



THE OFFICIAL BI-ANNUAL NEWSLETTER OF THE ASSOCIATION OF STEMM PATHWAY AND BRIDGE PROGRAMS (ASBPB)

Letter from the Editorial Team: How Pathway Programs Helped Me

by Kyeorda Kemp, Ph.D.

Oakland University William Beaumont School of Medicine

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When I was five, I decided I would dig to China. I got out my shovels and dug for what felt like hours. I gave up on that goal but found what I thought was a fossilized dinosaur egg. My father was convinced that I had NOT found a fossilized dinosaur egg. To get me to accept that it was just a rock, he took me to the local science museum, where I met a geologist. That interaction started me on my path to becoming a scientist. I think of myself as one of the lucky ones.



My parents looked into every opportunity for me to learn more and to create opportunities for me to engage in Science, Technology, Engineering, Math, and Medical Professions (STEMM). I attended a high school with great guidance counselors and a robust science curriculum. It was here that my physics teacher encouraged me to participate in a STEMM pathway program when I entered college. These programs have been instrumental in my success and provided academic support, research opportunities, lectures, and workshops on the various soft skills needed to be successful. Knowing how important these programs were for my undergraduate career, I participated in Alliance for Graduate Education and the Professoriate in graduate school. Here, I learned about teaching postdocs and decided to do one funded through the NIH. That experience led me to my first faculty position.

These programs are also beneficial for the faculty that lead them. In response to our query to readers to let us know how PBP programs have benefited them, a professor wrote, "As a faculty member, PPBs [sic] have allowed me to expand my repertoire of courses and methods of teaching different levels of learners....(continued on page 2)

...Teaching in a PPB program has really highlighted the fundamentals necessary for peak performance in a health program and allowed me to refocus my instruction to reinforce those fundamentals, both in my teaching for the PPB program as well as the numerous health professions I teach in. I really appreciate my involvement in a PPB for these reasons." STEM pathway programs proved invaluable for me. I knew I wanted to be a scientist and an academic, but I didn't know anyone who had embarked on this path, nor did I know how to get started. These programs gave me a roadmap. My path wasn't always smooth, but I reached my final destination. In this volume of PBP WIRE we tell stories of how pathway and bridge programs have helped others succeed.

The Gathering That Sparked an Awakening: Beyond Typical Conference Proceedings

by Edgar R. Meyer, M.A.T., Ph.D., University of Mississippi Medical Center; and guest contributor Peter Vollbrecht, Ph.D., Western Michigan University Homer Stryker M.D. School of Medicine

As many readers might know, the Pathway Programs & Bridges (PPB) Special Interest Group held its inaugural annual conference this past summer on July 21, 2022, and the event was a resounding success. Conference proceedings transpired within an abridged six-hour timeframe to adhere to a schedule to maximize attendance by appealing to attendees' busy schedules. The conference was held virtually on the Gather.town platform, and the program included a plenary session, oral presentations, poster presentations, program descriptions, roundtable discussions, workshops, and closing remarks. Thanks to generous sponsorship from Western Michigan University Homer Stryker M.D. School of Medicine, the Stryker Foundation, and the National Board of Medical Examiners (NBME), the conference was free

for all participants. A total of 463 individuals registered for the conference from over 175 unique institutions. Of those registered for the conference, 376 individuals participated in the event's activities.

The conference began with opening remarks followed by the inspirational plenary session titled "Helping Your Students Succeed When Everyone Thinks They're Failing," delivered by the keynote speaker Dr. Karen Morris-Priester. Dr. Morris-Priester is a board-certified anesthesiologist working in Allentown, Pennsylvania. Despite experiencing obstacles such as having limited access to resources and becoming a teenage mother and a young single mother of five children, Dr. Morris-Priester became the first grandmother to graduate from Yale University School of Medicine. These experiences and the benefits she obtained from her involvement in a medical pathway program motivated Dr. Morris-Priester to develop a scholarship fund for financially disadvantaged students and a mentoring program to guide students interested in pursuing careers in healthcare.

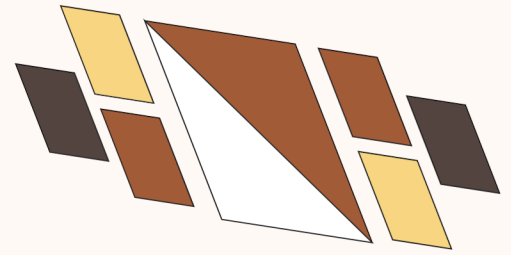
Dr. Morris-Priester's powerful testimony set the tone for the entire conference as a hopeful, joyful atmosphere in which attendees shared the benefits and challenges of their institutions' PBP programs while simultaneously learning about the benefits and challenges of both similar and different programs at others' institutions.

These conference interactions included the hosting of eight short research talks highlighting work being done within the field of PBP programs. These talks were focused either on K-12 or undergraduate level through post-baccalaureate programs.

One of the highlights of the day included the program and research poster sessions which allowed for networking opportunities and discussions of what has been working and what has not been working in programs across the country. During this session, approximately 72 program descriptions or research posters were presented.



The conference then hosted 24 separate roundtable discussions, allowing for further networking and sharing of best practices and problems. The conference hosted six workshops featuring topics such as resident engagement in pipeline programs, responses to COVID-19 and racial injustice in post-baccalaureate programs, and advising for diverse, prospective health professional students, to name a few.



Finally, the conference ended with closing remarks, acknowledgments, and the presentation of the election results at the general meeting. The following positions were filled:

Executive Council Members:

President - Tracey Weiler

President-Elect - Kyeorda Kemp

Secretary - Edgar R. Meyer

Treasurer - Jon Wisco

General Council Members *(including Executive Council Members from above as well)*

Membership and Internal Communications - Saby Moulik

Research and Scholarship - Ingrid Bahner

External Communication and Advocacy - Courisse Knight

Conference Chair - Peter Vollbrecht

Southern Region Representative - Barbra Roller

Western Region Representative - Erica Rojas

Central Region Representative - Brianne Lewis

Northeastern Region Representative - Luckson Omoaregba

The virtual gathering was well attended and received, leading the conference planning team and the newly elected group leadership decided to establish an independent professional society. This society is now known as the Association of STEMM Pathway and Bridge Programs (ASPBP), and its leadership is involved in establishing it as a non-profit organization.



Committees of the Association of STEM Pathway and Bridge Programs (ASPBP)

by Jaehwa Choi, Ph.D.

Mercer University School of Medicine

Our Pathways, Pipelines, and Bridges (PPB) Special Interest Group has now become the “Association of STEM Pathway and Bridge Programs (ASPBP)”. The leadership team was formed by online nomination followed by voting before the first PPB meeting was held virtually on July 21, 2022 (see page 3).

In addition, five committees were established, and one committee is in the process of development. The chair of each committee is as follows:

- PPB Conference Planning Committee - [Dr. Peter Vollbrecht](mailto:peter.vollbrecht@med.wmich.edu) (peter.vollbrecht@med.wmich.edu) - This committee works to plan our annual conference and is critical for planning the workshops, presentations, and networking events in addition to inviting the keynote speaker.
- Financial Committee - [Dr. Jonathan Wisco](mailto:jjwisco@bu.edu) (jjwisco@bu.edu) - This committee oversees financial matters. The identity and the future direction of our ASPBP organization are very tightly related to financial matters (e.g., membership fees, scholarships, and taxes). We are in the process of acquiring non-profit status.
- Membership and Internal Communications Committee - [Dr. Sabyasachi Moulik](mailto:smoulik@fiu.edu) (smoulik@fiu.edu)- This committee oversees communication with members.
- Research and Scholarship Committee - [Dr. Ingrid Bahner](mailto:ibahner@usf.edu) (ibahner@usf.edu) - This committee will fund grant writing opportunities and oversee the submission of applications. This committee will also manage the grant and scholarship awards once the funds are established.
- External Communication and Advocacy Committee - [Dr. Courisse Knight](mailto:cknigh27@jhmi.edu) (cknigh27@jhmi.edu) - This committee will plan programs to promote our organization's mission, vision, and values.
- The Justice, Equity, Diversity, and Inclusion (JEDI) Committee - [Dr. Tracey Weiler](mailto:tracey.weiler@fiu.edu) (tracey.weiler@fiu.edu) - This committee is forming and will establish and promote values related to JEDI principles.

If you are interested in serving on these committees, please contact the individuals above. Congratulations to the elected executive and general council members. Thank you to everyone for your service. Best wishes to all of us who work hard to make a difference for our students with devotion.



Creating a ripple effect- How an educational project led by GMES students enriched the medical school curriculum

*by Ozman Ochoa MS, Boone Coleman MS, Jake Sellers MS, and Gurvinder Kaur Ph.D.
Texas Tech University Health Sciences Center*

Our time in the TTUHSC Graduate Medical Education Sciences (GMES) program proved to be a valuable stepping-stone to help us become medical school students. During our first year, we were fully integrated into the medical student body, taking courses alongside medical students. During our second year, we taught the courses as teaching assistants, fully realizing medical students' struggles when learning a challenging curriculum. When we returned as medical students, we were fully invested in not only the medical school but the community of Lubbock as well, wanting to see its success alongside our own. This meant we were in a unique position to identify potential community-driven areas of improvement in the medical school curriculum.

While TTUHSC does a great job preparing its students to enter the clinical force, it has been noted that there is a lack of diversity regarding the standardized patient (SP) population with which it trains its students through the Development of Clinical Skills (DOCS). One of the underrepresented communities is the LGBTQIA+ community, especially those who identify as transgender. While this omission is not intentional, it does cause a disservice to the students since some serve transgender patients at the local free clinic.

To address this educational gap in our medical curriculum, we decided to create a clinical encounter that focused on skills in communication with a transgender patient. The clinical encounter included a case-based clinic scenario incorporating an actual transgender SP volunteer. The educational aim of this encounter was to assess and teach the student volunteers appropriate etiquette and communication strategies when performing DOCS skills with transgender patients, a scenario that is seldom used in a typical medical school curriculum. Overall, we found that providing medical students with transgender SP clinical experiences early in the curriculum increased student confidence in interacting with transgender patients and may alleviate student gender biases when meeting patients for the first time. Many students felt that incorporating underrepresented SP into the medical school curriculum can diversify the student experience and teach practical communication skills that will prove useful in future medical practice.

Fortunately, the TTUHSC School of Medicine and Sim Life Center (where the SP encounters and training are held) administration supports student initiatives to bolster the education of its students' education and wholeheartedly advocates for inclusion and representation of marginalized populations such as the transgender community. Because of projects like these, conversations and initiatives have been taken up by not just students but the school administration to continue advocacy for a growing pool of diverse SP encounters to better prepare medical students for the patients they will one day serve. Based on our initiatives, an elective, "Diversity & Inclusivity," has been offered to first and second-year medical students where informative lectures on clinical realities faced by marginalized communities are paired with intentionally diverse/challenging SP encounters in DOCS.

Collectively, through the GMES program, we have been able to understand and fill the needs of our school and the community it serves. We have grown as leaders and healers, resolved to continue learning about the needs of our patients. We understand the health disparities that marginalized groups face, which led us to start this project to help address those issues.

Do we really “bridge” the gap?

*by Krystal Ripa, Ph.D. - Upstate Medical University and Kyeorda Kemp, PhD- Oakland University
William Beaumont School of Medicine*



Special master's programs (SMPs) are in the graduate category of post-baccalaureate programs that aim to increase students' chances of getting admitted to health professional schools, including medical schools. Students in these programs receive a degree, unlike many other post-baccalaureate programs. The structure and content are program dependent, but all aim to allow students to increase their knowledge of a field by taking relevant graduate and professional-level courses. Moreover, they can help bolster an applicant's chances of matriculation by providing opportunities for research and clinical experience. Students may enter these programs for a variety of reasons. However, some programs focus on serving students who have been historically excluded or more commonly referred to as underrepresented in medicine (URM), generations of their families omitted from higher opportunities in employment and education, or those with low access to academic or financial success to enhance their academic record and application to medical schools ([McDougle, 2015](#), [Andriole 2015](#)). Significantly, graduates of programs focused on the previously mentioned groups often go on to practice in underserved areas or as primary physicians ([McDougle, 2015](#), [Smitherman, 2021](#)).

The Association of American Medical Colleges (AAMC) lists 311 post-baccalaureate premedical programs on their [database](#) as of December 2022. Of these, 110 are undergraduate premed post-baccalaureate programs, and 201 are graduate programs. Of the 201 graduate programs, 44 are certificates, and 157 are master's degree programs, some of which may be classified as 'special master's programs (AAMC Post-baccalaureate Program database, 2022). SMPs are uniquely positioned to allow entry of historically excluded groups into medicine, and their numbers have increased in recent years. But do we serve the intended populations defined above? Do we really “bridge” the gap between these populations and those privileged in their access to opportunity? The physician workforce supply and anticipated projections suggest that we still fail to meet the needs of our most underserved communities without significantly increasing the representation of physicians from their communities. Gaining access is one of the many challenges that our students face, as many challenges exist after matriculation. These students have difficulty with a sense of belonging, monetary issues, and the likelihood of receiving lower scores on licensing examinations, which can significantly impact their career trajectory ([Jones, 2021](#)). Moreover, some members of underrepresented groups, such as Native American/Indigenous, have a 2-fold lower chance of finding a faculty position post-residency ([Forrest, 2022](#)).

In previous volumes of the PBP Wire, we have covered the creation, implementation, and development of pathway and bridge programs and the challenges we have faced in maintaining and strengthening them, but how do we assess these programs? Suppose the goal is to enhance these students' academic records or applications to medical schools. In that case, we can measure this by improved performance in the SMP program, successful acceptance and matriculation into medical school, strong performance in medical school, matching in choice residencies, and our students' feeling of preparation and happiness with our programs.

Some attempts have addressed whether or not we are “bridging” the gap. Johnson et al. found that while participants in SMP programs had similar MCAT scores to traditional applicants within the University of Toledo system, those in SMP programs had higher USMLE STEP 1 scores (Johnson, 2021).

...There can be many variables that could affect this result; however, a recent study by Schneid et al. exploring the Step 1 results of students attending the University of California, San Diego (UCSD) medical school that participated in the UCSD PBP, participated in any type of PBP, or took a traditional path found those that participated in the UCSD PBP program had a similar score as traditional students. Also they found that PBPM program GPA was a predictor of pre-clerkship academic performance and Step 1 performance (Schneid, 2022). Ripa et al. compared students who completed the Medical Technology Academic Enhancement Graduate Program (furthermore, SMP graduates) at a medical school in Central New York and matriculated to the same institution for medical school to their medical school peers' performance in required first-year coursework and exams. They found that SMP graduates performed on par with their non-SMP peers in many courses in the same medical school class. More so, SMP graduates with MCAT scores below the 50th percentile or who were underrepresented in medicine performed better than the controls on many measures (Ripa, 2022). While these studies point to SMP programs improving candidates' likelihood of academic success in medical school, this does not tell us about the well-being of our students. We argue that we need to assess these programs individually, as above, and as a whole, remember that the desire is to serve those previously underserved. Moreover, we also must explore the perceptions of the graduates regarding their preparedness, self-efficacy, and state of mind.

While the quantitative data may be telling and important, anecdotally, are our students happy and feeling prepared? Failure to explore our students' perceptions may result in us being unable to meet their needs apart from those that are academically based, resulting in the loss of these students from the pathway. For any of my colleagues that run such programs, we contend that we must prioritize these qualitative anecdotes when assessing for success in the same ways that we crunch the numbers.

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Deadlines cont.

The AAMC Southern Group on Educational Affairs (SGEA) 2023 annual conference will be held in-person in Nashville, TN, on March 22-25, 2023. [More information is available here.](#)

The International Association of Medical Science Educators (IAMSE) 2023 Annual Meeting will be held in Cancun, Mexico, from June 6-13, 2023. The deadline for early registration is April 1, 2023. [More information is available here.](#)

The date for the 2023 annual Association of STEMM Pathway and Bridge Programs Conference is set for October 4th and 5th, 2023. As in the first conference in 2022, the virtual meeting platform Gather will be used. More information, including abstract submission, will be announced in 2023.



Meet Our Editorial Team

Editor-in-Chief

KYEORDA KEMP (She/Her), Ph.D.

Assistant Professor, Oakland University William Beaumont School of Medicine



Assistant Editors

JAEHWA CHOI (She/Her), Ph.D.

Associate Professor, Mercer University School of Medicine



GURVINDER KAUR (She/Her), Ph.D.

Assistant Professor, Texas Tech University Health Sciences Center



BRIANNE LEWIS (She/Her), Ph.D.

Assistant Professor, Oakland University William Beaumont School of Medicine



EDGAR MEYER (He/Him), M.A.T., Ph.D.

Assistant Professor, University of Mississippi Medical Center
Assistant Director, Master of Science in Biomedical Sciences Program



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Director of Special Admissions Programs, Clinical Assistant Professor,
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