IPS: Theory and Applications

Medical school is quite challenging, and class structure and expectations are different there than at the undergraduate level. Integrated Problem Solving (IPS) is a course designed to teach students to apply theory learned in medical school classes to clinical cases. Upon the recommendation of former PHC alumni who have attended medical school, an IPS course was developed at UTPA. David Alonzo, a first year medical student at Baylor College of Medicine (BCM), found UTPA’s Integrated Problem Solving Course (BIOL 4387) extremely helpful. In fact, during his very first week in BCM’s IPS course, only David knew what was going on—so he looked like a genius during discussions. One of the case studies David took at BCM turned out to be one he already had taken at UTPA (Racing Rosie). Both courses contain similar content and about the same amount of work, but because this is

Applications are now being accepted for the Premedical Honors College (PHC), Class of 2007. The PHC is an eight-year, high school-through-medical school pathway created by Baylor College of Medicine (BCM) and The University of Texas-Pan American (UTPA), to increase the number of physicians in medically underserved areas of Texas.

PHC students attend UTPA for their undergraduate education (majoring in biology or chemistry) and receive conditional acceptance to BCM upon acceptance into the program. Tuition and fee waivers are available for both undergraduate and medical school. Those who fulfill all PHC requirements and BCM prerequisites are accepted into BCM upon graduation from UTPA.

Application deadline is FEBRUARY 1, 2007. Care should be taken in completing the application form and in answering essay questions.

As part of the screening process, 30 applicants will be
Each summer, rising sophomore PHC students attend the Honors Premedical Academy (HPA) at Baylor College of Medicine (BCM). During the six-week program, students must handle a rigorous course load of anatomy and physiology classes, and one English course, and work with a doctor in the Texas Medical Center. In this issue, we examine some of the PHC students’ experiences. The conclusion of this two-part article follows.

PARTICIPATING INSTITUTIONS: Baylor College of Medicine (BCM), Ben Taub General Hospital (BTGH), Michael E. DeBakey Veterans Affairs Medical Center (VAMC), Northwest Community Health Center: Harris County Hospital District, Texas Children’s Hospital (TCH), The Methodist Hospital (TMH), St. Luke’s Episcopal Hospital.

STELLA L. BENAVIDES feels she learned the most from the HPA ethics seminar, and specifically, that a medical decision may not be right, but only “less wrong” than other available options. Stella worked with Jane E. Corboy, MD, associate professor, and Sabrina Echols-Elliot, MD, assistant professor, Family and Community Medicine (BCM), learning first-hand the importance of a good patient-physician relationship and patient education. Stella also enjoyed attending church services with people of different cultures, visiting the museum and playing frisbee. Her best advice to other HPA participants? Don’t sleep in—get out of bed! During the day, you’ll realize you’re having fun!

ZEINA DALU found the large HPA course load and managing her time effectively was definitely a challenge. But her fears of the gross anatomy lab disappeared once she cracked the chest of a cadaver! Zeina shadowed Charles D. Fraser, MD, professor, Congenital Heart Surgery (BCM, TCH), Emmett D. McKenzie, MD, associate professor, Congenital Heart Surgery (BCM, TCH), and Jeffrey Heinie, MD, Congenital Heart Surgery (TCH). She saw lifesaving surgeries on the youngest of children—newborns! Though intense, she found the HPA experience rewarding. Still, there was time to unwind while participating in events like the water balloon fight, play frisbee, shop at the Galleria or try restaurants.

RACHEL GELMAN was both anxious andprehensive about participating in the HPA program. Luckily, everyone she worked or came in contact with seemed to understand the overwhelming nature of the HPA experience. Rachel shadowed Oluyinka Olutoye, MD, PhD, assistant professor, Surgery-Pediatric Surgery Division (BCM, TCH). Though he had more than 12 years of training after college, Dr. Olutoye never made Rachel feel intimidated by complex topics, instead, he communicated in a way that was both clear and reassuring. It surprised her to learn many medical specialists also were educators and “students” themselves, in an environment of endless learning.

NATALI HINOJOSA found the rigorous HPA program good preparation for her future in medicine. The anatomy and physiology classes gave her insight about the human body and helped her when she worked with a cadaver. Natali partnered with Debra L. Palazzi, MD, and Flor Munoz-Rivas, MD, assistant professors, Pediatrics-Infectious Disease (BCM/BTGH). Natali enjoyed participating in examinations of patients with TB, syphilis, and other bacterial or viral infections. Though the HPA was quite a challenging experience, Natalie came away with a feeling of satisfaction, and with the confidence to continue her chosen career path.

POOJA KOOLWAL learned that the “challenge” of HPA was an understatement. Work started right after unpacking ended. So she figured she’d be a sleep deprived caffeineoid by the end of six weeks! Pooja worked with Suryakanta Velamuri, MD, assistant professor, Medicine-Pulmonary (BCM, VAMC), and learned about lung diseases and bronchoscopies, while attending lectures. The talent show was a highlight, revealing closet gymnasts, musicians, etc. She feels the most important lesson she learned was the value of friendship with her peers. It was the study sessions, the pranks, movies, “emergency” shopping, etc., that kept the HPA from being just another summer credit learning opportunity—even though she did turn into a caffeine zombie after all.

VERONICA SEPULVEDA adjusted to the heavy HPA course load—though the first day still remains a blur! She partnered with Paula E. Sturgeon, MD, assistant professor, Pediatrics-Newborn (BCM, TMH), with whom she was able to see real cases and learn how difficult it can be for a doctors to deal with the emotional strains of trying to help children, because she had a hard time dealing with it herself. She found the medical ethics series helpful because it addressed some of these same issues. Veronica feels observing patients in the level two nursery was the greatest learning experience for her, and she loved exploring Houston, and becoming friends with other PHC students.
EARN WHILE YOU LEARN

Summer programs offer premed students opportunities to explore their interests and gain clinical and academic experience. All PHC undergraduates are strongly encouraged to participate in such programs. Those listed here are just a few of many options. Explore your options via the Internet and apply to all programs that interest you.

Summer Medical and Research Training Program (SMART)

BCM’s SMART program provides biomedical-related summer research projects for undergraduates. Participants receive nine paid weeks of biomedically related research in a broad range of areas, daily seminars, discussion groups, free GRE prep workshops and other activities. For more information, visit the SMART Program web site at www.BCM.edu/Smart.

Michael E. DeBakey Summer Surgery Program

BCM’s Summer Surgery Program encourages the development and interest of well-qualified undergraduates who are considering a medically oriented career. The eight-week program provides students with an opportunity to work with faculty, surgical residents, medical students and nurses in the Medical Center. Faculty members practice General Surgery, Plastic Surgery, Pediatric Surgery, Vascular Surgery or Cardiothoracic Surgery. For more information, visit the Summer Surgery Program web site at www.DebakeyDepartmentofSurgery.org/home/content.cfm?menu_id=17.

Undergraduate Summer Research Program

Louisiana State University (LSU)

LSU’s Department of Biological Sciences, with funding from the Howard Hughes Medical Institute Undergraduate Biological Sciences Education Program, is hosting nine week research opportunities for eligible undergraduate students in the Life Sciences. Work will be done in established laboratories with interaction among scientists and peers. Applications for Summer 2007 still are being accepted. For more information, visit the LSU web site at www.Biology.LSU.edu/hhmiprog/undergrad.

HOLIDAY BANQUET ’06

The PHC holiday banquet was held at Las Palmas in McAllen on December 7, 2006. Dr. Graciela Villarreal, Dr. William Thomson, and Elizabeth Lopez from BCM were present to visit with undergraduate PHC students, and to provide updates about program success. Joey Nichols made the trip from Houston to attend the event and catch up with his fellow classmates (all of whom will be graduating in May 2007).

The PHC seniors received a medical dictionary. Those who enrolled in the Spring IPS class will use their dictionaries during the course. PHC sophomores and juniors received jackets with “BCM” embroidered on them, and freshmen received backpacks.

MCAT SUCCESS!!!

All 14 students from the entering class of 2003 met the conditions for acceptance to BCM! They all plan to matriculate to medical school in the Summer of 2007. Of the 14 juniors (Class of 2004) who took the MCAT in August, 12 have achieved the target score for their conditional acceptance to BCM. Now that the exam is computerized, there are more MCAT test dates, so students have more flexibility in terms of when they can take the exam.

PHC Application Deadline...

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selected to interview at Baylor College of Medicine (BCM) in Houston. The interviews will be held on Friday, March 16th. Students, accompanied by PHC staff, will fly to Houston. Each student will have two 30-minute interviews. Interviewers include current BCM faculty and medical students, and staff from BCM’s Center for Educational Outreach. Final selections will be made based on the results of the interviews.

To be competitive in the screening process, students already should have completed advanced placement and/or concurrent enrollment hours, and taken math and science their senior year of high school.

Applications are available for download from the UTPA site (www.panam.edu/dept/biology/baylor.html). Or contact the PHC office by telephone (956-316-7025 and 956-316-5216), or by e-mail (cindy@UTPA.edu or mmendez1@utpa.edu).
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David’s “second time around,” the BCM IPS course has become his chill session—almost!

For example, ammenorrhea is currently being discussed in David’s IPS class at BCM. Since he already had a similar course at UTPA, the subject makes more sense to David now than it did at UTPA.

David doesn’t think the class at UTPA could be made any better because it mirrors the course at BCM (except in medical school, they finish a case in two weeks, compared with three and more weekly meetings at UTPA). David encourages others to take the class because it provides such a leg-up in medical school that it is worth the extra work at the undergraduate level.

Daren Molina found the UTPA IPS class to be helpful because it helped him to learn how things are done at BCM. However, he thinks his UTPA classmates did not have sufficient background to understand all facets of the cases presented. He thinks it would be beneficial if UTPA would include related theory in its IPS. In medical school, students are enrolled in classes that correspond to the clinical cases, providing the theory needed to understand completely the disorder and potential complications. The case wrap-ups provided by medical students were very helpful, and gave students an opportunity to ask questions related to the case.