla Clayman, PhD, MPH, is a health behavior and public health researcher. Her scientific focus is on patient participation in healthcare decision making and patient-provider communication.

Karon Cook, PhD, is a psychometrician and outcomes researcher. Most recently, she has been focusing on item response theory and identifying patient-based score interpretation of PROs.

Tom Cook, PhD, is a sociologist interested in social science research methodology, program evaluation, and contextual factors that influence development, particularly for urban minorities. He is an internationally recognized scholar in bias estimation and minimization in study design.

Linda Emanuel, MD, is the founder and principal of the Education in Palliative and End-of-life Care (EPEC) Project, its adaptations, and the Patient Safety Education Project (PSEP). She is a widely recognized leader in palliative and end-of-life care research.

Richard Gershon, PhD, is a leading expert in the application of Item Response Theory (IRT) in individualized and large scale assessments. He has developed item banks and Computerized Adaptive Testing (CAT) for a wide variety of educational, clinical, and health applications.

Beth Hahn, MS, is a medical sociologist whose research primarily involves PROs in chronic illnesses, with a focus on underserved populations, low literacy, culture, and health disparities.

Gordon Hazen, PhD, is an industrial engineer with research interests in medical decision analysis and comparative effectiveness, including cost-effectiveness methodologies.

Larry Hedges, PhD, is a mathematician who has done leading edge work on developing and applying statistical methods for social science research, including comparable effect size metrics and combining and analyzing effect size data in meta-analysis, and systematic review.

Jin Shei Lai, PhD, is an occupational therapist and a psychometrician with extensive experience in patient-reported outcomes, psychometric analyses and measurement, quality of life and symptom management, with a central focus on quality of life in pediatric cancer populations.
David Liebovitz, MD, is an internal medicine physician who has experience in methods of care management, staffing, clinical integration, IT structures, and alignment of incentives for IT in healthcare.

Lei Liu, PhD, is a biostatistician with a broad interest in longitudinal data analysis, survival analysis, and smoothing regression methods, with applications to clinical and health services studies.

Dan Mroczek, PhD, is a lifespan developmental psychologist whose expertise includes using existing databases for health-related investigations, individual differences research, and quantitative techniques.

Alexis Thompson, MD, MPH, is a pediatrician with clinical interest on non-malignant hematology. Her expertise fill existing gaps in well-designed approaches to truly and fully integrate the patient’s perspective into the interpretation of clinical trial data and the implementation of improvements in health care delivery.

Donna Woods, PhD, conducts research in healthcare quality and patient safety that spans several high priority contexts and populations: pediatrics; ambulatory care; chronic disease care; use of disease registries and self-management; surgical safety; transplantation; and use of health information technology.