Foundation fellowship experiences

The Wisconsin Medical Society Foundation offers unique learning opportunities through its Summer Fellowship in Government and Community Service program. The goal of the program is to provide medical students the opportunity to experience how community organizations and/or government agencies work with the medical profession to address health issues in Wisconsin. Each student receives a $3500 stipend.

In 2008, the Foundation Board of Trustees boldly committed $35,000 to increase the number of medical student fellowships from 1 to 10. This dramatic increase has already had measurable benefits for the students, the Foundation and the communities in which they have conducted their fellowships. While the Foundation’s goal is to maintain that level, the number of fellowships offered each year depends on the generosity of Foundation donors and the physician mentors who guide the students.

The following pages contain brief reports on the fellowship projects completed during the summer of 2008 in communities throughout Wisconsin. For information on how you can help support these fellowships, contact Melissa Breen at 608.442.3744 or 866.442.3800 or e-mail melissa.breen@wismed.org.

A glimpse into practicing in a remote community

Diane Anderson, M-2, UW School of Medicine and Public Health

My summer 2008 fellowship project involved working with Margie Frederickson, MD, a family physician in a remote community clinic on Madeline Island. As a participant in the Wisconsin Academy for Rural Medicine at the University of Wisconsin School of Medicine and Public Health, this project seemed like a natural extension of my interest in rural medicine.

There were 4 major professional goals for my fellowship, which I accomplished with varying degrees of success. The first was to research whether or not all island children were up-to-date on immunizations. With the help of the school nurse I confirmed that all were up-to-date. I also developed a mailer encouraging parents to schedule annual physical and immunization appointments and offering information on Badger Care as an option for those without insurance coverage.

The second goal was to work with the elderly residents and identify ways to help them remain in their homes as they age. I met with several seniors and discovered significant needs. Because of the remote location, seniors and their families have difficulty meeting routine needs due to a lack of local resources. To begin to address this issue, I established a durable medical equipment loan program at the clinic. The first piece of equipment was a lift chair needed by an elderly man who did not have the resources to afford it.

Another goal was to investigate the possibility for an assisted living facility on the island. I developed a survey for seniors and caregivers assessing the need and interest for a facility. This is a complex process that will extend well beyond the scope of my fellowship, but at least with the survey, it has begun.

My final goal was to learn about operating a rural solo practice, so I spent a great deal of time at the clinic shadowing Dr Frederickson. It allowed me to practice interviewing skills, take vital signs, and learn the electronic medical records system. I learned and practiced many skills and observed a variety of procedures and treatments.

The fellowship allowed me to achieve some personal goals as well. Because of my interest in rural medicine, I was especially excited to experience the unique challenges of a solo, community-supported practice and my experience at La Pointe Community Clinic was enlightening. I discovered that actual patient care was only a fraction of the overall work to keep the clinic going. All aspects of the practice were handled by staff including cleaning, stocking and tracking supplies, billing, computer support, and even delivering blood and tissue samples from the clinic to the lab in Ashland (a 1-hour long trip, partly by ferry). I was impressed with the breadth of experience Dr Frederickson demonstrated, not only from a clinical standpoint, but also operationally. A rural practice with limited resources...
As part of my summer fellowship with the Cribs for Kids program, I conducted a comprehensive literature review on safe sleep and sudden infant death syndrome (SIDS). The Cribs for Kids Program distributes Graco® Pack N Play cribs and safe sleep information to low-income families in the Milwaukee community with infants at risk for SIDS. The program also offers education on the benefits of a smoke-free and safe sleep environment and evaluates the use of cribs for 1 year after disbursement through a self-reported questionnaire.

When enrolling patients in Cribs for Kids, I reviewed the SIDS and Safe Sleep Questionnaire with each family, showed them a Centers for Disease Control and Prevention video on myths about smoking, and completed a safety checklist on safe sleep environments. I then registered each family’s crib on the Graco Web site and entered their data on the program’s spreadsheet, which I modified for improved statistical evaluation. I made follow-up calls to the families at 1 week, 2 weeks, and 2 months post-crib distribution and collected data about crib usage and compliance with safe sleep procedures. During these calls I also provided support for the families. I created a follow-up record to assist with tracking phone contacts and collected program follow-up information at each well-child check until the child reached 1 year of age. In the process, I learned the techniques and challenges of long-term follow up with patients.

As the study progressed, I realized that in a clinic with multiple providers and frequent turnover of residents it is difficult to consistently collect data from patients at each well-child check. To problem solve, I designed a new chart notification system for follow up at well-child checks that encourages professionals to assess program compliance. During the fellowship, I had the opportunity to participate in meetings with other Cribs for Kids programs around Milwaukee County. I also shadowed Suzanne Brixey, MD, on Thursdays and attended project management meetings for the Healthier Wisconsin Partnership Program Milwaukee Kids Car Seat Program. Interacting with this group provided a better understanding of all the elements that go into designing and maintaining community participatory research.

My personal goal for the fellowship was to make an impact in the Milwaukee community by reducing the rate of SIDS. While it is too early to know whether or not the rate of SIDS actually decreased, the project was successful in promoting safe sleep among a high risk inner-city population. Prior to receiving the Pack N Play, 61.4% of families reported their infant sleeping in bed with adults, placing them at greater risk for SIDS. Two months after providing a crib, 83.7% of families reported placing their infant in the crib for every sleep.

My professional goals for the fellowship included completing the research with solid data and learning the methods for analyzing the data. While these goals were accomplished, I did not understand until the project’s conclusion that the more essential accomplishment was in understanding the challenges of caring for an underserved population. This project allowed me to realize the fear of in-home violence, collecting agencies, law enforcement, and even health care professionals that some of these patients struggle with every day. In addition, I learned of the financial difficulties that prevent some urban families from providing a safe environment for their children. In an urban, low-income, minority community the whole medical culture must adjust so that doctors’ recommendations and patients’ abilities to comply can coexist.
In the first 2 years of its state grant, Healthier Cumberland made significant steps toward improving health in the community through interventions targeted at children in the schools, adults at worksites, and through community classes and events. However, very little work was done with adolescents.

My summer fellowship project under the guidance of Jane Kotchen, MD, was to develop, implement, and evaluate a pilot healthy lifestyles intervention program for high school students modeled after the highly successful Healthy Lifestyles Coaching classes for adults. These classes follow the Diabetes Prevention Curriculum, which includes lessons on understanding health, nutrition, and fitness, and the skills involved in making small, sustainable behavioral changes. My project followed this approach, but with 3 key differences: (1) instead of Healthy Lifestyle Coaching training, I received training in Motivational Interviewing; (2) the program was tailored to meet the needs of individual students, versus being “class-based”; and (3) I took on a larger role in Healthier Cumberland activities and programs than was originally planned. The adolescent pilot program was accepted as an amendment to the Healthier Cumberland Program by the Children’s Hospital of Wisconsin Human Research Review Board and enrolled 4 high school students.

In addition to the adolescent program, I assisted in Healthier Cumberland Coalition meetings, the sharing of best practices, health education and blood pressure screenings, and 2 projects targeted at encouraging elementary-aged children to be more active in the summer. One project, the Summer Shindig, offered children 5-10 years old 1 or 2 active sessions with exercise and a variety of group games aimed at learning about healthy eating. The sessions were well attended with 27 children at one and 35 at the other.

The pilot program for adolescents was assessed on the basis of its acceptability to students, sustainability, and participant results. In these 3 areas the project did what was proposed. Student feedback throughout the program indicated that they welcomed the healthy lifestyle behavior intervention. At the end of the summer, all 4 students expressed an interest in continuing, so school guidance counselor Kate Koehler, a Healthy Lifestyles Coach, will continue to meet with the students.

All 4 participants were successful in increasing understanding of their own behaviors and health, and making various small, sustainable changes in diet and physical activity. Specifically, each participant was able to increase total time spent in exercise and/or intensity, increase servings of fruit or vegetables, and decrease high-fat foods eaten each day. They experienced varied success at trying to reduce some of their risk factors for metabolic syndrome (ie, weight, waist circumference, blood pressure, triglycerides, and cholesterol). All experienced frustration while trying to lose weight, but could appreciate other rewards like improved energy, agility, self-efficacy, and self-esteem.

This fellowship and my work with the Healthier Cumberland Coalition offered a great environment for gaining experience on working with community health professionals. To see community medicine needs and solutions through the eyes of the Healthier Cumberland staff gave me insight both into a good model for health interventions, but also into rural medicine. I met most of my personal learning objectives and received invaluable education and experiences. In return, I provided the Cumberland community the first step in a behavioral change program for adolescents.

Studying theories of behavior and methods for influencing behavior change, especially understanding the transtheoretical model of behavior change and getting the opportunity to learn and practice Motivational Interviewing techniques empowers me to talk to people about the possibility and process of changing behaviors. I can foresee countless occasions where not being intimidated by a patient’s resistance will facilitate better communication and better care.
In addition to these results-oriented projects, I also spent time reviewing current literature and discussing the theories of racial disparities in health care and infant mortality with Dr Ndiaye. Through this, I was able to better understand the implications of our data and to acquaint myself with current research and theories.

I also attended many state and local health department planning meetings and town hall meetings where, on one hand, I learned the somewhat long and bureaucratic nature of making policies for a large population and, on the other hand, realized the passion of people who work in the field. This exposure is not a significant part of medical education, which is why I feel the Wisconsin Medical Society Foundation’s summer fellowship program has been crucial to my overall education.

Working with PHMDC proved to be a perfect venue for me to assert my education, to meet people working on behalf of the health of a community, and to meet community members who may one day be future patients.

Having just completed Developmental Pathology in my second year of medical school, it’s satisfying to realize how much I learned about infant mortality, intrauterine growth restrictions, maternal health factors and Sudden Infant Death Syndrome over the summer. In addition, my long sessions with Dr Ndiaye discussing the power of epidemiology have really helped as professor after professor discusses recent studies in our organ-based pathophysiology courses; now I can actually follow the statistics! It was truly a worthwhile summer experience, and I feel fortunate to have been a part of the program.

My proposed fellowship project for the summer of 2008 was to work alongside Marlene Melzer-Lange, MD, a pediatric emergency medicine physician, and analyze patients who presented to the Emergency Department at Children’s Hospital of Wisconsin with violent assault-related injuries. I was to review the charts of patients over 2006 and 2007 and examine the reason for their visit. The victims of interpersonal violence-related injuries were to be categorized into groups, based on their Project Ujima participation, and entered into a database. Project Ujima is a violence intervention program that meets with victims of interpersonal violence and attempts to lessen the psychosocial trauma of violence.

This study’s hypothesis was that youth who receive Project Ujima services for interpersonal violence-related injuries will be less likely to sustain subsequent violence-related injuries than patients who do not receive Project Ujima services. The goal of the study was to determine Project Ujima’s effectiveness at reducing subsequent violence-related injuries and helping victims cope with their previous injuries.
We found that subjects were more likely to be contacted by Project Ujima staff if they had inpatient stays as compared to visits to only the EDTC. Also subjects were more likely to be seen by staff if they were assaulted by firearms or by other weapons.

Through this fellowship experience, I gained an understanding of how clinical research is undertaken, from design, to data collection, to the finished project of a poster and abstract. Specifically, I learned how to write an application for IRB approval, construct a template for data collection, and decide what variables to examine for each subject. Through my chart review and working with Dr. Melzer-Lange, I was able to understand how the EDTC at Children’s Hospital and Project Ujima work together to assist victims of violence. Since much of my data collection required me to extract information from the subjects’ charts, I also feel that I have become more adept at navigating hospital records. The broader lesson I learned was that youth violence is a complicated situation and many agencies and health care must work together to try to lessen the burden of violence on our youth.

During a chart review, all patients eligible for Project Ujima services were divided into 5 groups: (1) patients who were seen by Project Ujima staff in the Emergency Department Trauma Center (EDTC), accepted services and participated; (2) patients who were seen in the EDTC, accepted services and did not participate; (3) patients who were seen in the EDTC and refused services; (4) patients who were contacted via a referral line and accepted services; (5) patients who were eligible for Project Ujima services but were not contacted.

Over the 2-year data collection span, there were 7 months of data missing from the trauma registry, which could have an effect on the number of patients reported with violent injuries. We did not find as much recidivism as expected, which could be due to the missing trauma registry data, the lack of follow-up time of the study, or patients presenting to other EDTCs. We did not find a significant difference between the 5 patient groups and recidivism. We did find some excellent demographic data, including types of assaults and locations. This will be helpful in looking for other areas to target violence prevention.

Learning the hurdles in the research process

Kristin La Fortune, M-2, UW School of Medicine and Public Health

With support from the Wisconsin Medical Society Foundation, I assisted David Rakel, MD, and Sarah Khan, PhD, with an interdisciplinary investigation titled “Intervention for Adults with Obesity: Feasibility Study,” which addresses the population health obesity epidemic through the care of patients in a group setting. The specific aims of the program are to conduct a feasibility study of overweight and obese adult patients with a 6-month nutrition, exercise, and mindfulness education intervention at the Odana Atrium Primary Care Clinic in Madison, Wis.

Since the program was still in the developmental phase when I began the fellowship, much of my work consisted of independent literature reviews. The main goal was to supplement grant proposals with up-to-date research regarding specific topics. In addition to the literature reviews, I obtained the electronic document for all referenced articles and organized the publications using an on-line bibliographic management program. Following the literature reviews, I completed the UW Biomedical and UW Social and Behavioral Courses that are required for all researchers employing human subjects. Using the knowledge I gained from the coursework, I developed a preliminary assessment for patients and physicians at the Odana Atrium Primary Care Clinic. I completed my fellowship by writing a review article about Vitamin D that will be published in the Integrative Medicine Newsletter this winter.

Before I began the fellowship, I hoped to be involved in patient recruitment and data collection rather than the passive process of reviewing literature. However, I later discovered that the developmental phase of research is often much more complex than the implementation phase. Securing funding is a rigorous and challenging process that requires extensive collaboration. Participating in this fellowship provided me with the opportunity to learn about the hurdles in clinical research and the methods to overcome these obstacles.

I am extremely grateful that I was able to work directly with Dr. Khan, as she was a wonderful mentor and taught me a lot about her experience as a woman in academic medicine. In addition, she was honest and transparent about medical research and how it can be both extremely rewarding and yet utterly demanding. I plan to continue working with Drs. Rakel and Khan on the project as time permits and hope to eventually see the project to fruition.
Under the mentorship of Jim Sanders, MD, my summer fellowship project focused on Community-based Chronic Disease Management (CCDM) in the inner-city Milwaukee population. The purpose of the CCDM program is to support the Healthier Wisconsin Partnership’s Health Improvement Model by addressing the prevalence of hypertension (HTN), Type 2 diabetes mellitus (T2DM), obesity, and smoking as major health risks to low-income, central-city African American adults in Milwaukee. This can be achieved by bridging the gap that exists in the health care services available to different patient populations in America, especially relative to socioeconomic status. Inner-city Milwaukee provides a clear example of this discrepancy. According to a recent study conducted by the Centers for Disease Control and Prevention, 57.7% of black non-Hispanic adults in Wisconsin are obese. Furthermore, National Center for Health Statistics states that “Obese adults are at increased risk of type II diabetes mellitus, hypertension, stroke, certain cancers, and other conditions.” If left unchecked, these diseases—individually or co-existing—can lead to devastating consequences for afflicted individuals and the community as a whole.

Located next to the food pantry at New Life Presbyterian Church in Milwaukee, the CCDM clinic screens all food pantry patrons for diabetes, hypertension, hyperlipidemia, smoking, and obesity. Every patient who is found to have any of the above health conditions is treated by the CCDM care team that consists of a clinician, at least 2 registered nurses, a social worker, and a medical student during the summer months. Since its inception in October 2007, the CCDM has screened at least 1141 people for hypertension and at least 125 for blood glucose; has developed a functional electronic health record for CCDM participants, helped 100% of enrolled participants with uncontrolled HTN to achieve at least 5 mm Hg decrease in systolic and diastolic blood pressures, involved several Medical College of Wisconsin students in service-learning experiences through screening and patient education activities, and helped several individuals enroll in government-sponsored health insurance programs including the General Assistance Medical Program (GAMP).

During my fellowship over the summer of 2008, the CCDM program saw many new accomplishments. Among the most notable is the development of evidence-based treatment protocols for diagnosing and managing patients with diabetes, hypertension with/without diabetes and renal complications, and hyperlipidemia.

The CCDM program is exciting. Its location near a food pantry provides an opportunity to care for a great majority of pantry clients who would otherwise not visit a medical care clinic, despite having health conditions that require a health care professional’s care. Furthermore, many of them would not even know that they have these health issues, especially hypertension, diabetes, and hyperlipidemia. The education and other services provided help these patients manage and avert some of the morbidities that accompany these illnesses, especially when they go uncontrolled. With the above-mentioned needs and the successes of the CCDM program, it is evident that the plight of the medically underserved can be significantly addressed using incremental, yet far-reaching steps like the CCDM program.

This Wisconsin Medical Society Foundation fellowship project was a great service learning opportunity and provided me with hands-on experience in using pharmacotherapy in combination with nutrition and lifestyle changes to manage the health of patients with uncontrolled hypertension and diabetes. Most importantly, I gained a better appreciation for the role a physician can play in bridging the gap between community health care needs and available services.
My summer fellowship involved investigating violent deaths among children and youth in Wisconsin under the guidance of Stephen Hargarten, MD, MPH.

My research began with a thorough literature search of violent injuries and deaths within the state as well as across the country, with particular attention to the method involved in such incidents. Previous research has shown that firearms were the most common weapon involved in violent deaths in our target age group (less than 25 years of age), so one of the initial goals was to determine whether or not firearms remain the most common method of death.

Next, I analyzed data from the Violent Injury Reporting System (VIRS) as well as the Wisconsin Violent Death Reporting System (WVDRS), which together spanned 2001-2006. After learning how to appropriately isolate the desired incidents using SAS software, violent deaths were analyzed according to predetermined age categories and the method involved in each death. Additionally, circumstance variables were analyzed, including the location of incidents, specific circumstances surrounding homicides and suicides, and toxicology results. Violent deaths were additionally categorized by the 5 public health regions in the state, as well as by urbanity. The last stage of my summer was spent preparing a brief presentation for the Injury Research Program at the Medical College of Wisconsin, as well as preparing an article for submission to the Wisconsin Medical Journal.

The ability to work in both Madison (at the Department of Health Services) and Milwaukee (at the Injury Research Center at the Medical College of Wisconsin) provided me with a unique perspective on injury research and how injuries are addressed in the clinical setting. Along with other students working on injury research, I was able to tour the different systems of care that a patient might encounter when admitted for an injury, including the ambulance bay, trauma bay, intensive care unit, and rehabilitation units. I spent time shadowing both the trauma surgery team and the emergency medicine team covering traumas at Froedtert Hospital, and enjoyed speaking with attending physicians, residents, other health care professionals, and even law enforcement officers about their roles.

On a professional level, this research program solidified the idea that injury is a preventable disease. The weekly seminars at the Injury Research Center introduced me to Haddon’s Matrix, which provides a framework for analyzing injuries and brainstorming ways to prevent injury before, during, and after the event. This knowledge will impact how I practice medicine, as I will be able to provide guidance to patients regarding prevention strategies.

On a more personal level, I was able to gain a better understanding of epidemiologic research. Working at the Department of Health Services allowed me to see the role that state government plays not only in injury prevention research, but in many other areas as well. I was impressed by the breadth of research supported by the state as well as how some of their work has impacted clinical practice. While at the Injury Research Center, I came to appreciate the degree of collaboration between faculty and staff when conducting research. Hearing input from biostatisticians, public health specialists, and clinicians proved useful in troubleshooting obstacles and addressing research questions from different angles.

Relationships with rural health care facilities

Nathan Vakharia, M-2, UW School of Medicine & Public Health

Under the supervision of Brad Garber, MD, my summer fellowship project activities focused on building relationships with rural health care facilities, health care professionals, professional organizations, and educational institutions to disseminate Wisconsin Comprehensive Advanced Life Support (CALS) Program information. The CALS Program offers knowledge and hands-on skills training in emergency medicine for rural primary care physicians and other health care professionals. In addition to the originally proposed objectives, the project included a Level III/IV Trauma Hospital Survey, creation of geographical information system (GIS) images, and a legislative component.

We started by sending a survey to all Level III/IV hospitals and using the information to create GIS pictures. The data showed the need for more functional advanced life support courses in rural areas. Once the need was established, information packets were created to
The overall goal of my Wisconsin Medical Society Foundation Summer Fellowship in Government and Community Service project was to use 2 violent death reporting systems, the Violent Injury Reporting System (VIRS) from 2001 to 2003 and the Wisconsin Violent Death Reporting System (WVDRS) from 2004 to 2006, to characterize elderly suicide in Wisconsin and determine associated risk factors. Originally, I proposed studying both suicide and homicide, but decided to focus solely on suicide in order to perform a more in-depth analysis. An additional goal was to provide both health care professionals and policymakers with recommendations on how to ameliorate the burden of elder suicide in Wisconsin. Findings of my fellowship research have been submitted for publication to the Wisconsin Medical Journal.

This fellowship provided me with the means to accomplish several of my proposed goals. I was able to see firsthand the relationship between health care and policy. Specifically, I discovered the immense power that evidence-based research has in dictating current health protocols and policy/legislation.

Furthermore, the fellowship allowed me to develop a solid foundation of research skills. In particular, I am much more capable of objectively examining a problem and developing a systematic method to analyze it. With the increasing strains being placed on the American health care system, these skills will prove valuable in the future.

Lastly, my experiences this summer allowed me to further develop my communication skills. I was not only able to give an oral presentation of my project at the VA Medical Center in Milwaukee, but I will also participate in a poster session at the Medical Student Research Symposium at the Medical College of Wisconsin. Additionally, I was able to develop my communication skills on a more personal level through networking with faculty and staff at the Injury Research Center at the Medical College of Wisconsin. I am indebted to them for their support, advice, and encouragement, and to the Wisconsin Medical Society Foundation for providing this opportunity.
The mission of the Wisconsin Medical Journal is to provide a vehicle for professional communication and continuing education of Wisconsin physicians.

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