

Data Driven Strategies for an Education Program to Improve Diversity, Equity, and Inclusion in Radiology

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No financial disclosures for any listed authors



Background

- Diagnostic radiology is the 9th most popular specialty for residency applicants¹
 - 17th for female representation
 - 20th for underrepresented minorities (URM) representation²
- Why?
 - Lack of preclinical exposure -> misconceptions and less interest in radiology³
 - Women: lack role models⁴, mentorship⁵ and perceive radiology as too competitive⁶
 - URM: lack of understanding of the field⁷

Purpose and Objectives

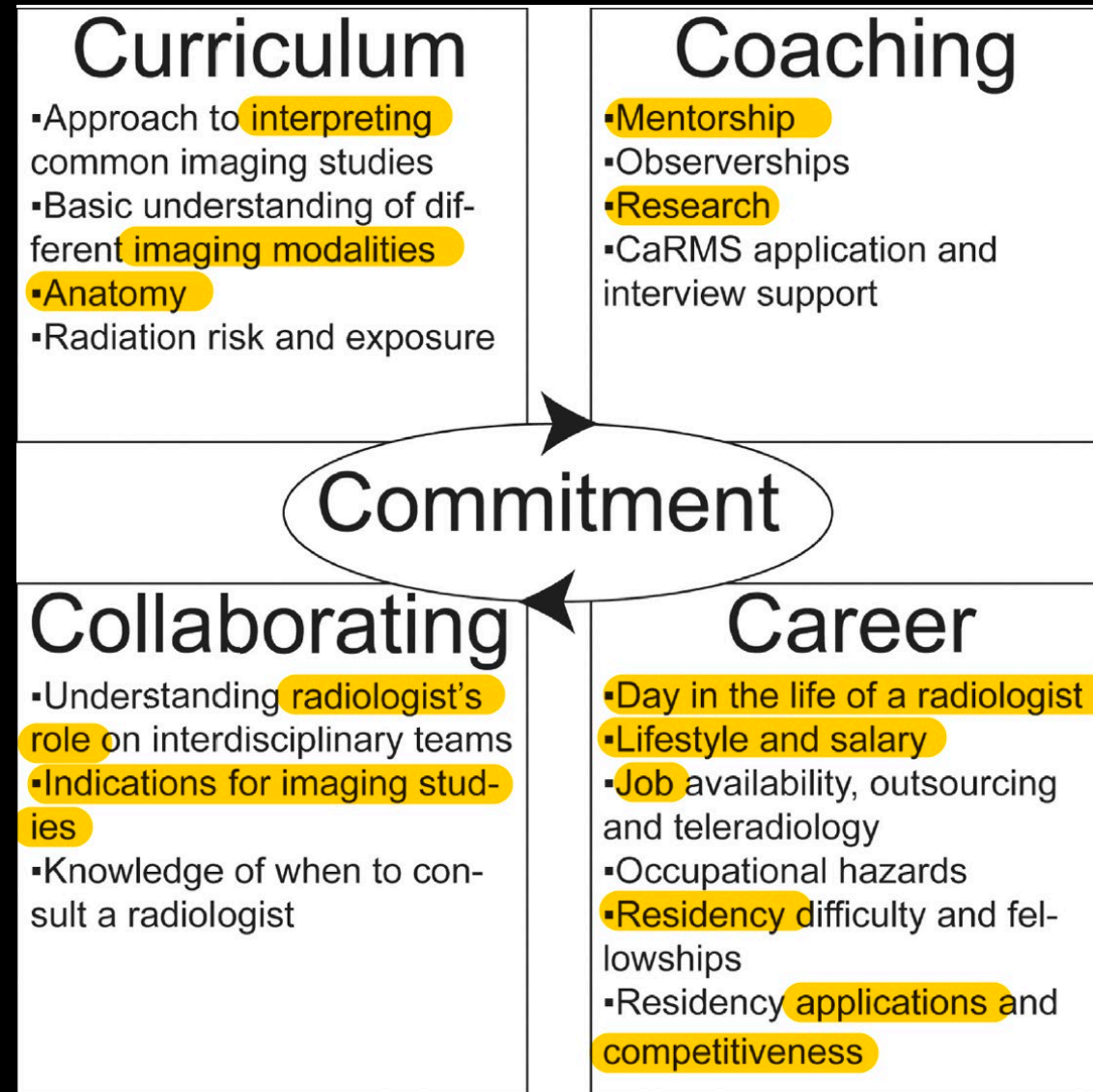
Apply a comprehensive framework to implement a **longitudinal** education and outreach program in radiology.

Increase **knowledge, interest, and awareness** of radiology as a specialty.

Collect quantitative and qualitative **data** for baseline evaluation, continued monitoring and improvement.

Increase the **diversity** of students applying to radiology residency.

Structured Framework for Radiology Education Programs: 5 C's⁸



Methods

24 events held since 2022

POST-EVENT SURVEY

Demographics

- Subgroups: Male/Female, medical/undergraduate, school years, URM/nonURM

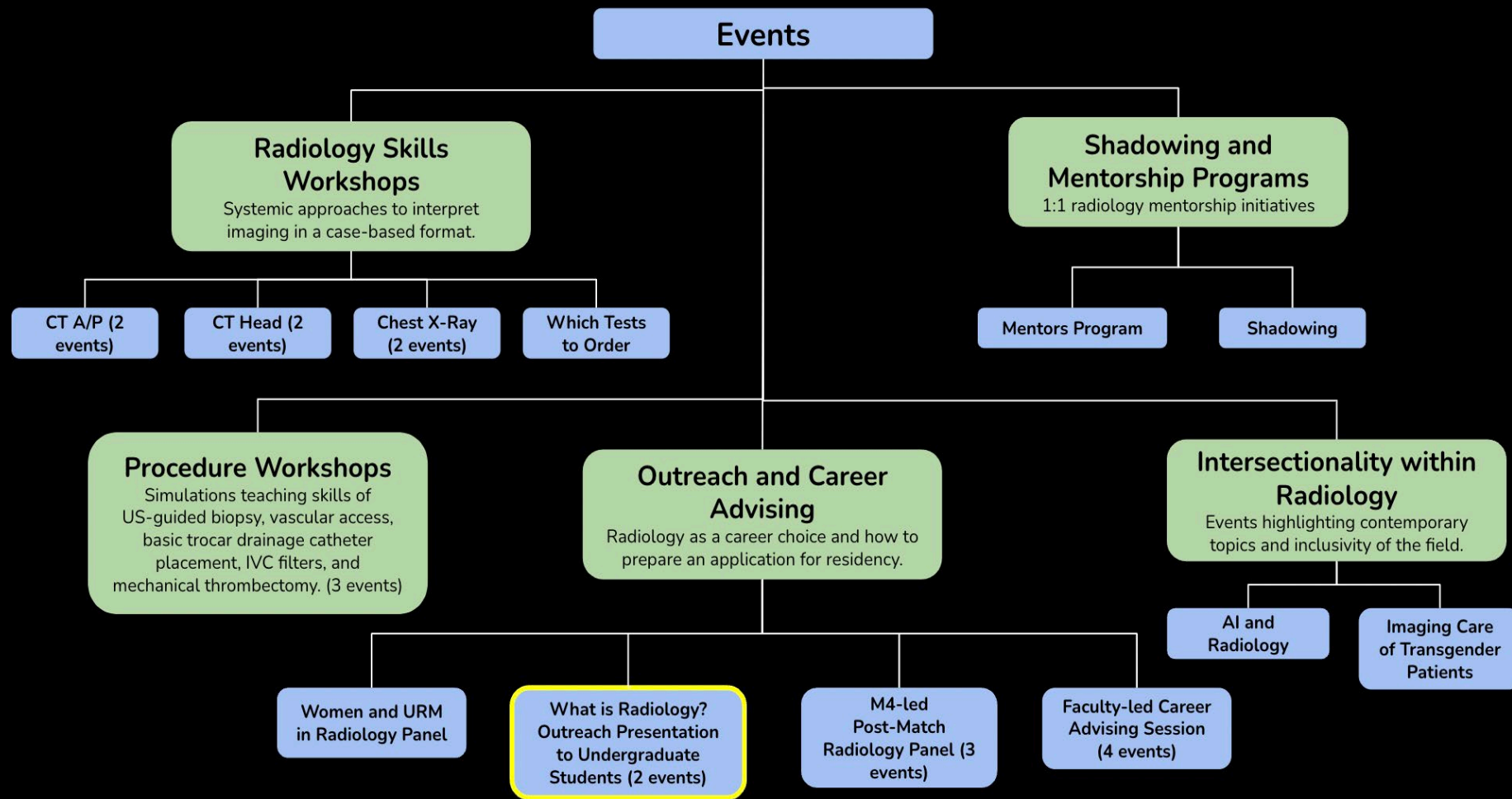
Previous Exposure

- Overall
- Subgroups

Feedback of Program

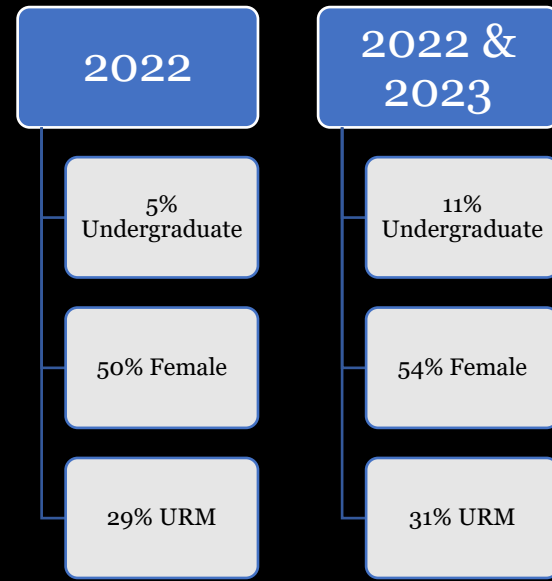
- Perceptions/misconceptions of radiology
- Interest in radiology
- Effectiveness of education program

DATA ANALYSIS: TWO-TAILED T-TEST COMPARISON

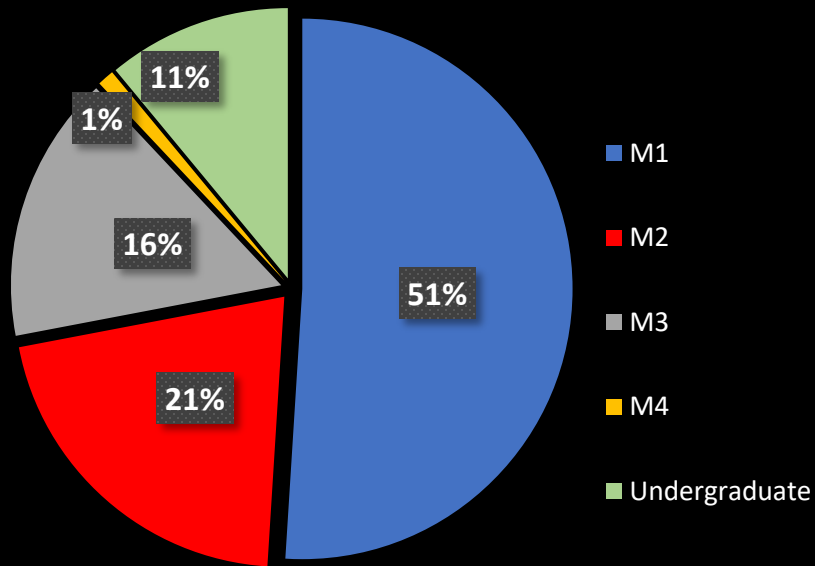


Demographics

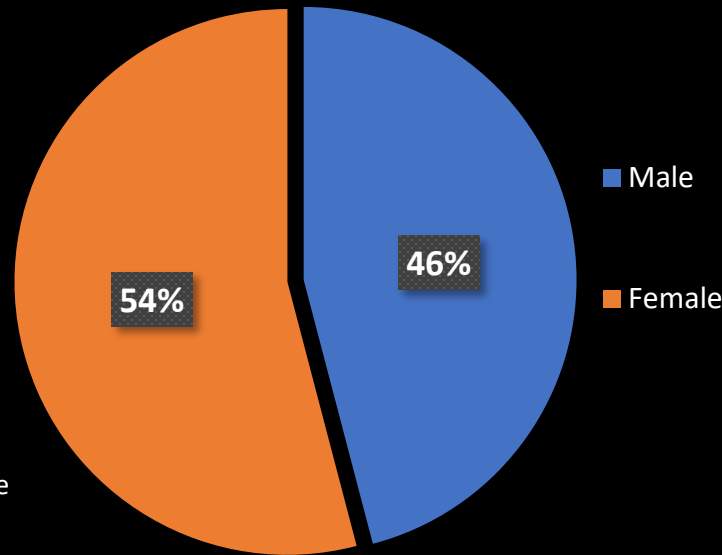
247 attendees with a 49% survey completion rate (122 responses)
 - 46 additional responses since last year



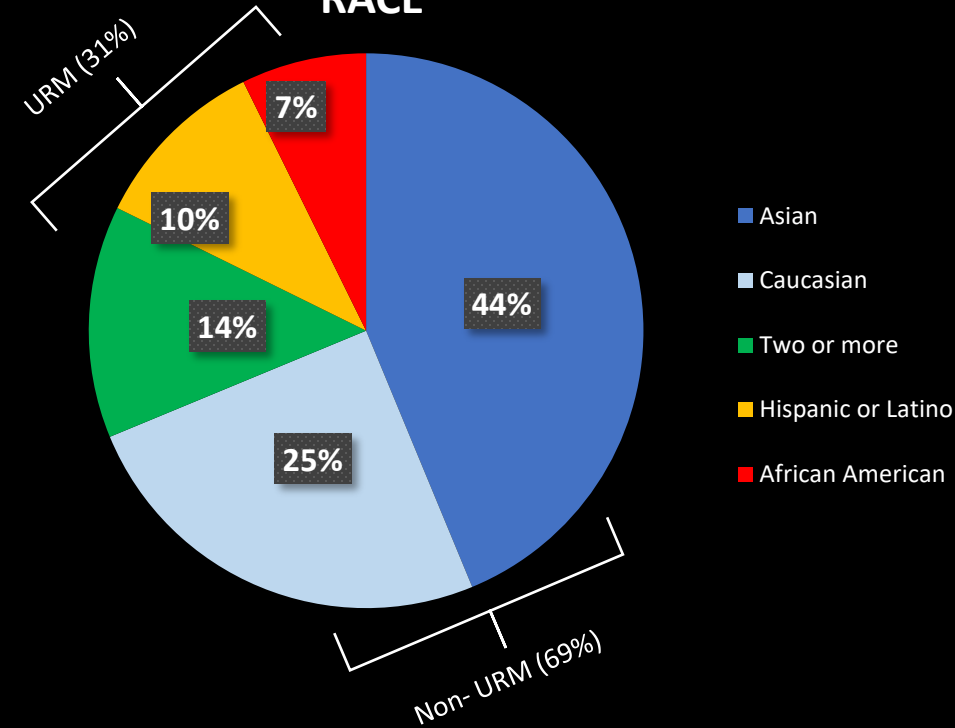
EDUCATION LEVEL



GENDER



RACE



Results

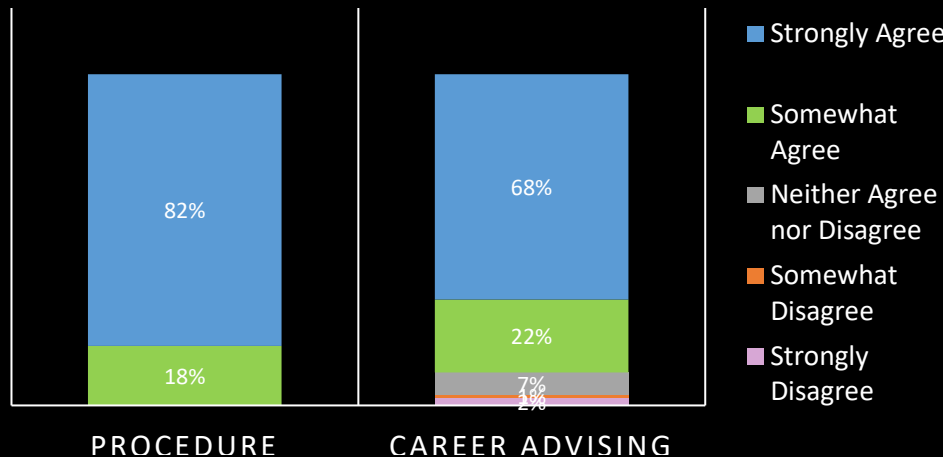
Session Modality

- **Misconceptions:** Procedure workshops significantly* less effective than other modalities for addressing misconceptions
- **Quality:** Procedure workshops rated significantly* highest quality modality

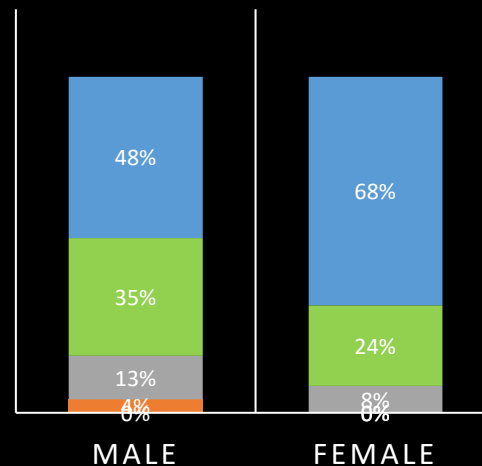
Women and URM

- **Trend:** greater positive impact on increasing interest in radiology and promoting the work-life balance in women than men
- **Trend:** greater positive impact on increasing interest in radiology in URM than non-URM

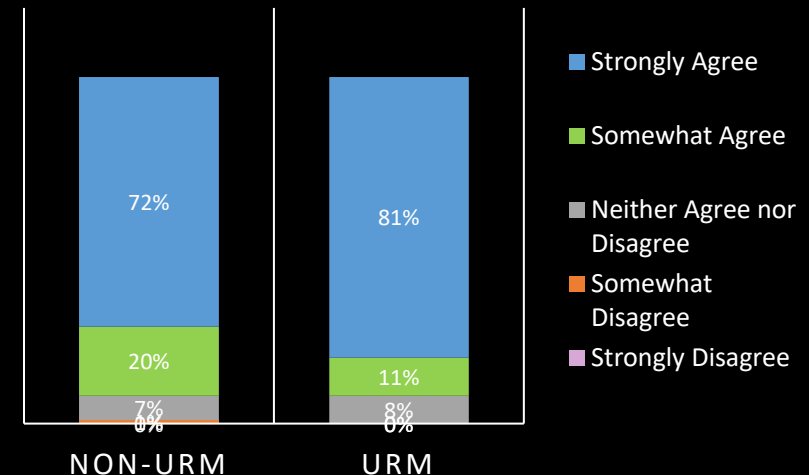
Quality of Procedure vs. Career Advising Session Modality



Male vs. Female: Effectiveness in promoting work-life of Radiology



Non-URM vs. URM: Effectiveness in increasing interest in Radiology



Results: Perceptions and Attitudes

2022

Present

- Undergrad sessions significantly* peaked radiology **interest** more than graduate sessions

Undergraduates

- significantly* increased **interest**, promoted **work-life balance**, and addressed **misconceptions** in **undergraduates** compared to medical students
- M1/M2 (Preclinical) vs M3/M4 (Clinical)**
 - No statistical difference
 - Trend:** greater positive impact on addressing **misconceptions** in **clinical** medical students compared to preclinical medical students

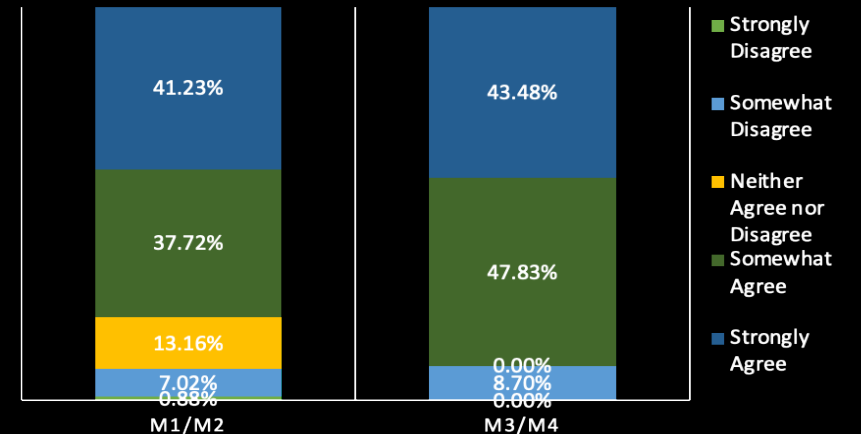
Work Life

	Med Student	Undergrad
Mean	4.14	4.85
Variance	0.90	0.13
N	151	33
P (two-tail) vs. Med student	4.90E-11	

Misconceptions

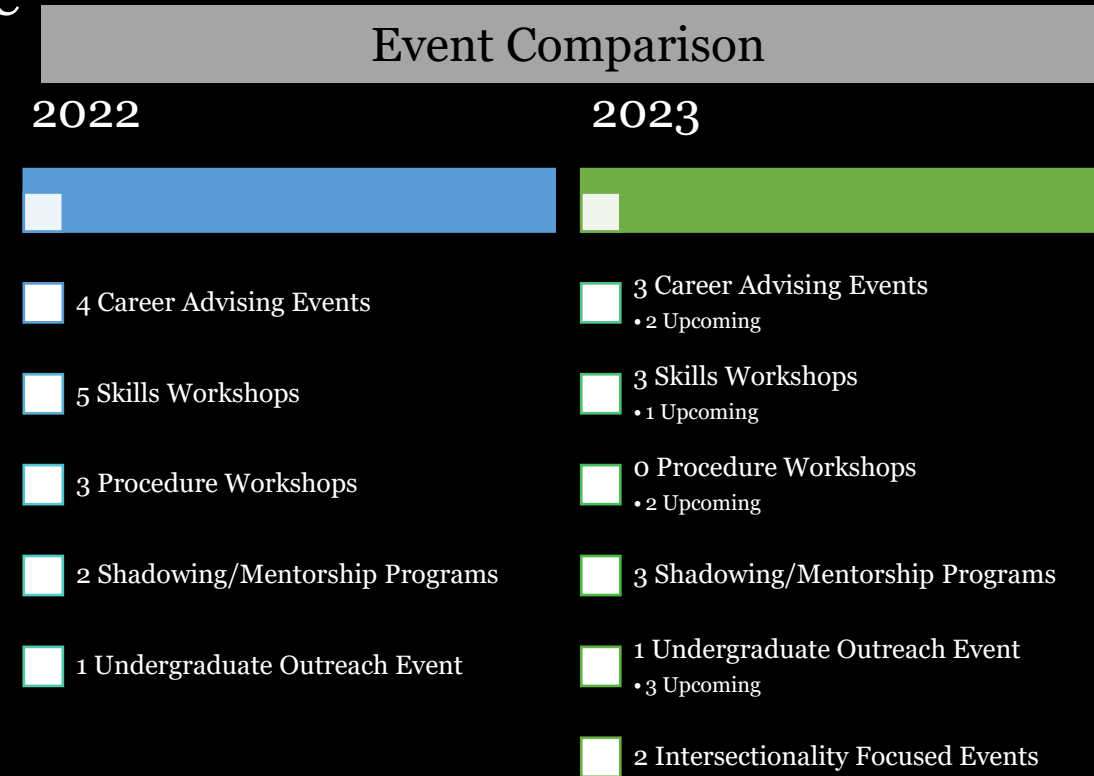
	Med Student	Undergrad
Mean	4.27	5
Variance	0.76	0.00
N	51	11
P (two-tail) vs. Med student	2.80E-07	

M1/M2 vs M3/M4: Effectiveness in addressing misconceptions in Radiology



Discussion

- Our program: equally effective in increasing the interest of all students, regardless of race or gender.
- 2022 --> Present
 - While well-received, **interactive** procedure workshops were **less effective** than other modalities in **addressing misconceptions**.
 - **Undergraduate** outreach events significantly increased students' **interest**, promoted **work-life balance**, and addressed **misconceptions** compared to medical student outreach events.
- **Undergraduate outreach = key pipeline**



Conclusion & Next Steps

- Intersectionality in radiology matters
 - *Visible* inclusivity can help **retain** interested students⁹
 - Our event on Imaging for Transgender patients was **equally well-received and effective** at promoting interest in radiology as skills and interactive procedure workshops.
 - Women and URM in Radiology panel -> **increased interest** in radiology for both respective groups
 - Event this semester = **AI and Radiology**
- **Future Directions**
 - Exploring intersectionality in radiology events
 - Targeted outreach to undergraduate students
 - Virtual events
 - More accessible, especially to those at distant campuses

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