

February 15, 2012

Edward D. Miller, Jr., M.D.
Dean, Medical Faculty
CEO, Johns Hopkins Medicine
733 North Broadway, Suite 100

Dear Dean Miller

It gives me great pleasure to give my utmost support to Edward J. Bernacki, M.D., M.P.H. for promotion to the rank of Professor (Full-Time) in the Department of Medicine, Division of Occupational Medicine. This promotion is based on the fact that Dr. Bernacki has achieved a national and international reputation as a program builder in occupational medicine. It is very clear that Dr. Bernacki has become a leader in the research and practice of occupational medicine. This preeminence was recognized by his peers when he received the Kehoe Award from the American College of Occupational and Environmental Medicine at the Colleges 2011 Annual Meeting. This prestigious merit award is given to the individual "who has made significant contributions to occupational and environmental medicine." (see below).

SCHOLARSHIP

Dr. Bernacki has published 57 peer-reviewed articles found under the peer-reviewed (PR) research section of his CV and the systems innovation and quality improvement activities (SIQIA) of his program building section of his CV as well as a number of non-peer-reviewed articles and book chapters. The common theme of his publications has been to quantify the effective interventions designed to reduce the incidence of disease and health care costs in working aged individuals (2-4, 7-11,19-21,28-36 SIQIA). When necessary, he helped create new instruments measuring these efforts (19,33,35 SIQIA). He applied the life table technique to create a longitudinal method of evaluating employee turnover patterns because traditional cross-sectional turnover rates could not measure attention of employees after the introduction of an invention such as an exercise program (2 SIQIA). The development of these measures enabled Dr. Bernacki to measure the effect of a number of conditions e.g. injuries, mental illness, heart disease, obesity, hypertension, etc. on the productivity of workers and the cost of these conditions to the corporation for which they worked (3-11,19-21,28-36 SIQIA). Studies were used to justify preventive medicine initiatives and assess the effect of positive health behaviors such as fitness programming and exercise adherence on absenteeism, health care costs and employee turnover. Because of the dissemination of this information in peer-reviewed journals, they became the basis for a number of similar initiatives that were subsequently introduced in other organizations. Dr. Bernacki's publications make him a contemporary pioneer in improving health and lowering costs.

During his tenure at Johns Hopkins, Dr. Bernacki transformed the Health and Safety Program into one of the premier programs in the country and grew the Division of Occupational Medicine into a service provider that spans the United States.

SYSTEMS INNOVATION and QUALITY IMPROVEMENT ACTIVITIES OF PROGRAM BUILDING

Dr. Bernacki has spent his entire career devoted to health promotion, wellness and sustainability as well as cost reduction in 7 specific areas that are outlined below. This all began and continues due to his initial interest in occupational health and work-related injuries. It is safe to say that Dr. Bernacki's forward thinking preceded the affordable health care act and he has really defined health care and sustainability as well as cost reduction long before academic medical centers initiated their thinking about this.

Centers of Excellence

In 1981, while Vice President of Tenneco, Inc. in Houston, Texas, Dr. Bernacki partnered with the Texas Health Institute, Baylor College of Medicine and MD Anderson Hospital to create one of the first centers of excellence programs (The Tenneco Select Provider Program in Corporate America). This initiative enabled Tenneco's 250,000 medical plan participants to obtain medical care for catastrophic conditions at a reduced cost for themselves and the corporation. Improvements in clinical outcomes and decreased expenditures were observed for the individuals who received their care as participants in this program. The Tenneco Select Provider Program became the model for other large medical plans as a cost containment and quality improvement strategy in the late 80s and early 90s. The use of selected providers for catastrophic illness in a fee for service medical plan proved to be a cost effective alternative to HMO coverage ({4 SIQIA peer-review}, {2 SIQIA non-peer-reviewed}).

Analyze and Redesign of Medical Plans to Improve Health Outcomes

As corporate Vice President, Dr. Bernacki was responsible for Group Health Benefit Design for Tenneco, Inc. In order to initiate benefit improvements, he first analyzed how insurance monies were spent by illness categories and population groups. With these data, two major initiatives were undertaken and the outcomes quantified: 1) redesign of mental health care benefits that limited inpatient care but improved access to outpatient treatment and 2) wellness and exercise programming. The references demonstrate the success of these initiatives in improving mental health care for children and the health benefits of exercise and wellness programs. ({4-5, 8-12, 17-20, 22 SIQIA peer review} and {3-4 SIQIA non-peer review}).

Use of Nurse Practitioners and Physician Assistants to Deliver Onsite Medical Care

During the 1980s, Dr. Bernacki recognized the potential of using nurse practitioners and other mid-level providers to provide injury care, preventive assessments and primary care in industrial settings. He utilized these professionals in staffing the onsite clinics of the companies' many subsidiaries (Tenneco West, Newport News Shipyard, Monroe, Walker Mufflers, Tenneco Oil, Tenneco Gas Transmission Company, etc). He documented the efficiencies of these practitioners and later used this as the basis of a Johns Hopkins initiative to provide onsite clinics for major corporations ({6 and 35 SIQIA peer review} and {1 SIQIA non-peer review}).

Occupational Injury Management and Accident Reduction

As Executive Director of Health, Safety and Environment for Johns Hopkins Institutions, Dr. Bernacki created a medical model to manage the care of individuals who sustained an occupational illness or injury. This initiative focused initial efforts on channeling injured employees to receive care from a small network of Hopkins physicians skilled in the treatment of occupational injuries. It decreased the institution's prior emphasis on claims adjudication to control costs. His hypothesis was that excellent medical care delivered in a friendly manner would ultimately reduce costs. This initiative was coupled with an aggressive ergonomics program to identify and abate safety risks in high accident frequency work areas and establishment of an environmental monitoring program for the hospital and the university. It should be noted that Dr. Bernacki moved to Hopkins in 1991 as the Executive Director of Health, Safety and Environment for Johns Hopkins University and, subsequently, in 1994 became the Director of the Division of Environmental Medicine at the Johns Hopkins University School of Medicine. Between 1992-2011, his approach in preventing and managing work-related injuries produced savings in workers' compensation costs for the Johns Hopkins Health System and the Johns Hopkins University. It also increased employee satisfaction as evidence by decreased litigation. The most significant accomplishment of this initiative was the reduction in the frequency of disabling accidents at the Johns Hopkins University and Hospital. When the program was initiated in 1991, there were 480 lost time accidents recorded for a population of 21,000. In 2011, the number of accidents had decreased to 255 for a population of 54,000. Furthermore, at the Johns Hopkins Hospital and University, the number of days

away from work for these injuries decreased from 34,000 in 1991 to 18,000 in 2001 ({24-30 SIQIS peer review} and {7 SIQIS non-peer review}).

Provision of Onsite Medical Care for Corporations

As the Division Director of Occupational Medicine at Johns Hopkins, Dr. Bernacki created a model to deliver standardized on-site wellness programming and occupational injury and illness management to over 200,000 employed individuals at seven large US corporations. In this model, wellness and occupational care management programs designed at Johns Hopkins were delivered by nurse practitioners and physicians assistants at manufacturing sites throughout North America. The most significant initiative to date has been the Weight Management Program. Each site offers a three-month weight reduction contest twice per year. Approximately 22-25 individuals at each of the 40 on-site clinics participate with an average weight loss of 10-15 pounds per participant per contest. The following two links further support both the Wellness Programs offered at the onsite clinics as well as documenting the amount of weight loss achieved:

(<http://www.benefitsonline.pbg.com/pdfs/2010%20Summer%20maga%20HC%20FINAL.pdf>,

<http://www.pepsico.com/Purpose/Talent-Sustainability/Health-and-Safety.html>)

Practitioner performance at the onsite facilities continues to be monitored electronically utilizing a software system that was developed by the Johns Hopkins Division of Occupational Medicine. This software is also being used to manage clinic activities at other academic medical centers and by two other manufacturing companies. The development of the system won the International Occupational Health Award from the American College of Occupational and Environmental Medicine. (35 SIQIA peer review and 7 SIQIA non-peer review).

Workers' Compensation, Consulting and Analytics

Dr. Bernacki's work quantifying interventions utilized to improve outcomes and reduce costs for the Johns Hopkins Workers' Compensation Program indicated there was a tremendous opportunity to do similar work for casual insurance carriers, Third Party Administrators (TPAs) and large self-insurance employees.

Physician Work Development

He assisted the Louisiana Workers' Compensation Corporation in creating a physician network to treat injured workers. The premise used in creating the network was that "quality medical management applied by empowered, yet accounted physicians, trained in care management techniques and unencumbered by precertification requirements will minimize disability." Subsequent studies documented that physicians in this network were able to manage these injuries at 42% lower costs (adjusted for severity of injury and age) than other physicians in the state of Louisiana treating workers' compensation injuries. The vast majority of the savings were realized from a reduction in time away from work (31-32 SIQIA).

Analytics

He worked with two insurance carriers to identify the factors associated with adverse workers compensation claims (claims that are expected to be low claims but settled for over \$100,000). In doing this work, Dr. Bernacki found that in addition to the type and severity of an injury, attorney involvement, obesity, and use of opioids were important predictors of high claim costs. This allowed Dr. Bernacki to create a tool to predict the ultimate cost of a worker's compensation claim at the time the first reserve is placed on a claim (approximately one month after injury). This information allows insurance to intervene in the management of the medical care of those claims to achieve better results and lower costs. For example, individuals whose claims are identified as being high-cost may be channeled to physicians who specialize in the care and management in the type of injury sustained by the claimant to achieve better medical outcomes and, subsequently, lower costs. The adoption of this tool by the Louisiana workers' compensation has resulted in improved medical care for many of the workers insured by this company, as well as reducing costs for certain types of workers' compensation claims.

In performing these studies, Dr. Bernacki noted that pain management physicians were associated with delayed return to work. This prompted his investigation of the relationship between opioid use and delayed return to work and morbidity associated with claimants prescribed opioids. This has resulted in peer reviewed papers and the initiation of three subsequent investigations into the problems of chronic opioid use among workers' compensation claimants. As a result of his research, Dr. Bernacki has been asked by the Federal Employees Workers' Compensation Fund to assist them in their efforts to control opioid use in injured federal workers(32-34, 37-39 SIQIA peer review).

Health, Safety and Environment at Johns Hopkins Hospital and University

Dr. Bernacki has headed health, safety and environment at Johns Hopkins for over 20 years. The organization of this program differs from the vast majority of medical health centers and safety programs in that all efforts of prevention accidents to the care of injured workers reside in one department. This has allowed him to assess the impact of injuries and to design programs to prevent them. Over the years, he has implemented a number of systems and programs that have reduced the incidence of injuries or have better addressed the care of injured workers. The most significant efforts were the design of an electronic medical record for occupational health, the development of an online reporting mechanism to Medicare, bloodborne pathogen online reporting system and a mass influenza immunization program. As an example, some of the specific diseases that were investigated included hepatitis B, HCV, CNS effects due to exposure to volatile anesthetics, and actual investigation of work sites to establish an ergonomics program that reduced upper extremity musculoskeletal disorders ({12-16, 18 PR research section of CV} and {24-30, 36 SIQIA peer review} and {6, 7 Book Chapters}).

It should be noted that to fully understand how to communicate the system innovation and quality improvement activities of program building, Dr. Bernacki met with Dr. Peter Pronovost as he was instrumental in designing this pathway that is now included in the Johns Hopkins CV.

TEACHING, LECTURING and MENTORING

Dr. Bernacki has presented numerous lectures since becoming associated with Johns Hopkins University. The majority of these presentations dealt with occupational medicine management issues, the most notable taking place at the 29th Annual Conference of International Health in Milan, Italy in June of 2006. A smaller number of presentations dealt with the issue of bloodborne pathogen exposures or occupational health practice, the most significant took place at the Society of Occupational Medicine Meeting in Durham, England in July of 2002.

Dr. Bernacki is responsible for the Occupational Medicine portion of the Patient, Physician and Society Course presented yearly to second year medical students at the Johns Hopkins University School of Medicine. He has organized the Occupational Medicine Elective for the past seven years.

Dr. Bernacki holds a joint appointment in the Department of Environmental Health Sciences in the Bloomberg School of Public Health and Hygiene (BSPH). He is lecturer in the Anna Baetjer Course, a member of the Residency Advisory Committee and preceptor of the Johns Hopkins University (BSPH), Occupational Medicine Residency Program. He is responsible for the resident's rotation at the Johns Hopkins Hospital's Occupational Injury Clinic. Here the residents participate in the assessment and treatment of occupational injuries and illnesses of Hospital and University employees, as well as the identification and elimination of chemical, physical and biologic hazards in a healthcare environment.

Dr. Bernacki's commitment to training extends to his involvement with the American College of Occupational and Environmental Medicine's continuing medical education efforts. At almost all of the College's spring and Fall Meetings over the last ten years, Dr. Bernacki has presented papers or has organized sessions for the attendees. He organized three national conferences for the College, the American Occupational Health Conference in Houston, Texas, the State of the Art conference in Dallas, Texas and the State of the Art Conference in Baltimore, Maryland. He was a member of the Planning Committee for the American Health Conference, which took place in Washington, DC in March 2011.

The contracts with numerous corporations throughout the United States, has afforded Dr. Bernacki the opportunity to train physicians, nurse practitioners and physician assistants in occupational

medicine and wellness activities. The primary training occurs annually in April where 5 physicians and 43 nurse practitioners and physicians assistants, employed by Departments throughout the country, attend a three-day continuing education program at the JHU East Baltimore Campus. The Course is approved for 8.5 Category I credits towards the AMA Physicians' Recognition Award. Course offerings vary from year to year, usually include; topics on screening for disease, the treatment of musculoskeletal illnesses/injuries, mental illness and primary prevention programs.

LEADERSHIP

In 2002, Dr. Bernacki was elected President of the American College of Occupational and Environmental Medicine. He currently Chairs the External Affairs Committee and the Business Committee of the College and is a member of the Fellowship Committee. He also served as Vice President, Treasurer and Secretary of the College and was on the Board of Directors for twenty years. This organization, with over 7,000 members is the largest international organization of occupational medicine physicians in the world.

Dr. Bernacki was a member of the primary review groups for the National Institute of Occupational Safety and Health between 1981 and 1984 and the National Institute for Alcohol Abuse and Alcoholism in 1976 to 1978. He served as a member of the National Advisory Committee on Ergonomics from 2002 to 2004.

As previously noted, Dr. Bernacki was the recipient of the Robert A. Kehoe Award of Merit from the American College of Occupational and Environmental Medicine (ACOEM) at their Annual Meeting in Washington, DC on March 26, 2011. The Award (established in 1957) is named after Robert A. Kehoe, MD who was the first Director of the Department of Environmental Health at the University of Cincinnati, School of Medicine and a pioneer in the field of Occupational Medicine. In Dr. Bernacki's case, it was made on the bases of his leadership in the field, development of internet based workers' compensation managements systems, academic excellence and research in the area of musculoskeletal disorders and worker's compensation. Of note, all past recipients in academic medicine were full Professors. Additionally, this award extends internationally and has been received by the Director General of the Institute of Occupational Health in Helsinki, Finland.

In summary, Dr. Bernacki has been able to combine the practice of his specialty with ongoing scholarship both nationally and internationally. Throughout his career, he has been continuously engaged in research and teaching, maintaining academic appointments and mentoring occupational health professionals. Based on his innovations, scholarship and leadership and vision that preceded the affordable care act, I recommend with my utmost enthusiasm the promotion of Dr. Edward J. Bernacki to Professor of Medicine.

Sincerely yours,

Myron L. Weisfeldt, M.D.
William Osler Professor of Medicine
Director, Department of Medicine