

## **Proposal for a Clinical and Research Experience at the Hennepin County Medical Center for Premedical Students at St. Olaf College**

The exposure of undergraduate premedical students to a variety of clinical and research experiences is an important element of their education. My own exposure to medicine as a premedical student at St. Olaf College was limited to my obtaining a job as a surgical orderly in the operating rooms of the then Lutheran Deaconess Hospital. The educational value of this experience was limited. Although the biomedical studies program at St. Olaf College has greatly improved the potential off-campus opportunities for premedical students, I think the Hennepin County Medical Center (HCMC) offers potential unique opportunities in this regard.

The HCMC campus occupies five city blocks near the Metrodome in downtown Minneapolis. HCMC also operates primary care clinics in various parts of the Twin Cities. It is a public safety net hospital providing care for the low income, uninsured, and vulnerable populations. No patient is turned away because of inability to pay for services. The hospital employs 64 interpreters speaking 17 languages to serve this diverse population. These patients are drawn primarily from a population area of one million, which includes the city of Minneapolis. HCMC is Minnesota's premier Level I adult trauma center and Level I pediatric trauma center with many nationally recognized programs and specialities. Virtually all medical specialities and subspecialities are represented at HCMC.

HCMC has a long tradition of medical education since its establishment as the first teaching hospital in Minnesota in 1893. In 2010 alone, HCMC trained 908 resident physicians, including 338 in 13 HCMC-based residency and fellowship programs and 570 from the University of Minnesota and Regions Medical Centers. In the same year, HCMC trained 546 medical students from 44 USA institutions and 24 foreign medical schools in 9 countries. In 2010, HCMC trained more than 1,000 nurses in diverse training programs from 20 institutions across the state and more than 5,400 emergency medical system personnel.

The Minneapolis Medical Research Foundation (MMRF) is responsible for administrating financial and compliance processes for the research faculty at the HCMC. Funding sources include the National Institutes of Health (NIH), the Center for Disease Control, and industrial. MMRF was founded in 1952 and is the third largest nonprofit medical research institution in the state of Minnesota. MMRF consistently ranks nationally in the top 10 percent of institutions receiving funding from the NIH. There is a wide variety of research groups and areas of interest on the campus. The following are illustrative examples: causes of dementia; heart disease and renal failure; addiction vaccines to tobacco and opiates; HIV prevention and treatment; provider and patient satisfaction; and traumatic brain injury.

The vision for this program, which would allow premedical students to develop their own program, is to develop a diverse curriculum. This would include exposure and involvement in specific clinical areas such as emergency medicine, family practice, sleep medicine, various surgical specialities, and psychiatry. During these clinical rotations the student would be exposed to the diverse patient population served at HCMC as well as clinical providers including nurses, occupational and physical therapists, clinical pharmacologists, and many others. In addition, the student would have opportunity to interact with physicians at many levels of their development including medical students, resident trainees early in their clinical exposure, as well as chief residents who are well advanced. They would also have the opportunity to be mentored by faculty. It would be anticipated that the student would select a primary mentor appropriate for the experience.

The student would also have opportunity to choose a research experience from a wide variety of areas with experienced investigators supported by extramural funding. The rotation would allow the student to be directly exposed to biomedical research directly pertinent to patient care. The student could develop laboratory techniques, be involved in manuscript preparation, and have a general exposure to a research unit.

Given the nature of the population served at the HCMC, as well as the stated mission of the institution, students would be exposed to the concept of health care as a service and as a calling to be a “healer”. This concept fits well with the objectives of an education at the St. Olaf College.

If the venture is successfully accomplished, there would be the potential of other institutions with premedical students having access to the program.

Gaylan L. Rockswold, M.D., Ph.D.