PATIENT-BASED LEARNING

TRAINING THE DOCTORS OF THE FUTURE

INTERNationally Recognized CURRICULUM

School of Medicine
University of Missouri Health
PATIENT-BASED LEARNING CURRICULUM

The Patient-Based Learning (PBL) curriculum, in place since 1993, emphasizes problem-solving, early clinical experience and collaborative teams. The MU School of Medicine has emerged as a national leader in case-based learning, teaching of interprofessional care, and focusing on quality and safety. The academic performance of our students continues to exceed national norms. Furthermore, our faculty and students are becoming increasingly diverse as we actively promote a culture of inclusion.

An internationally recognized curriculum, Patient-Based Learning (formerly Problem-Based Learning), prepares students to care for patients in the context of authentic clinical cases modified to unfold much like a medical mystery. Students learn medicine instead of learning about medicine. They learn in the context of patient care. The quality of the curriculum has proven its value as medical students consistently rank above the national average on licensing exams and residency director reviews.

WAKE-UP CALL

In 1990, the University of Missouri School of Medicine received a back-handed compliment from the LCME. The medical school accreditation agency noted that MU had a “perfectly preserved 1960s curriculum.” At the time, the curriculum included a two-year component of basic science, in which students learned mostly through lectures and memorization, and a two-year component of clinical practice. Students did not see a patient until year three.

Lester Bryant, MD, then the MU Medical School dean, tasked Michael Hosokawa, EdD, currently the senior associate dean of education, with finding a better way to train future generations of doctors. Drawing on the knowledge that by the time students graduate nearly half of what they’ve been taught is already out of date, Hosokawa and his fellow members of the curriculum design committee became intrigued with problem-based learning, then only used in a handful of American colleges.

The challenge to medical schools was to prepare physicians who would practice in a world that faculty could not yet imagine. Medical graduates are never a finished product; they must be lifelong learners, constantly applying the most current knowledge to solve problems. They needed to learn in the same way doctors practice, critically applying informatics skills to seek information and incorporating evidence-based medicine in their decisions.

In 1993, the new integrated system-based, patient-based learning curriculum was introduced in Years 1 – 2 and core clerkships in Years 3 – 4 were streamlined. Small groups worked on a clinical problem each week, and lectures were reduced by 60%.

The PBL curricular changes implemented in 1993 have resulted in higher performances on the national licensing examinations. Mean scores for MU medical students have been significantly above national means. The changes from a traditional to a PBL curriculum have better provided our graduates with the knowledge and skills needed to practice within a complex and ever-evolving health care system. In every comparison, students who completed the PBL curriculum received higher scores from residency program directors than did students from the traditional curriculum.

1990
The School of Medicine undertakes the task of finding a better way to train the next generation of doctors. Curricular change begins.

1993
The new Problem-Based Learning curriculum is implemented. The first group of students enter the program.

1995
The first MU class using the PBL method takes USMLE Step 1. Their scores reflect an increase from 198.3 to 207.3.

2010
Name changes to Patient-Based Learning to better reflect the focus of the curriculum and the ongoing application of the most current knowledge.
PATIENT-CENTERED CARE LEARNING CENTER

The Patient-Centered Care Learning Center (PCCLC), a $42.5 million medical education center, opened in July 2017. The MU School of Medicine’s focus on patient-centered care defined the design of the building, which includes improved daylight quality and an enhanced focus on collaboration among students, faculty and staff. The 97,088-square-foot, six-floor building was designed with students’ input and includes features that reflect Missouri’s history, including reclaimed Missouri walnut wood and the unique topography of Missouri rivers carved into that wood. The mission to educate and inspire students to provide exceptional patient-centered care is realized in the 32 PBL classrooms. In each classroom, humanity is emphasized with images of Missourians overlaid on the glass door, each with individual stories. The creative collaboration with MU’s School of Journalism incorporated works of professional photojournalists from the Missouri Photo Workshop to create the artistic installation.

The PCCLC also includes an anatomy lab, a simulation center, four seminar rooms, Patient-Based Learning labs, a 6,900-square-foot auditorium, and education services for medical students.

The building represents an expansion of the MU School of Medicine to address a critical shortage; our state and nation are in desperate need of more physicians to serve a growing elderly population and increased numbers of patients living with chronic illnesses. Together with the Springfield clinical campus, the PCCLC can accommodate an increase in class size from 96 to 128 students.

BENEFITS

Patient-oriented learning
- Decrease in rote memorization
- Extensive training in patient communication to enhance the ability to have difficult conversations and obtain an accurate history
- Student-centered learning
- Integrated curriculum and small-group learning

Patient care experience in the first year
- Increased proficiency in critically reading literature and developing the informatics skills to seek information when it is needed
- Develop lifelong learning skills
- Incorporate evidence-based medicine and best practices in patient care
NATALIE RODRIGUEZ  
Kansas City, MO

Medical Minority Scholarship

This scholarship opened a tremendous door of opportunities for my education. My family has always struggled financially primarily due to being first generation in the United States and not having any family in the states to help or guide us. As the oldest child, I took on the responsibility to help my family financially. Although I've worked since I was 15 years old and was entering medical school at age 29, I did not have the savings to pay for my medical education because most of my money had gone to my family. I plan to pay it forward and fund a scholarship to a future student when I become a physician so that more students like me can feel this sense of financial freedom to be the best version of themselves and not allow finances to hold them back from their dreams.

The most influential factor in my decision to attend MU medical school was meeting the staff. I was interviewed by two doctors who I really admired. They were warm but at the same time effective. In that short hour of being interviewed, where I thought I would be extremely nervous and intimidated, I felt quite the opposite. It was a conversation instead of an interview. Another factor that helped me decide to attend MU was the Patient-Based Learning curriculum which is not purely lecture-based, but also small group led. I am someone who loves working with others and being part of a team. I enjoy helping other students, and MU's medical program allows me to do just that. Lastly, receiving the scholarship was extremely important to me. I was extremely honored and it solidified my decision that MU medical school was the right choice for me.

MICHAEL TURCO  
Pittsburgh, PA

Class of 1987 Scholarship

The most important factor for my attending Mizzou was the PBL curriculum, which I felt was an extension of other education I had received to date, and enabled me to hone interpersonal, logical, and learning skills that I believe will be essential to my success as a physician. One of the unfortunate specters of education is the burden of debt that accrues in pursuit of knowledge. This scholarship has helped reduce a part of that burden, which I hope will free me from choices that might limit how and where I practice. I am grateful for the generosity that has been shown to me. My career was previously in alumni relations and fundraising, so I am doubly aware of the effort required to make these gifts possible. It is good to know that the physicians who have come before me still see themselves as connected to the school, and help enable the next generation. It has inspired me to consider how I will contribute in the future.

MONTE ROPER  
Payette, ID

Class of 1985 Scholarship

Obviously having a family during medical school adds some challenges financially. This is a significant stress reducer and allows me to more easily concentrate on my studies at school. I chose to come to MU due almost entirely to the PBL curriculum. I really bought into the system, and its focus on self-directed functional learning. Beyond this, I am a non-traditional student and a veteran of the U.S. Army. While in the service I did a 12-month deployment to Afghanistan from 2010 to 2011. I did my undergraduate degree at Missouri State University in Cell and Molecular Biology. I have a wife and a 2-year old daughter. Starting medical school has been a little challenging to my role as husband and father, but we are making the best of it as a family. My daughter often comes to the school to color on the white boards and spend time with me while I study. The class has basically adopted her now, and constantly slip candy to her behind my back. School is going well, and the information, while immense, has been riveting. I hope to honor the Class of 1985 and the scholarship fund with hard work through my medical training.

CANDACE FOGLIATTI  
Chicago, IL

Dr. E.L. Priest Medical Scholarship

The number one reason I chose to attend MU medical school is because Mizzou feels like home. I completed my undergraduate degree here, and over the course of five years I decided there was nowhere else I’d rather receive my medical school education. I’ve only been a medical student for one block and about one week, but I know I’ve made the best decision. I have learned more in PBL these last few months than I could ever imagine. I was initially attracted to MU’s unique PBL curriculum. As I continue on, I realize how lucky I am to be at a place with such an amazing learning environment. The cases each week drive my curiosity and have encouraged me to become a much more self-directed learner. I love how PBL lab fosters my ability to communicate effectively, ask questions, and work out gaps in my knowledge, all while developing close relationships with my peers. It has been a challenging but fun time problem solving and getting to know my fellow classmates, and I am so excited to grow as a future physician throughout medical school here at MU.
Growing up in Kansas City, Missouri, Laine Young-Walker, M.D. ’97, always knew she wanted to be a doctor. The first person in her family to attend college, she was accepted into two schools for her undergraduate work, ultimately choosing Mizzou. Although funding played a large part in her decision, the people were also an important influence. She had previously participated in a six-week program at MU that invited minorities from across the country to explore medical careers. The following year, she was asked to serve as a counselor. The connections she made in that program and the people she met while touring the campus heavily influenced her decision to attend Mizzou.

Following completion of her undergraduate work, staying in Columbia for medical training made sense for Dr. Young-Walker for a variety of personal reasons. She was encouraged to apply to MU’s medical school by her contacts at MU, including her strongest advocates, Dr. Ellis Ingram, Dr. Laura Hilman and then-recruiter Barbara Horrell. And as she learned about the Problem-Based Learning curriculum, as PBL was first named, it seemed like an excellent fit for her hands-on learning style. She was excited to be accepted into the first incoming class that would use this innovative curriculum. There were almost a dozen minority students in that class, including six African Americans; that high number was attributed to Barbara Horrell’s recruitment efforts.

The PBL curriculum launched in the fall of 1993. Because she didn’t know anything other than PBL for learning and was already adjusting to medical school, there was no real transition period for her from a traditional format, other than it was different from undergrad. “People would jokingly say we were guinea pigs, but I don’t think too many students really thought that way,” she remembers. “I can’t speak for everybody, but I know for me and the people in my circle, nobody thought, ‘This is bad, and I’m not going to stay here.’” She decided it was a better way to learn medicine.

Her original goal was to be an obstetrician/gynecologist. She notes that although the African American culture was generally distrustful toward psychiatry at that time, she ultimately made the decision to pursue it in her third year of medical school. As she began her psychiatry residency at MU, several things helped her transition from the role of student. In addition to already knowing many of her now-colleagues, the PBL method helped her remember what she had learned and draw from it to help her patients. She credits the case-based learning for much of her success during residency.

After completing her residency and fellowship with MU, she joined the School of Medicine faculty as an Assistant Professor of Clinical Psychiatry. Fantastic opportunities followed, due in no small part to her strong organizational and leadership skills. She had never planned to be a division chief but after the new chair observed the way she worked and her positive methods for meeting the department’s goals, she was offered the position. Likewise she had not planned to be the Associate Dean for Student Programs, nor the Chair of the Department of Psychiatry, to which she was appointed in July of 2019.

In her current role as Associate Dean, Dr. Young-Walker routinely hears praise for the PBL method from the students. They share and demonstrate how this structure of learning helps them set a strong foundation. “I have experienced the success of PBL both from the student side and the faculty side. It is a great way to learn.”
Naming opportunities are available for recognition of gifts at a variety of donation levels. Some examples are below.

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<thead>
<tr>
<th>Donation Level</th>
<th>Description</th>
<th>Opportunities</th>
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<tr>
<td>$10,000</td>
<td>Patient Based Learning Laboratories</td>
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<td>Student Seminar Rooms</td>
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“Patient-based learning teaches medical students medicine rather than learning about medicine. From the first day of medical school, students learn clinical reasoning as they work through authentic patient cases and, in the process, learn the basic science of medicine.”

Michael Hosokawa, EdD
Senior Associate Dean for Education

In celebration of 25+ years of our outstanding PBL program, we have established the Patient-Based Learning Scholarship Endowment Fund (PBL-25). Because so many incoming students list the PBL curriculum and financial assistance as their top two reasons for choosing Mizzou Med, this scholarship fund is the perfect way to commemorate this milestone. As listed above, donations of $10,000, $25,000 and $50,000 offer you a naming opportunity in the PCCLC; however, all gifts, regardless of size, will increase the number of scholarships available to future medical students. To donate online, please go to: https://tinyurl.com/PBL25
Thank you for taking the time to learn about Patient-Based Learning at the University of Missouri School of Medicine. Through generous support from alumni and friends, we are able to offer an innovative, world-class education.

To learn more about giving opportunities at the School of Medicine, please contact us at:
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