

2023: The Current State of AOA elections at Geisel

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Summary

- In the 2020-2021 academic year, Geisel made **major modifications to the AOA election processes to address potential for bias and ensure the selection and nomination process is fair and equitable.**
- Changes to Academic Eligibility
 - **Using pre-clinical academic performance** to recognize the full extent of a student's academic ability and avoid perpetuating biases of only using clerkship grades. Clerkship performance is weighted slightly more heavily than pre-clinical performance as we feel it more closely reflects the characteristics of being a physician and the practice of medicine.
 - **Expanded eligibility pool** by changing our academic threshold from the top 25% to the top 40% of the class to ensure that a broad group of academically successful students had the opportunity to be selected for AOA.
- Changes to Candidate Application and Selection
 - **Blinded application review** to decrease the possibility of unconscious biases impacting the selection process.
 - Each application is reviewed by two AOA Election Committee members and **scored independently using a standard scoring rubric.** The AOA Councilor independently scores all applications and then reviews team scoring to ensure consistency in application of the rubric within and across teams.
- Outcomes of Geisel AOA Elections
 - Since 2021, the **number of different ethnicities represented in the AOA class has increased** and come closer to the ethnic diversity in the associated graduating class.
 - Since 2021, the percentage of students elected to AOA identifying as **Asian** was equal to the percent of the total graduating class identifying as Asian in 3 out of 4 years, and less in 1 year.
 - Since 2021, the percentage of students elected to AOA identifying as **Hispanic or Latino** were equally represented 2 out of 4 years and underrepresented 2 years. Prior to 2021, they had similar results, however the discrepancies were larger.
 - Since 2021, the percentage of students elected to AOA identifying as **Black or African American** were underrepresented one year, equally represented one year, and overrepresented two years. Prior to 2021, they were underrepresented 3 out of 4 years.
 - Since 2021, the percentage of students elected to AOA identifying as **White** were equally represented 2 out of 4 years, and over-represented 2 out of 4 years. Prior to 2021, they were overrepresented 4 out of 4 years. The frequency and extent of over-representation have diminished.
- **We feel that the changes made in eligibility criteria and the election process have improved our holistic review of academic excellence and increased diversity in our AOA student membership,** representative of the excellence that exists within the entire student body.
- In light of these improvements, **Geisel remains committed to continual review and assess our processes to mitigate bias and ensure equity,** aligning with the high standards of our school and AOA.

Alpha Omega Alpha (AOA) is the only National Medical Honor Society in the United States, and membership recognizes individuals who have demonstrated excellence in several areas, among them professionalism, academic and community leadership, education, clinical care, research, humanism, and serving the community. Each medical school establishes its own eligibility and selection criteria for AOA Membership, with AOA values at the core. At the Geisel School of Medicine at Dartmouth, students are elected in their final year of medical school.

In the 2020-2021 academic year, our chapter made major modifications to the AOA election processes to address the potential for bias and ensure that Geisel's selection and nomination process is fair and equitable. The modifications were based on best practices put forth by the National AOA organization and modeled after several other institutions (1).

Part I: Establishing academic eligibility

AOA distinguishes itself from other awards of achievement conferred at Geisel because academic performance is a key factor in selection. Historically, eligibility for AOA was determined based on both Pre-clinical and Clerkship grades with the top 25% of the class being eligible for AOA. In 2009, the pre-clinical curriculum was changed to Pass/Fail grading. While we acknowledge the intended benefits of this change for student wellness, this presented a challenge for determining academic eligibility for AOA, which subsequently was based solely on the number of Honors grades earned in the 6 core Clerkships. We decided that only using clerkship grades does not recognize the full extent of a student's academic ability and can perpetuate biases. Clerkship grades are partially subjective, given they are in large part based on individual evaluations. The potential for unconscious bias is inherent with this type of grading, and studies have shown that students from underrepresented backgrounds in medicine (URiM) may receive Honors grades less frequently than non-URiM students (2,3). To ensure a more balanced and equitable process, we decided to include pre-clinical academic performance in the determination of academic eligibility. This broader assessment of academic performance over a longer time interval was thought to be more equitable for all types of learners who come from a variety of different backgrounds. Accordingly, while final pre-clinical grades are Pass/Fail, the numerical grades earned in individual courses contribute to determining academic eligibility for AOA (in keeping with the [student handbook](#)). Clerkship performance is weighted slightly more heavily than pre-clinical performance, as we feel it more closely reflects the characteristics of being a physician and the practice of medicine.

We also consider nominations from Phase 1 and 2 course and clerkship directors. Those academic directors are asked to nominate students using the following criteria: *Academic excellence as defined by a combination of performance in assessments, didactics and small groups, demonstration of intellectual curiosity, collegiality, teamwork, academic integrity, and peer assistance and support.* Through this robust process, students who have demonstrated academic excellence but who might not have excelled in a single domain would be considered for nomination to AOA.

At the same time, we chose to expand our eligible student pool by changing our academic threshold from the top 25% to the top 40% of the class. Since we have no class ranking at Geisel and determining the top of the class is an inexact process, this expansion was deliberately chosen to ensure that a broad group of academically successful students had the opportunity to be selected for AOA.

The Geisel AOA Councilor cross references the above data to generate a list of the 40% of students in the class with the highest academic performance. This list of students is submitted to the Associate Dean of Student Affairs and Chair of the Professional Standards & Conduct Board to identify any validated professionalism issues. Any validated professionalism issues negate AOA eligibility regardless of academic performance, as adherence to professional standards is a core element of excellence in AOA.

Part II: Candidate Application and Selection

Those determined to be academically eligible for AOA are invited to complete a standard application to assess their fulfillment of other areas of excellence. Students can choose up to 9 activities that have been the most meaningful and impactful to them to include in the application.

All applications are de-identified by the AOA Administrative Assistant, and neither the AOA Councilor nor the Election Committee members know the students' identities. Previously, names and pictures were included with applications; Geisel moved to blinded application review to decrease the possibility of unconscious biases impacting the selection process.

Each application is then reviewed by two AOA Election Committee members and scored independently using a standard scoring rubric. Prior to 2021, no standard scoring rubric was used which introduced unnecessary discrepancies in evaluation criteria. With the current process, the final score for each applicant is then determined by subsequent discussion & consensus of the two committee members. The AOA Councilor independently scores all applications and then reviews team scoring to ensure consistency in application of the rubric within and across teams. Any discrepancies are sent to an additional committee member for blind adjudication. The final list of selected students is based on scores from the application. Approximately 20% of the Geisel graduating class is selected each year.

Part III: Outcomes of Geisel AOA elections

Given the changes made by the AOA Committee to address unconscious biases that disproportionately affect URiM students, we began to closely track diversity-related data for the AOA classes. We aim to use this data to ensure that the changes in processes since 2021, including expanded eligibility criteria, blinded application review, and a standard scoring rubric,

are addressing our concerns regarding bias in grading and AOA selection. Geisel is committed to ensuring equity and diversity in our support of students from all backgrounds and lived experiences, and to ensuring that our assessment of achievement and academic success are accordingly equitable and holistic. While natural variation in the AOA class composition is expected from year to year, tracking this data will allow us to differentiate between natural variation and trends that may indicate inequity with our processes.

Gender

Students identifying as female have been slightly over-represented in AOA since 2017. We did not observe significant changes in gender representation following new method of election in 2021 (Table 1).

Table 1. Gender in AOA class vs. graduating class

	2021-2024		2017-2020	
	New Election Process		Old Election Process	
	Elected to AOA # (%)	Total Class # (%)	Elected to AOA # (%)	Total Class # (%)
Female	47 (62.6%)	209 (56.9%)	36 (63%)	203 (60.2%)
Male	28 (37.3%)	159 (43.3%)	21 (36.8%)	134 (39.8%)

Ethnicity

We began looking closely at the ethnicity data of students selected for AOA compared to all students in the associated graduating class. It is important to note that Geisel relies on self-identification of ethnicity from students, and not all students choose to include their specific information. As a result, the ethnicity data provided is incomplete; from 2021-2024, 17.3% of all Geisel students were listed as “no response, non-resident alien, two or more races, or unknown race”. This relatively large proportion of unknown ethnicities limits our ability to analyze the data and draw conclusions.

One measure of diversity is the number of different ethnicities represented in a group. Since 2021, the number of different ethnicities represented in the AOA class has increased and come closer to the ethnic diversity in the associated graduating class (Table 2). While this suggests that the modifications in Geisel’s AOA selection process have had an impact on potential bias, resulting in a broader diversity within the AOA class, we continue to observe a small discrepancy.

Table 2. Variety of ethnicities in AOA class vs. graduating class

	Method of AOA election	Number of different ethnicities in the AOA class	Number of different ethnicities in the graduating class
Prior to 2021	Old	3-7 (mean 4)	10-12 (mean 11)
2021-2024	New	4-7 (mean 5.5)	8-10 (mean 8.3)

We also compared the percentage of the AOA class vs the percentage of the total graduating class identifying in different ethnic groups to determine if certain groups were underrepresented or overrepresented in AOA. Looking at individual years of data is of limited statistical significance, given the small class size and small size of AOA membership. A difference in 1 student changes values by as much as 5%, so while the tracking and trends from year to year are important, we felt it was likely more accurate and meaningful to analyze election results comparing the old method of election vs the new. Table 3 displays the cumulative data from 2017-2020 and 2021-2024.

Table 3. Four-year aggregate data for the ethnic make-up of the AOA class vs total Geisel class.

	2021-2024		2017-2020	
	New Election Process		Old Election Process	
Self Identified Ethnicity	Elected to AOA # (%)	Total Class # (%)	Elected to AOA # (%)	Total Class # (%)
Native American or Alaskan Native	0	5 (1.4%)	0	3 (0.9%)
Asian	11 (14.6%)	60 (16.3%)	7 (12.2%)	65 (19.3%)
Asian, Non-Resident Alien	0	1 (0.2%)	4 (7.0%)	14 (4.2%)
Black or African American	5 (6.7%)	17 (4.6%)	1 (1.8%)	24 (7.1%)
Black, Non-Resident Alien	0	0	0	4 (1.2%)
Hispanic or Latino	4 (5.3%)	40 (10.9%)	3 (5.3%)	45 (13.4%)
Hispanic, Non-Resident Alien	0	0	0	1 (0.3%)
Native Hawaiian, Pacific Islander	0	0	0	1 (0.3%)
No Response, Non-Resident Alien	1 (1.3%)	3 (0.8%)	1 (1.8%)	5 (1.5%)
Other, Non-Resident Alien	7 (9.3%)	26 (7%)	0	2 (0.6%)
Two or more races	3 (4.0%)	17 (4.6%)	2 (3.5%)	12 (3.6%)
Unknown Race	2 (2.7%)	26 (7.0%)	2 (3.5%)	14 (4.2%)
Unknown, Non-Resident Alien	0	0	0	3 (0.9%)
White	42 (56.0%)	164 (44.7%)	36 (63.2%)	142 (42%)
White, Non-Resident Alien	0	1 (0.2%)	1 (1.8%)	3 (0.9%)
Total Students	75	367	57	337

Looking at data for the four years from 2021 through 2024:

- *Students identifying as Asian:* the percentage elected to AOA was equal to the percent of the total graduating class identifying as Asian in 3 out of 4 years, and less in 1 year.
- *Students identifying as Hispanic or Latino:* were equally represented 2 out of 4 years, and underrepresented 2 years. Prior to 2021, they had similar results (underrepresented 2 out of 4 years), however the discrepancies were larger.
- *Students identifying as Black or African American:* were underrepresented one year, equally represented one year, and overrepresented two years. Prior to 2021, they were underrepresented 3 out of 4 years.
- *Students identifying as White:* were equally represented 2 out of 4 years, and overrepresented 2 out of 4 years. Prior to 2021, they were overrepresented 4 out of 4 years. The frequency and extent of over-representation have diminished (mean difference in % class vs % AOA was 22% and is now 11%).

Anomalies in certain years are unexpected and difficult to explain. As diversity data is tracked annually, it will be important to look for trends and investigate the causes of any trends that are revealed. However, trends cannot easily be attributed to bias in our election process, given the 100% blinded review of applications. We have carefully reviewed the AOA student application form and the scoring rubric, looking for sources of bias with the assistance of Lisa McBride, PhD, Associate Geisel Dean for Diversity, Equity and Inclusion. It has been postulated that White students (who may be from a higher socio-economic background, or less likely to be first generation students) are more engaged in research years, dual degrees, or have professional connections that would provide them opportunities to engage in activities/projects that are more valued by the AOA election committee and engage in these activities earlier in medical school. The rubric's weighting is based on length and depth of involvement in an activity, to avoid bias in the perceived value of the activity itself (for example, a first author manuscript published in a peer reviewed journal is weighted equally with being a full voting member of the Geisel admissions committee or membership on the hospital or regional ethics committee). It was recognized that students who split years or obtained dual degrees were significantly more likely to be elected to AOA, given the additional time taken to pursue extra-curriculars. Since 2021, a weighting factor has been applied to these scores to correct for the additional time, which has corrected this discrepancy.

Part IV: Future directions

Improve data collection: We hope to obtain ethnicity data from a higher proportion of Geisel students to ensure the data we calculate is as accurate and precise as possible. Even 1 or 2 students identifying as 'unknown or no response' - could significantly change our election statistics.

Broaden diversity data collected: One factor that may warrant future investigation is an analysis of the applicant pool – how does the ethnic make-up of the students *invited to apply* to AOA

compare with the class as a whole. Ideally, we would also like to evaluate other forms of diversity, such as LGBTQ+, first-generation medical students, socio-economic background, and the influence of dual degrees. Admittedly, this may not be feasible, and certainly presents new and different challenges, as well as the need for additional staff and support. We do recognize the need for more diversity-related data to ensure we are not overlooking other potential areas of bias and inequity.

Improve communication about AOA and elections. Although the election process at Geisel has been publicly available on the Geisel Student Affairs website for several years, many students are unaware of this. We have engaged the Associate Dean of Student Affairs to share information with students during 1st year orientation session (done by Allison Holmes in 2023), and are looking into the 3rd year Intersessions course as a point to share reminders about AOA. We also plan to work more closely with Geisel Student Government to share reminders about the election process, and to solicit suggestions from students.

Part V: Conclusions

The AOA selection process is a thorough, transparent, and fluid process, with constant feedback and input from students, faculty, the national AOA list-serve membership and informed by literature. We will continue to welcome feedback from all members of our community.

We feel that the changes made in eligibility criteria and the election process have improved our holistic review of academic excellence and provided our election committee with a more complete picture of how candidates in the graduating class have represented the values of the AOA Honor Medical Society. This holistic review has in turn increased diversity in our AOA student membership, representative of the excellence that exists within the entire student body. In the light of these improvements, Geisel remains committed to continual review and assessment of our processes to mitigate bias and ensure equity, aligning with the high standards of our school, community, and AOA.

References

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