

Commission on Accreditation of Athletic Training Education

2022 CAATE /// Accreditation Conference

October 7-8, 2022 / Atlanta, Georgia



Holistic Admissions: Strategies for Increasing Student Diversity in Occupational Therapy, Physical Therapy, and Physician Assistant Studies Programs

College of Health Professions Medical University of South Carolina Charleston, South Carolina

Contributors

Speakers:

- Cristina Reyes Smith, OTD, OTR/L, Associate Professor, Occupational Therapy
- Mark Bowden, PT, PhD, Professor, Physical Therapy
- Lauren B Fogelgren, PA-C, Instructor, Physician Assistant Studies

 With contributions from Karen A. Wager, DBA, CHP Associate Dean of Student Affairs & Professor, Healthcare Leadership & Mgmt

Disclosure: Employees of the Medical University of South Carolina



Presentation at a Glance

- Overview and Rationale for Holistic Admissions
- Journey and Experience with Holistic Admissions
 - Occupational Therapy Admissions (Cristina Smith)
 - Physical Therapy Admissions (Mark Bowden)
 - Physician Assistant Studies Admissions (Lauren Fogelgren)
- Where We Are Today and Next Steps



The Burning Platform: The Why

Multiple landmark reports have called for increasing diversity among health professions

- Reduce health disparities
- Increase access and quality of care
- Ensure workforce reflects communities served

Universities recognized need for new and innovative strategies

Recognition that recruitment, retention and inclusion are all important





Country Comparison of Health Outcomes (2016 est.)

Healthcare Expenditures

#1 U.S.A.

#2 Marshall Islands

#3 Tuvalu

#4 Maldives

#5 Micronesia

Adapted from Central Intelligence Agency (n.d.a)

Life Expectancy at Birth

#1 Monaco

#2 Singapore

#3 Japan

#4 Macau

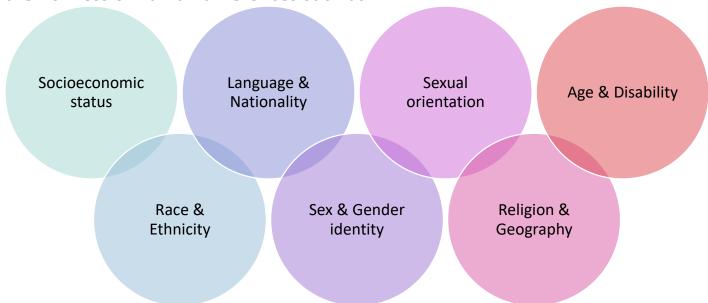
#46 U.S.A.

Adapted from Central Intelligence Agency (n.d.b)



MUSC Definition of Diversity—

the richness of human differences such as...



(Diagram adapted from MUSC Diversity and Inclusion, 2014)



U.S. Race and Hispanic Origin

61.3% White alone, not Hispanic or Latino

17.8% Hispanic or Latino

13.3% Black or African American alone

5.7% Asian alone

1.3% American Indian and Alaska Native alone

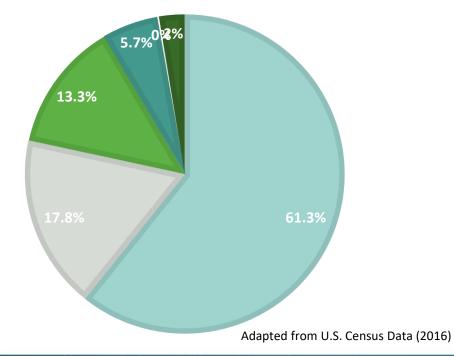
0.2% Native Hawaiian and Other Pacific Islander alone

2.6% Two or more races

UNITED STATES DEMOGRAPHICS



■ Native Hawaiian/Pacific Islander ■ Two or more races





S.C. Race and Hispanic Origin

63.9% White alone, not Hispanic or Latino

27.5% African American alone

5.5% Hispanic or Latino

1.6% Asian alone

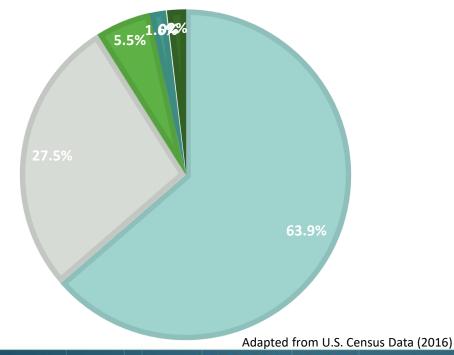
0.5% American Indian and Alaska Native alone

0.1% Native Hawaiian and Other Pacific Islander alone

1.8% Two or more races

SOUTH CAROLINA DEMOGRAPHICS





2022 CAATE ///ACCEPTAGE Accreditation Conference

National Calls to Action

Cultural Respect National Institutes of Health, 2016 Cross-Cultural Education Institute of Medicine, 2002

Cultural Competency Training
Association of American Medical Colleges, 2009

Cultural and Linguistic Competency
US DHHS Office of Minority Health, 2016

Culture, Language, and Health Literacy
US DHHS Health Resources and Services Administration, 2016





Diversity and Inclusion is everyone's responsibility.

--Michael de Arellano, PhD, Senior Associate Dean for Diversity, MUSC College of Medicine



"There just weren't any faculty of color actually teaching us."
--Graduating student on his experience

"I didn't know that {this university} would want someone like me." --Prospective Student during recruitment effort

"I've just never been somewhere that has been so "not diverse."
--Current Student on her experience as a new student

"I want to go somewhere that they are taking D & I seriously and not just "talking the talk."
--Faculty Member on his reasons for leaving



Defining Holistic Admissions

American Association of Medical Colleges

The medical profession has implemented a number of national strategic initiatives including:

- ➤ holistic admissions processes (AAMC, 2017)
- **▶** accountability and data reporting on diversity-related initiatives for ongoing academic accreditation (Liaison Committee on Medical Education, 2016);
- initiatives related to recommendations developed by the USDHHS Office of Minority Health (2013) as related to National Culturally and Linguistically Appropriate Services (CLAS) Standards 3: "Recruit, Promote, and Support a Diverse Governance, Leadership, and Workforce."



American Association of Medical Colleges

Calls for enhanced workforce diversity from the Institute of Medicine "Unequal Treatment" Report series of 1999 (IOM, 2002)

Sullivan Commission on Diversity in the Healthcare Workforce (2004):

- Admissions
- ☐ Pipeline Support/Expansion
- ☐ Retention/Advancement
- ☐ Curriculum Content
- ☐ Training Environment
- ☐ Resource Commitment/Policy Advocacy



Prospective Student to Workforce

Student Recruitment

Student Admissions Student Retention

Student Graduation







Traditional Admissions

Typically do not consider:

- having a job throughout college
- military service
- having a family
- socioeconomic factors
- other life factors





Prerequisite Courses

Reference Letters

Observation/Volunteer Hours



Defining Holistic Admissions

American Association of Medical Colleges (AAMC) (2017): "...a flexible, individualized way of assessing an applicant's capabilities by which balanced consideration is given to experiences, attributes, and academic metrics and, when considered in combination, how the individual might contribute value as a medical student and physician."



Four Core Principles (AAMC, 2017)

- 1. Selection criteria are **broad-based**, clearly **linked to school mission and goals**, and promote **diversity as an essential element** to achieving institutional excellence.
- 2. A **balance** of experiences, attributes, and academic metrics (EAM) is used to assess applicants to create a **diverse interview**, **selection pool**, **and student body**;
- Applied equitably, grounded in data and evidence to support selection criteria
- 3. Admission staff and committee members consider **how each applicant may contribute** to the medical school learning environment and practice of medicine
- Weighing and balancing the range of criteria needed achieve the desired outcomes



Four Core Principles (AAMC, 2017)

- 4. Race and ethnicity may be considered as factors when making admission-related decisions **only** when:
- narrowly tailored to achieve mission-related educational interests and goals associated with student diversity
- considered as part of a broader mix of factors (I.e. personal attributes, experiential factors, and demographics)
- other considerations under federal law (and where permitted by state law)



Examples of Desirable Traits and Applicant Data Points

Intellectual ability	Academic record		
Commitment to service	History of engagement		
Cultural sensitivity	Past behavior		
Empathy	Essay, letters of reference		
Capacity for growth	Adversities overcome		
Emotional resilience	Distance traveled*		
Strength of character	Letters of reference, testimonials		
Interpersonal skills	Interview, letters of reference		
Curiosity and engagement	• Life choices		

"Distance traveled" = cumulative life experiences - how far one has come in life





Trends in Holistic Admissions

Academic programs have been transitioning including:

- Interprofessional (Brotherton et al., 2021)
- Medicine (Kerrigan et al., 2016; Mahon, Henderson, & Kirch, 2013)
- Physician assistant (DiBaise, Salisbury, Hertelendy, & Muma, 2015; Felix, Laird, Ennulat, Donkers, Garrubba, Hawkins, & Hertweck, 2012)
- Nursing (Glazer, Clark, Bankston, Danek, Fair, Michaels, 2016; Scott & Zerwic, 2015)
- Dentistry (Mertz, Wides, & Calvo, 2016)
- Capers et al., 2018); Cloutier et al., 2021); Kilburn et al., 2019; Price & Grant-Mills,
 2010;





Holistic Admissions Policies, Processes, and Outcomes

Occupational Therapy

MUSC OTD Holistic Admissions Transition

Holistic Review—Started in 2018:

- Incorporated into OTD Academic Program Strategic Plan
 - Reflected College and University diversity initiatives
- Developed a Holistic Admissions Coordination Committee
- Discussed rationale/plan with OT Faculty and Staff over series of meetings
- Established earlier application deadline in November
- Revised admissions materials to reflect changes



Admissions Cycle **2021-2022**

60 New Students

- Incoming OT Class based on interviews
- Some selected for Alternate List

Appx. 120 Interviewed

- Day 1 & Day 2, 60 candidates each
- Morning or Afternoon Interviews
- 3 per applicant-2 Faculty, 1 Clinician

300+ Applicants: GRE, GPA, Profile Points, Profile Summary Form, Statement on diversity/uniqueness

- Files reviewed individually to determine interviews
- Index score for rankings
- Some exclusion criteria



MUSC OTD Holistic Admissions Transition

Initiated two Interview Days (60 applicants per day; total of 120 applicants) including:

- Panels with current faculty and students
- Campus Tour with OT Student Ambassadors
- Online interviews when travel presented an undue burden

Interview Process:

- In each 15-minute session the candidate received 5 of 15 questions:
 - Emotional intelligence, communication, service, critical thinking, & "added value"
 - Scoring for questions was 1=fair, 2=good and 3=outstanding, except for the question "added value" which was scored 1=fair, 3=good, and 5=outstanding



Occupational Therapy Admissions: Sample Questions

Emotional intelligence:

• Please describe what motivates you. How has that impacted your future goals?

Communication skills:

• Describe a time when you presented your thoughts successfully to a person or group. What challenges did you have to overcome?

Service:

• Give me an example of a time when you went above and beyond the call to serve others.

Critical Thinking:

• Tell me about a complex problem you have solved. What was the process you used?

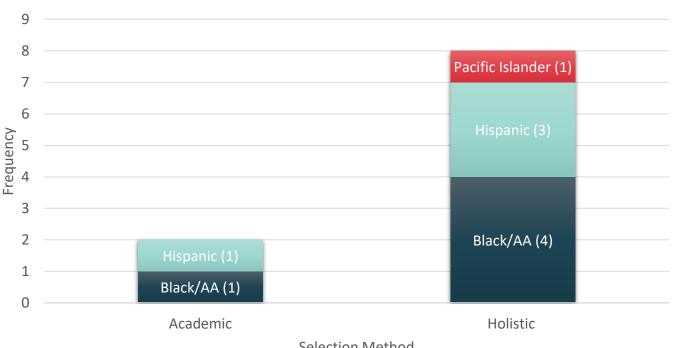
Added value:

• What are some of the unique life experiences you would bring to the occupational therapy program?



Results

Academic vs Holistic Selection Year 1



Occupational Therapy Admissions: Trends 2014-

Entering Class	Completed Applications	URM Completed Applications	Total Matriculants	URM Matriculants	% URM Matriculants		
2014	386	34	43	2	4.8%		
2015	449	55	46	6	13.3%		
2016	392	37	46	3	7.1%		
2017	347	32	46	4	9.5%		
2018*	373	35	48	7	15.9%		
2019	224	16	49	4	8.3%		
2020	221	30	52	7	14.6%		
2021	250	32	54	6	11%		
2022 (Pending)	223	28	59	12	20%		
2023 (To Date)	130	26	?	?	?		

National trends for the OT profession were slightly lower with an average enrollment of 12% under-represented minorities in Master's degree programs and 8% under-represented minorities in OTD programs in 2018 according to the AOTA 2018-2019 Annual Data Report.

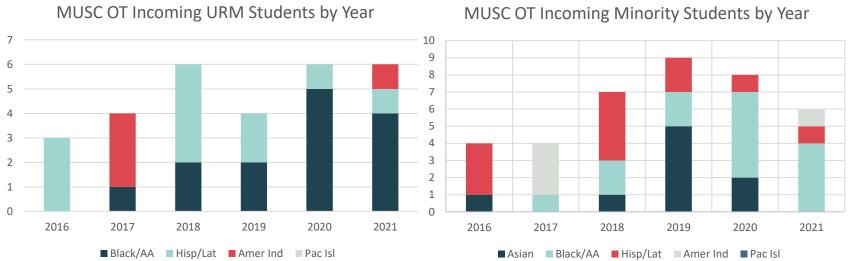
URM = Hispanic, African American, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and Asian students who are either Filipino, Vietnamese, or SE Asian Non-Vietnamese These numbers exclude international and undeclared race.

*Year implemented holistic admissions practices





MUSC OT Trends in Holistic Admissions



URM = Hispanic, African American, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and Asian students who are either Filipino, Vietnamese, or SE Asian Non-Vietnamese

These numbers exclude international and undeclared race.



Recent Admissions Initiatives

- ► Increased percentage of complete applications in 2019 from 75% to 95%
- ➤ Transitioned to OTCAS in July 2020
- Obtained HRSA Scholarships for Disadvantaged Students grant
 - >\$3.25 million 2020-2025
- Interprofessional manuscript on holistic admissions published
- ➤OT manuscript on holistic admissions in progress
- ➤ Presented at the AOTA Academic Education Special Interest Section on Holistic Admissions Feb. 2020
- ➤ Presented at the World Federation of Occupational Therapy Congress on "Data-Driven DEI: Student Admissions, Recruitment, and Retention" Aug. 2022



Ongoing Challenges

- ➤ Pool of in-state applicants has decreased over the years (competition, etc.)
 - ➤ Developing relationships with undergrad public and HBCU programs
 - Developing relationships with elementary, middle, and high schools
 - > HRSA-MUSC OT Scholarship program, AHEC Scholars Program, OTD Advisory Board
- ➤ Potential Interviewer Bias
 - Monitoring patterns over first few years
 - ➤ Increased training for interviewers (faculty, clinicians, PhD students, etc.)
- Limitations for applicants entering the applicant pool related to GRE
 - ➤ GRE no longer required as of 2021-2022 admissions cycle
 - Decreased amount of shadowing hours required to 15 (allow online continuing ed)



Occupational Therapy Admissions: Lessons Learned

- Transition to doctorate in 2019 did not adversely impact applicant pool.
- Under-represented minorities were over-represented in the incomplete application pool resulting in a lower percentage in the interview pool.
 - Initiatives to improve number of completed applications implemented to increase access to info resulting in 95% completed in 2020.
- Transition to the Occupational Therapy Centralized Application System (OTCAS) in 2020-2021 admissions cycle.
 - Increased out of state pool but may have decreased in-state pool.
- HRSA Scholarships for Students from Disadvantaged Backgrounds further helped to increase diversity of the applicant pool since 2020-2021.
- Developing pipeline programs, retention initiatives, and health equity in the curriculum have been important additional factors.





Holistic Admissions Policies, Processes, and Outcomes

Physical Therapy

Physical Therapy Admissions

Holistic admissions were adopted in 2017 to meet our Guiding Philosophy for Admissions:

Guiding Philosophy. The goal of the holistic review process is to build a DPT class that includes a diversity of individual characteristics and backgrounds, preparing students for the diversity they will experience in their practice. We intend for the admissions process to promote a diverse learning experience for students in the program, and to create a class of graduates that will as a group achieve excellence across the many domains of physical therapy. Our consideration of diversity will include racial and ethnic background to increase the probability of building a class that reflects the population of South Carolina but will also include several other factors that will contribute to a class with a wide variety of life experiences.



Elements of Holistic Admissions

- **Diversity**: URM, socioeconomic diversity (eg., 1st in family to attend college), from medically underserved areas
- Artistic or athletic achievement in college
- **Cultural experience** with underserved populations/volunteerism
- **Exposure to profession and patients** with a variety of diagnoses
- Leadership
- Military service
- Overcoming adversity
- Previous applicant
- Recommendations
- Research
- Unique academic background (college major in an atypical area)
- Work experience (service or healthcare related of at least 3 months)



Holistic Rating

Α	В	С	D	F
Exceeds	Somewhat exceeds	Meets expectations	Somewhat meets	Does not meet
expectations	expectations		expectations	expectations

- **A: Outstanding.** The applicant's combined holistic attributes cause them to stand out compared to other applicants. The applicant's unique characteristics are likely to make them an important contributor to a diverse class. Approximately **10%** of the reviewed applicants should receive an A.
- **B: Above Average.** The applicant has notably more positive holistic attributes than the median reviewed applicant. Approximately 30% of the reviewed applicants should receive a B.
- **C: Average.** The applicant has achieved some of the cited holistic criteria, but not notably more than the median reviewed applicant. Approximately 50% of the reviewed applicants should receive a C.
- **D: Below Average.** The applicant has met the minimum required criteria for program admission but has not gone above this minimum standard in terms of the holistic criteria. Approximately **10%** of the reviewed applicants should receive a D.
- **F: Poor.** The application has characteristics that raise major concerns, and it appears unlikely that the applicant would be a good fit for the targeted class. An unfavorable letter of recommendation could serve as justification for a score of F. Scores of F should be rare.





Scoring Examples

<u>Scoring Examples</u>. It is not possible to provide a strict formula for calculating a holistic score based on the highly variable backgrounds and experiences of applicants. Instead, we provide highlights from nine hypothetical applications. One optional heuristic that reviewers may find useful is as follows:

- A score of A could be the result of:
 - Notable examples in 2 of the relatively rare holistic admissions categories (i.e. varsity athletics or national-level arts; member of an under-represented minority population; leadership in a national or state-wide organization; military service; overcoming significant health or economic barriers; unique academic background; previous career in a different field)
 - Notable examples in 4 of the more commonly observed holistic admissions categories (i.e. club sport athlete; extensive outreach or cultural experiences; substantially more than 100 hours of clinical experience; local organization leadership; improved application from previous year; excellent recommendations; research participation; entry-level work experience)
 - Or some combination thereof
- A score of B could be the result of:
 - Notable example in 1 of the relatively rare holistic categories listed above
 - o Notable examples in 2-3 of the more commonly observed holistic categories listed above



Examples of Holistic "A" scores

Score	Applicant	Notable holistic attributes
Α	1	 Division I varsity volleyball athlete Worked for 5 years as an elementary school teacher Excellent letters of recommendation, relative to other applications Over 200 clinical observation hours
Α	2	 Vice president of a student-run state-wide organization for public health majors African American Participated in a mission trip to Central America
А	3	 Participated in marching band for an SEC school Over 300 clinical observation hours in a wide range of clinical settings Presented undergraduate research at a university-wide poster session Worked for 1 year as a PT aide Was treasurer of a sorority



Examples of other Holistic scores

В	4	o Served in the Navy
В	5	 Was in a car accident as a junior in college, corresponding to their semester with the lowest GPA Previously applied to the program; has improved their GRE scores and improved their Science GPA by retaking Chemistry at a local community college Has worked for 3 years as a nanny for a family with special needs, including providing swimming lessons
В	6	 Was on the club soccer team for 4 years in college Speaks Spanish fluently Worked as a research assistant for 2 summers on a professor's research projects
С	7	 Completed 100 observation hours at a sports medicine clinic Was a member of a fraternity in college, which did volunteer work with roadside cleaning Was on the tennis team in high school Emphasized the social aspects of college too much freshman year, but has had a steadily increasing semester GPA since then
D	8	 Completed 50 observation hours at a single site No notable examples of the holistic attributes listed on the next page
Е	9	 A reference letter that does not recommend the applicant for admission based on provided examples of immaturity and unprofessionalism

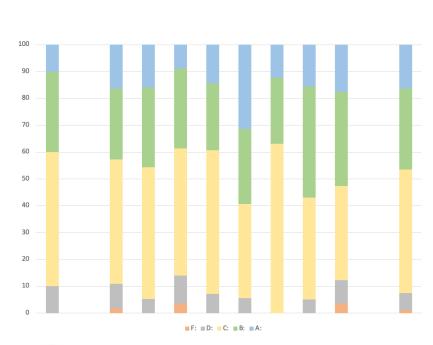
Academic Criteria

- An "Index Score" is created by OEM to summarize academic achievement
- A regression analysis is completed to predict first-time pass rate on the NPTE

 Applicants are placed into one of four tiers (actual index score is blinded to admissions committee so all in the same tier are treated equally)

Tier#	Index Score Range	First-time pass rate
1	> 85	100%
2	80-85	96%
3	75-80	87%
4	<75	79%

Reliability?



Expectations : A=10%; B=30%; C=509

		Score from more negative reviewer				r
		А	В	С	D	F
	А	4	7	5		
Score from more positive reviewer	В		7	11		
	С			15	2	
	D				1	1
	F					

- Reviewers agreed on 27 applicants (51% of the time)
- Reviewers differed by one holistic level for 21 applicants (40% of the time)
- Reviewers differed by two holistic levels for 5 applicants (9% of the time)



2022 Review Results

Combined Tiers and Holistic Scores

Number of applicants per category

	Tier 1	Tier 2	Tier 3	Tier 4
Α	30	15	14	11
В	35	28	31	23
С	45	52	51	39
D	5	3	6	8
F	2	1	0	2

Note: in the case of a dual-scoring discrepancy, the higher holistic score was assigned.

Percentage of applicants offered admission

	Tier 1	Tier 2	Tier 3	Tier 4
Α	100%	100%	100%	27%
В	100%	100%	23%	9%
С	51%	0%	0%	0%
D	0%	0%	0%	0%
F	0%	0%	N/A	0%





PT Admissions: Trends 2014-2021

Entering Class	Completed Applications	URM Completed Applications	Total Matriculants	URM Matriculants	% URM Matriculants
2014	417	29	64	4	6.3%
2015	373	27	64	5	7.8%
2016	407	36	64	3	4.7%
2017*	753	78	64	12	18.8%
2018	601	73	64	11	17.2%
2019	551	60	68	5	7.4%
2020	447	47	68	10	14.7%
2021	440	54	68	10	14.7%
2022	520	66	68	9	13.2%

URM = Hispanic, African American, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and Asian students who are either Filipino, Vietnamese, or SE Asian Non-Vietnamese
These numbers exclude international and undeclared race.



Additional DEI Resources

Pipeline Programs (COAST/PEP): Creating Opportunity & Academic Success for Tomorrow's Therapists/PT Exploration Program.

https://chp.musc.edu/academics/physical-therapy/diversity-pipeline

Dedicated DEI Adjunct Faculty Member: Michael Isreal, DPT (MUSC class of 2017)



CARES Pro Bono Therapy Clinic: https://muschealth.org/medical-services/cares-therapy/contact

Planned Hybrid/Online Educational Pathway





Holistic Admissions Policies, Processes, and Outcomes

Physician Assistant Studies



Physician Assistant Studies Admissions

Holistic admissions adopted in 2017 to be consistent with our goal:

 "Enroll a richly diverse student body with varied experiences, attributes, sensitivities and academic backgrounds"

Admission process considering experiences, attributes, and academic metrics

- Experiences (e.g., clinical shadowing, community service, intercultural, research)
- Attributes (e.g., leadership, motivation, persistence, empathy)
- Diversity (rural hometown, first generation college, URM in medicine, single parent)
- Academic metrics (e.g. Cumulative GPA, Science GPA)

The PAS admission process is modeled on the MUSC College of Medicine's process



Physician Assistant Accreditation

Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA)

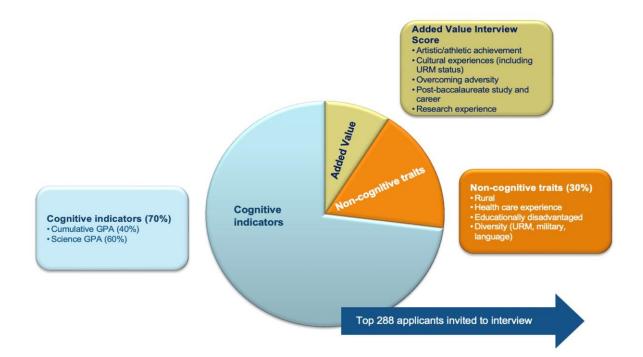
- **A3.13**: The program *must* define, publish, consistently apply and make readily available to prospective student, policies and procedures to include:
 - A) admission and enrollment practices that favor specified individuals or groups (if applicable)
 - B) admission requirements regarding prior education or work experience
 - C) practices for awarding or granting advanced placement
 - D) any required academic standards for enrollment, and
 - E) any required technical standards for enrollment
- A 3.14: The program *must* make student admission decisions in accordance with clearly defined and *published* practices of the institution or program

Physician Assistant Studies Accreditation

Demonstrating Compliance:

- Annual website updates
- All admissions material consistent
- Accreditation applications includes direct hyperlinks to find information quickly

Selection Criteria-Initial Review





Interview Questions

Adversity and Stress Management

• Tell me about a time you faced unrealistic goals or expectations. How did you handle it?

Diversity, Equity, and Inclusion

 How would you handle a situation where a colleague was being culturally insensitive, sexist, racist or homophobic?

Professionalism and Behavior

Tell me about the hardest stand, ethically or morally, you have ever had to take.

Ethics and Real-Life Scenarios

 You inadvertently administer the wrong medication to a patient being treated in the hospital. Although the situation is not life threatening, how would you respond to the situation?



Interview Questions

Goal of Interview

- Communication
- Motivation
- Knowledge of PA profession
- Empathy
- Appreciation of diversity
- Stress tolerance
- Integrity
- Tenacity
- Continuous learning and growth

Final Applicant Selection

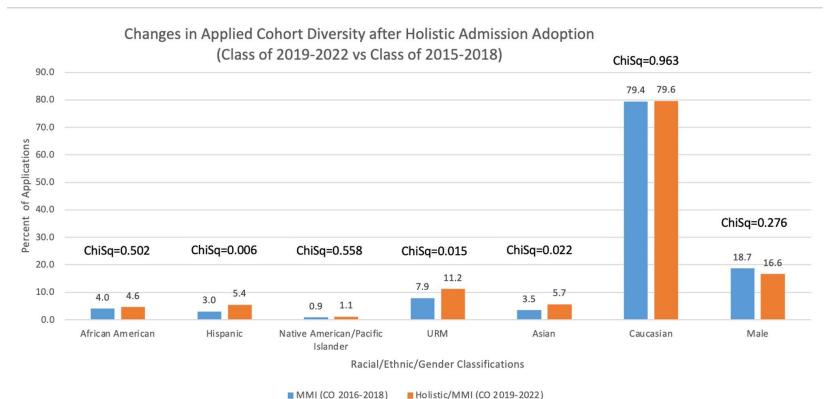
Rank order based on interview score + added value interview score c/o 2016-2023 used MMI-Standardized interview process includes 5 stations:

- 1.One-on-one scripted questions
- 2.One-on-one scripted questions
- 3. Acted case scenario
- 4. Group discussion
- 5. Writing communication

c/o 2024 utilized only one-on-one interviews

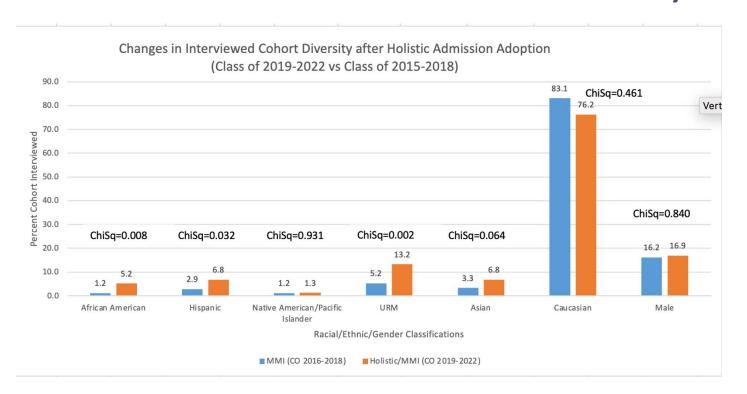


PAS Application Diversity



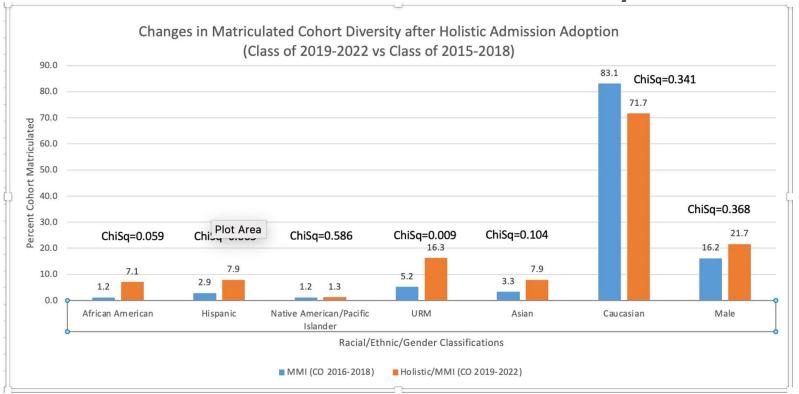


PAS Interviewed Cohort Diversity





PAS Matriculant Diversity



Changes Since 2020

No longer utilizing MMI (Multiple Mini Interview)

One-on-one interviews

2021-2022 did not use holistic admissions approach

Admissions Coordinator change in 2021

2021-2022 PACAT new requirement

Implications: Significant decrease in overall and URM applicants



PA-CAT-Applicant Barrier to Success

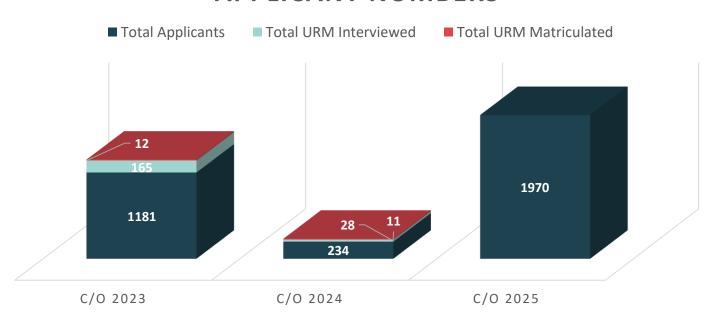
Physician Assistant College Admissions Test

- New standardized PA entrance exam
- Tests basic sciences, reflective of undergraduate science courses
- Difficult exam
- No resources for studying (review courses, review books)
- Expense-\$228
- In 2021, MUSC only 1 of 9 programs in the country making it a requirement
- Solution to non-existent problem?



PA-CAT Implications on Applicants

APPLICANT NUMBERS





Class Demographics

Matriculated	Class of 2021	Class of 2022	Class of 2023	Class of 2024
South Carolina residents	50%	34%	50%	50%
Out-of-state residents	50%	66%	50%	50%
1st generation college student	15%	8%	15%	14%
Historically black college and university graduates	3%	1%	3%	0%
Underrepresented minority*	15.25%	20%	12.63%	13.40%

Lessons Learned and Beyond

Process may or may not have improved overall PAS class diversity, but does increase the amount of URM applicants interviewed

Consider barriers to applicants for increasing diversity 2022-2023 application cycle-no standardized testing requirement

1970 applications

2022-2023- reinstituting holistic admissions practices Make decisions in line with accreditation body





Article Citation:

Brotherton, S., Smith, C.R., Boissonneault, G., Wager, K. A., Velozo, C., & de Arellano, M. (2021). Holistic admissions: Strategies for increasing student diversity in occupational therapy, physical therapy, and physician assistant studies programs. *Journal of Allied Health, 50*, e91-e97. Retrieved from: https://www.ingentaconnect.com/content/asahp/ian/2021/00000050/00000003/art00014#trendmd-suggestions

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