

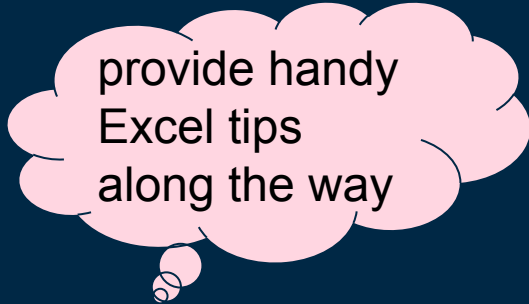


# How to Excel II

AAMC advisor webinar  
August 2024

# Agenda

- Our data workflows
- The data we collect
- The visualizations we create
- Sharing data: Who, what, where, and when



provide handy  
Excel tips  
along the way



# Recap

- Introduce the reports available in the AAMC Advisor Information System (AIS)
- Show how we use institutional data alongside the AIS Roster of Applicants data
- Offer examples of data visualizations to learn things about your applicants via charts and [Pivot Tables](#)



# Kate's process

campus roster +  
info session form +  
data entry

Generate Applicant  
Database



FALL 23-  
SPR 24

Summer  
2024



Add to Applicant Database  
Monitor AIS Roster of Applicants

Applicant Tracking List



AUG 24

2024-25



Monitor AIS ROA  
Application Action Tracking  
Preliminary Analysis

Final Analysis



DEC 25

# Data collection google form @ info session

Questions Responses **178** Settings

## HPA Applicant Info Session

2025 entering class

Section 1 of 4

### HPA Canvas for Applicants

**B** *I* U ↻ ✕

Please provide your contact information below so we can add you to Canvas.

Email \*

Valid email

This form is collecting emails. [Change settings](#)

# Preliminary Applicant Data

Oct 2023-Oct 2024

Google Form (Intent to Apply)

- Name
- Email
- Profession(s) applying for

Advisee Roster (PeopleSoft download)

- Class Year
- Major & Minor(s)

# Add new applicants + more fields to Applicant Database

2023-2024

- Intended Matriculation Year
- Applicant Status
- Path (CL, EA, Other)
- “Not ours” info
- Adviser
- AAMC ID
- Degree(s) sought (apps submitted)
- Outreach date
- Last updated date



Microsoft Access  
Database

*but this could easily be a  
spreadsheet!*



# Applicant Database

ApplicantStatus	Path	NoCLDetails	Degree Sot	Class'	Last Update	Outreach	Earliest II	Earliest Acc	Previous App	Inter
Accepted - No CL	OTH	17 COM, PB via Harvard (indiv	MD	2017	6/15/2023	7/23/2024		5/13/2024		NA
Accepted - No CL	OTH	20 PSY, Penn PB (CL)	MD	2020	1/8/2024	7/23/2024	1/5/2024	4/4/2024		NA
Accepted	CL		MD	2022	3/12/2024	7/23/2024	10/10/2023	12/2/2023		KFC
Accepted	CL		MD	2023	3/11/2024	7/23/2024	8/10/2023	10/16/2023		SD
Accepted	CL		MD	2024	3/4/2024	7/23/2024	10/11/2023	2/26/2024		KFC
Accepted Reapplicant	CL		MD	2022	12/21/2023	7/23/2024	8/9/2023	10/20/2023	2022 (WL)	SH
Accepted	CL		DDS	2021	5/2/2024	7/23/2024	9/13/2023	12/15/2023		KFC



# AIS available for cohort once their AMCAS opens

Gain access to  
AIS through the  
AAMC Prehealth  
Advisors  
resource page

The screenshot shows the AAMC Prehealth Advisors website. The browser address bar displays 'students-residents.aamc.org/prehealth-advisors'. The page header includes the AAMC logo and the text 'AAMC | Students & Residents'. Below the header is a navigation bar with links: 'Choosing a Medical Career', 'Applying to Medical School', 'Attending Medical School', 'Applying to Residency', 'Training in a Residency or Fellowship', and 'Quick Links'. The main content area is titled 'Prehealth Advisors' and contains the following text: 'As a prehealth advisor, you have a critical role in guiding your students on their individual paths to medical school. The AAMC provides accurate, reliable resources and tools on medical school admission requirements, financial aid, the application process, and more, to support you in providing the best guidance to your students.' Below this is a section titled 'How to Get the Most of the Advisor Information System (AIS)' with the text: 'Use AIS to track the performance of your program and run reports on your students' MCAT scores and applicant data.' Further down is a section titled 'AMCAS® Choose Your Medical School Tool for Advisors' with the text: 'The AAMC American Medical College Application Service® (AMCAS®) created this tool to support medical schools' enrollment management processes and help applicants communicate their intentions about which medical schools they plan to attend. Schools will only be able to access information about their accepted and alternate-list (waitlist) applicants. Applicants should use the tool at the direction of the schools to which they have applied.' On the right side of the page, there is a sidebar with three blue buttons: 'Advisor Information System', 'AMCAS® Letter Writer Application', and 'Medical School Admission Requirements'. Below these buttons is a section titled 'Prehealth Advisor Support' with the text: 'The AAMC's prehealth advisor support team offers assistance for the Advisor Information System, AMCAS, MCAT, Medical School Admission Requirements, the Fee Assistance Program, Aspiring Docs, and FIRST.' At the bottom of the sidebar, there is a clock icon and the text: 'Monday - Friday, 9 a.m.-5 p.m. ET Closed Wednesday 3-5 p.m. ET'.

students-residents.aamc.org/prehealth-advisors

My Drive Stuvia AIS Calendly Canvas @ Princeton Dashboard Zoom HPA Zoom Registrar linkedin MSAR HPA Application Pe... Webforms | Princet...

AAMC | Students & Residents

Choosing a Medical Career Applying to Medical School Attending Medical School Applying to Residency Training in a Residency or Fellowship Quick Links

Home / Prehealth Advisors

## Prehealth Advisors

As a prehealth advisor, you have a critical role in guiding your students on their individual paths to medical school. The AAMC provides accurate, reliable resources and tools on medical school admission requirements, financial aid, the application process, and more, to support you in providing the best guidance to your students.

### How to Get the Most of the Advisor Information System (AIS)

Use AIS to track the performance of your program and run reports on your students' MCAT scores and applicant data.

### AMCAS® Choose Your Medical School Tool for Advisors

The AAMC American Medical College Application Service® (AMCAS®) created this tool to support medical schools' enrollment management processes and help applicants communicate their intentions about which medical schools they plan to attend. Schools will only be able to access information about their accepted and alternate-list (waitlist) applicants. Applicants should use the tool at the direction of the schools to which they have applied.

**Advisor Information System**

**AMCAS® Letter Writer Application**

**Medical School Admission Requirements**

### Prehealth Advisor Support

The AAMC's prehealth advisor support team offers assistance for the Advisor Information System, AMCAS, MCAT, Medical School Admission Requirements, the Fee Assistance Program, Aspiring Docs, and FIRST.

Monday - Friday, 9 a.m.-5 p.m. ET  
Closed Wednesday 3-5 p.m. ET

# AIS + You

[Log Out](#)

**Statement of Confidentiality:**

**AIS Terms of Use:**

You agree to protect the confidentiality and security of the information in AIS. Specifically, you agree that you shall not:

- ▶ Share personally identifiable examinee or applicant information with a third party, including medical schools;
- ▶ Release AIS information, including admissions decisions, to an advisee. The medical schools are the only entities authorized to release admissions actions;
- ▶ Provide a list, or any part of a list, of an applicant's designated medical schools and associated actions to a medical school admissions office; or
- ▶ Share your unique AAMC username and password with any other individual.

You agree that you have been designated as a health professions advisor for the institution for which you receive AIS access and that all advisor contact information provided to AAMC is up-to-date. Use of information obtained through AIS is restricted as follows:

- ▶ You may use information for the purpose of advising applicants to health professions schools.
- ▶ You may use de-identified or aggregate information for internal business purposes and for marketing.
- ▶ You may not use information for research purposes. (Requests for research data may be made to [facts@aamc.org](mailto:facts@aamc.org).)

You agree to report to AAMC any known or suspected unauthorized disclosures of AIS information of which you become aware.

AAMC reserves the right to revoke AIS privileges from an advisor and/or the advisor's institution for violation of these Terms of Use. AAMC reserves the right to change these Terms of Use at any time. If you have any concerns or need clarification about the AIS Terms of Use, please contact the AAMC at [advisors@aamc.org](mailto:advisors@aamc.org).

**Additional Institution Terms** This agreement is in effect until the designated advisor at this Institution no longer requires access to AIS, until the designated advisor has not accessed the system for over one year, or until terminated or modified by AAMC, whichever occurs first. Institution must promptly notify AAMC of any changes to its authorized advisors.

I agree with this statement.

Login via [systems.aamc.org/ais2](https://systems.aamc.org/ais2)

# Roster of Applicants = Monitor current cycle

A screenshot of a web application's navigation bar. It features a horizontal row of eight menu items: 'Home', 'Quick Lookup', 'Roster of Applicants', 'MCAT Roster/Summary', 'PREview Roster', 'Designated School', 'App Yr Stats', and 'Trends'. Below this row is a white banner with the text 'Welcome to the Advisor Information System.' The 'Roster of Applicants' item is highlighted with a yellow star icon.

Home Quick Lookup Roster of Applicants MCAT Roster/Summary PREview Roster Designated School App Yr Stats Trends

Welcome to the Advisor Information System.

# Roster of Applicants = Monitor current cycle

**Roster of Applicants**

Application Year  
Select Year:

Output Selection

- Display on screen - short table view
- Display on screen - all records, full view
- Download Roster

Optional Filters

- Filter by Applicant Category
- Filter by Designated Medical School
- Filter by Program Type
- Filter by Action Category
- Filter by Degree Status
- Filter by Fee Assistance Program Award Status
- Filter by AMCAS Status  
[check all](#) / [uncheck all](#)
  - Active
  - Hold
  - Processed
    - My Primary Undergraduate School
  - Returned
  - Withdrawn

Display on screen - all records, full view

Download Roster

Optional Filters

- Filter by Applicant Category
- Filter by Designated Medical School
- Filter by Program Type
- Filter by Action Category

Standard (Bio)  
 Schools Attended  
 Actions - 1 row  
 Actions - multi row  
 Letter Data

# ROA downloaded roster info

## Includes

- Current email
- Race/Ethnicity
- “Disadvantaged”/FAP
- Application BCPM, AO, CUM  
GPAs for UG, PB, GR levels
- MCAT: most recent date, overall  
score, subsections, percentiles
- Processed date
- # applications, acceptances
- Matriculated school (end of  
cycle)

## Does NOT Include

- Primary UG school
- Fully accurate major(s), minor(s)
- Class year
- Reapplicant status
- Multiple MCAT attempts info
- Credit hours
- Committee letter status
- PreVIEW score
  
- Any applicant who has not  
provided advisor release of data

# Roster of Applicants: Roster View

Logged in as: Princeton University

> Help | > Log Out

[My Account](#)

Home

Quick Lookup

Roster of Applicants

MCAT Roster/Summary

PREview Roster

Designated School

App Yr Stats

Trends

<<< Back to: [Query Form](#)

Applicants Roster Result:

Printer-Friendly

Application Year: 2025

Students: 133

Name	AAMC ID	BCPM	AO	CUM	Recent MCAT	Recent PREview	AMCAS Status	Accepts
<a href="#">Ab</a>							Processed	0
<a href="#">Ad</a>							Processed	0
<a href="#">Ad</a>							Processed	0
<a href="#">Ag</a>							Processed	0
<a href="#">Ag</a>							Processed	0
<a href="#">Ah</a>							Processed	0
<a href="#">Alt</a>							Processed	0
<a href="#">An</a>							Processed	0
<a href="#">Ar</a>							Processed	0
<a href="#">Be</a>							Processed	0
<a href="#">Bie</a>							Processed	0



# Roster of Applicants: Individual Applicant Record

AMCAS Applicant Data (application year: 2025)											
Name			AAMC ID		FAP Award	Gender	DISAD	State			
[REDACTED]			[REDACTED]			F	N	TX			
Race				Ethnicity							
White				Hispanic or Latino							
Tribal Affiliation											
American Indian or Alaskan Native Tribe: No											
Some Other Indigenous Tribe:											
Status		BCPM GPA	BCPM HRS		AO GPA	AO HRS		CUM GPA	CUM HRS		
CU (incl. UG post-bacc grades)		[REDACTED]	88.00		[REDACTED]	36.00		[REDACTED]	124.00		
PB											
GR											
Colleges Attended			Majors			Degrees			Date		
Princeton University			Molecular Biology			Bachelor of Arts			05/2023		
Letters of Evaluation/Recommendation											
Primary Author or Contact			Institution			Type		Letter Status		Letter ID	
Kate Fukawa-Connelly			Princeton University			Committee		Received		11204091	
MCAT Scores After January 31, 2015											
Test Date	Total	Confidence Band <sup>1</sup>	Percentile Rank of Score <sup>2</sup>	Chemical and Physical Foundations of Biological Systems		Critical Analysis and Reasoning Skills		Biological and Biochemical Foundations of Living Systems		Psychological, Social, and Biological Foundations of Behavior	
				Score	Percentile Rank of Score <sup>2</sup>	Score	Percentile Rank of Score <sup>2</sup>	Score	Percentile Rank of Score <sup>2</sup>	Score	Percentile Rank of Score <sup>2</sup>
26-AUG-2023	5 [REDACTED]	5 [REDACTED]	[REDACTED] %	1 [REDACTED]	[REDACTED] %	[REDACTED]	[REDACTED] %	1 [REDACTED]	[REDACTED] %	[REDACTED]	[REDACTED] %

Click into a record for at-a-glance information about any applicant

- **Colleges attended** helps you identify applicants you don't recognize
- **Credit hours (HRS)** only available here (not in download file)

# Applicant Tracking List

Aug 2024

- Generate after final committee letter applicant is verified
- Merge database + AIS Roster of Applicants (AIS ROA) fields into an excel tracking spreadsheet
- Color code metrics & dates





# Applicant Tracking

Aug 2024 - May 2025

- Add columns & enter data every couple of weeks
  - Current status (no interviews, not yet accepted, wait list, accepted)
  - First interview invitation / First acceptance
  - Interviews as of ...

App Year	Status	Last Name	First Name	app process + mcat	letter send	Total Score	CU BCPM GPA	State	PB/GR?	Class Year	years to application	URM	URM / DIS / FAP	Email	adviser	First II
2024	not yet accepted			dental	6-Jul	DAT			none	2023	1 year	N	N		KFC	
2024	not yet accepted			Jun 16 to 30	6-Jul	"	"	NJ	none	2022	2 years	N	Y		KFC	
2024	not yet accepted			Jun 16 to 30	14-Jul	"	"	IN	none	2022	2 years	N	N		SH	
2024	not yet accepted			Jun 16 to 30	6-Jul	"	"	IN	none	2022	2 years	Y	Y		KFC	
2024	not yet accepted			Jun 16 to 30	6-Jul	"	"	TX	none	2023	1 year	N	Y		KFC	
2024	not yet accepted			Jun 16 to 30	14-Jul	"	"	MD	none	2021	3 years	N	Y		KFC	
2024	not yet accepted			Aug	11-Sep	"	"	PA	none	2024	direct entry	N	Y		SD	
2024	not yet accepted			Jun 16 to 30	4-Aug	"	"	SC	PB	2020	4 years	N	Y		SH	

# Applicant Tracking

Aug 2024 - May 2025

- We record admissions actions in our database then add summary info to the tracking spreadsheet
  - Applicants report interviews via a google form
  - Applicants email or tell us about wait lists and offers

## 2025 Interview Reporting

Use this form to let us know about your professional school interview invitations! This information helps us know how your application cycle is going and provides data to share with future cohorts.

katef@princeton.edu [Switch account](#)

\* Indicates required question

Email \*

Your email

Name \*

Your answer

School that invited you \*

Your answer

Type of program \*

# You can glean some of this data within AIS

*But only when/if schools choose to report it*

the 2 most recent previous calendar years.

State	Med Code	Medical School Name	Program Type	Latest Action	Action Date	Letter
NY	845	Hofstra Northwell School of Medicine	Regular M.D.	Accepted	13-MAY-2024	109236
NC	153	North Carolina	Regular M.D.	No Action	28-JUN-2023	109236
PA	162	Pittsburgh	Regular M.D.	No Action	28-JUN-2023	109236
IL	812	Rush	Regular M.D.	Passive Withdrawal	21-NOV-2023	109236
NY	102	Albany	Regular M.D.	Rejected	26-MAR-2024	109236
MA	105	BU Chobanian Avedisian SOM	Regular M.D.	Rejected	14-NOV-2023	109236
RI	192	Brown	Regular M.D.	Rejected	13-DEC-2023	109236
OH	186	Case Western Res	Regular M.D.	Rejected	15-FEB-2024	109236
CO	113	Colorado	Regular M.D.	Rejected	01-MAR-2024	109236
NY	114	Columbia U Vagelos Coll of P&S	Regular M.D.	Rejected	20-FEB-2024	109236
CT	190	Connecticut	Regular M.D.	Rejected	05-MAR-2024	109236
NY	115	Cornell University	Regular M.D.	Rejected	26-FEB-2024	109236
NH	118	Dartmouth	Regular M.D.	Rejected	08-DEC-2023	109236
NC	119	Duke	Regular M.D.	Rejected	11-MAR-2024	109236
DC	123	George Washington	Regular M.D.	Rejected	16-NOV-2023	109236
DC	122	Georgetown	Regular M.D.	Rejected	19-OCT-2023	109236
IN	129	Indiana	Regular M.D.	Rejected	29-SEP-2023	109236
PA	132	Jefferson	Regular M.D.	Rejected	26-FEB-2024	109236
MD	133	Johns Hopkins	Regular M.D.	Rejected	23-FEB-2024	109236
CA	862	Keiser Permanente SOM	Regular M.D.	Rejected	09-MAR-2024	109236

During the cycle, you can monitor **actions** for those schools that report them

- Request Secondary
- Interview
- Passive Withdrawal
- Accepted
- Alternate List
- Withdraw Before Accepted
- Withdraw After Accepted

# Applicant Database

PUID	Last Name	First Name	ApplicantStatus	Path	NoCLDetails	Degree Sou	Class'	Last Update	Outreach	Earliest II	Earliest Acc
92			Accepted	CL		MD	2023	3/11/2024	7/23/2024	8/10/2023	10/16/2023
Last	First	Med	School Name	IVW Invite	IVW Date	Decision	Decision D	Notes	App	Alun	Click to Add
		872	NYU Long Island	9/6/2023	10/5/2023	R			Y	Y	
		846	Geisinger	8/10/2023	9/11/2023	A	10/16/2023	IVW with Geisinger Scholars	Y	Y	
		805	Stony Brook	9/26/2023	11/3/2023	WL	12/12/2023		Y	Y	
		145	U Michigan	10/16/2023	11/16/2023	A	12/13/2023	PTE	Y	Y	
		107	Buffalo	9/25/2023	10/19/2023	WL	12/21/2023		Y	Y	
		801	Mt Sinai	10/17/2023	11/10/2023	H	1/19/2024		Y	Y	
		136	SUNY Downstate	11/1/2023	12/11/2023	WL	3/18/2024		Y	Y	
		866	Hackensack	11/27/2023	12/4/2023	WL	4/11/2024		Y	Y	

# Applicant Tracking End of Cycle Snapshot

App Year	Status	PTE	app process + mcat	Total Score	BCPM GPA	State	PB/GR?	Class Year	years to application	URM	URM/DIS/FAP	A 7/8	A 5/31	IVW 5/31	IVW 3/1R	IVW 2/2R	IVW 2/1R	IVW 1/1R	IVW 12/1R	IVW 12/7	IVW 11/17	IVW 10/30	IVW 10/1R	
2024	accepted		Jun 16 to 30			CA	none	2022	2 years	N	Y	1	0	4	4	4	3	3	2	2	0	0	0	0
2024	no interviews (withdrew)		Aug			VA	none	2023	1 year	N	N	0	0	n/a	n/a	n/a	n/a	n/a	0	0	0	0	0	
2024	accepted		Jul 16 to 31			IL	none	2022	2 years	N	Y	1	1	3	3	3	3	3	4	4	4	1	1	0
2024	accepted		Jun 1 to 15			NJ	none	2022	2 years	N	N	2	2	4	4	4	4	4	4	4	4	4	4	2
2024	accepted		Jun 16 to 30			NJ	none	2023	1 year	Y	Y	1	1	3	3	3	3	3	3	3	3	3	3	3
2024	accepted		Jul 1 to 15			NY	none	2022	2 years	Y	Y	1	0	9	8	8	4	4	4	4	4	4	4	4
2024	accepted		Jun 16 to 30			CA	none	2021	3 years	N	N	1	1	4	4	4	3	3	3	3	3	3	3	2
2024	accepted		Jun 16 to 30			CT	none	2023	1 year	N	N	1	1	4	4	4	4	4	4	4	4	3	3	3
2024	accepted		Jun 16 to 30			FL	none	2022	2 years	N	N	1	1	2	2	2	2	2	2	2	2	2	2	2
2024	not accepted		Jul 1 to 15			TX	none	2022	2 years	N	N	0	0	1	1	1	1	1	1	1	1	1	1	1
2024	accepted		Jul 16 to 31			NM	none	2022	2 years	N	Y	2	2	4	4	4	4	4	4	4	3	3	3	3
2024	accepted		Jul 16 to 31			MA	none	2022	2 years	Y	Y	7	7	14	14	12	12	12	12	12	12	15	9	7

# Final data analysis

- Download final AIS ROA with matriculated school information
- Clean your data (see previous presentation)
  - Deciding whom to count
- Generate additional columns to facilitate data analysis
- Add to file with previous four admission cycles



# Marc's process

campus roster + student  
form + data entry

Monitor AIS ROA

December  
2024

Build Data Visualization  
(Power BI)

Weekly

Final Analysis

Summer  
2024

Use ROA to Build  
Applicant Tracking Sheet

January  
2025

Update ROA and  
Power BI Report

August  
2025



# Preliminary Applicant Data

August 2023 - June 2024

## Microsoft Form (Intent to Apply)

- Name
- Student ID
- Email
- Profession(s) applying for
- First Gen Status
- Applicant/Reapplicant Status
- Advising Interactions
- Applicant Self-Assessment



## Microsoft Excel Sheet

Captures \*most\* but not all of our applicants

Merge with ROA Data sheet & clean up missing information





# Intent to Apply Form

## Intent to Apply - 2025 Matriculation Survey

If you intend to apply to medical, dental, podiatry, optometry, or PA school, please complete this form. You are not committing to applying, but letting our office know that you are at least considering applying this cycle for Fall 2025 matriculation. This survey should take 5-10 minutes to complete.

\* Required

### Applicant Information

1. First Name \*

Enter your answer

2. Last Name \*

Enter your answer

3. Penn State 9 Digit ID (format: 912345678) \*

Enter your answer

4. Penn State Email Address (format: [abc1234@psu.edu](mailto:abc1234@psu.edu)) \*

Enter your answer



*Students self-assess their preparation which is used to make a "spider chart" aka Radar Graph.*


# Data Storage @ Penn State

Documents > Prehealth Files > DATA

 Name ▾

 .ARCHIVE

 2021

 2022

 2023

 2024

 2025

Documents > Prehealth Files > DATA > 2024


 Name ▾ Modified ▾

 AACOMAS Data\_2024.xlsx June 18

 AACPMAS Data\_2024.xlsx March 8

 AADSAS Data\_2024.xlsx June 18

 Accepted Students 3-25.xlsx March 25

 AIS Data\_2024.xlsx June 18

 CASPA Data\_2024.xlsx June 18

 Combined Medical Data\_2024.xlsx June 18

 Comprehensive Interview Feedback Surv... June 29, 2023

 Data Legend.docx February 9

# Storytelling with Data

- **Big Idea Worksheet**

- What are you trying to show?
- How important is this information?
- Who is your audience? **Identifying your stakeholders is key!**
- Is your audience familiar with the type of visualization?
- How are you presenting the information?



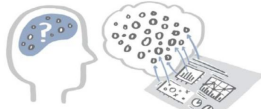
# Storytelling with Data

**SWD BOOK**  
CHAPTER 3

FIRST, LET'S RECAP  
**CLUTTER is your ENEMY**

**CLUTTER** VISUAL ELEMENTS that TAKE UP SPACE and DON'T AID our UNDERSTANDING.

**COGNITIVE LOAD** The MENTAL EFFORT that's REQUIRED to LEARN NEW INFORMATION




Every element we put on a page or screen puts cognitive burden on our audience...

So we should take care not to include things that aren't adding information

**LACK of VISUAL ORDER** (Another type of CLUTTER)

LEVERAGE WHITE SPACE and ALIGN ELEMENTS

Aim for clean horizontal and vertical elements, avoid diagonal



CATEGORY 1  
CATEGORY 2  
CATEGORY 3  
CATEGORY 4  
CATEGORY 5

**NON-STRATEGIC USE of CONTRAST**

CLEAR CONTRAST is a SIGNAL, INDICATING WHERE to LOOK


Don't make too many things different, or key points will get lost

**GESTALT PRINCIPLES**


DESCRIBE HOW we SUBCONSCIOUSLY ORDER what we SEE in the WORLD

We can use this understanding of how people see to help identify & eliminate CLUTTER


**PROXIMITY**




**SIMILARITY**




**ENCLOSURE**




**CLOSURE**



**CONTINUITY**



**CONNECTION**



# Storytelling with Data

**SWD BOOK**  
CHAPTER 5

**FIRST, LET'S RECAP**  
**THINK like a DESIGNER**

**FORM follows FUNCTION**

**1 FUNCTION**  
**WHAT** do you want to **ENABLE** your **AUDIENCE** to **DO** with your **DATA**?

**2 FORM**  
**HOW** can you **BEST VISUALIZE** to allow for this with **EASE**?

**AFFORDANCES**

ASPECTS of the DESIGN that make it **OBSVIOUS HOW** to USE

**Highlight** the important stuff and eliminate distractions (at most 10% of the overall design)

**GRAPHIC DESIGN AFFORDANCES**

**Bold** **CASE** **Size**  
**italics** **typeface** **color**  
**underlining** **interesting**

**Is it necessary to "make it pretty?" ...YES!**

**1** Be smart with color  
**2** Pay attention to alignment  
**3** Leverage white space

**“You know you've achieved perfection, not when you have nothing left to add, but when you have nothing left to take away.”**  
Antoine de Saint-Exupéry

**ACCESSIBILITY**

DESIGN that is **USABLE** by **PEOPLE** of **WIDELY VARYING TECHNICAL SKILLS**

**1** Make it **LEGIBLE**  
**2** Keep it **CLEAN**  
**3** Use **PLAIN LANGUAGE**  
**4** Remove **UNNECESSARY COMPLEXITY**

**AESTHETICS**

More **VISUALLY APPEALING DESIGNS** are **PERCEIVED** as **EASIER** to **USE** and are **MORE READILY ACCEPTED**

**ACCEPTANCE**

For your **DESIGN** to be **EFFECTIVE**, it must be **ACCEPTED** by the **INTENDED AUDIENCE**

**1** Articulate the benefits  
**2** Show the side-by-side  
**3** Provide multiple options or seek input  
**4** Get a vocal audience member on board

**Is it necessary to "make it pretty?" ...YES!**

**1** Be smart with color  
**2** Pay attention to alignment  
**3** Leverage white space

# Examples of Stakeholder Questions



- Acceptance Data
- Demographic Analysis
- Academic Performance
- Co-curricular Experiences
- Geographic Trends
- Advising Experiences





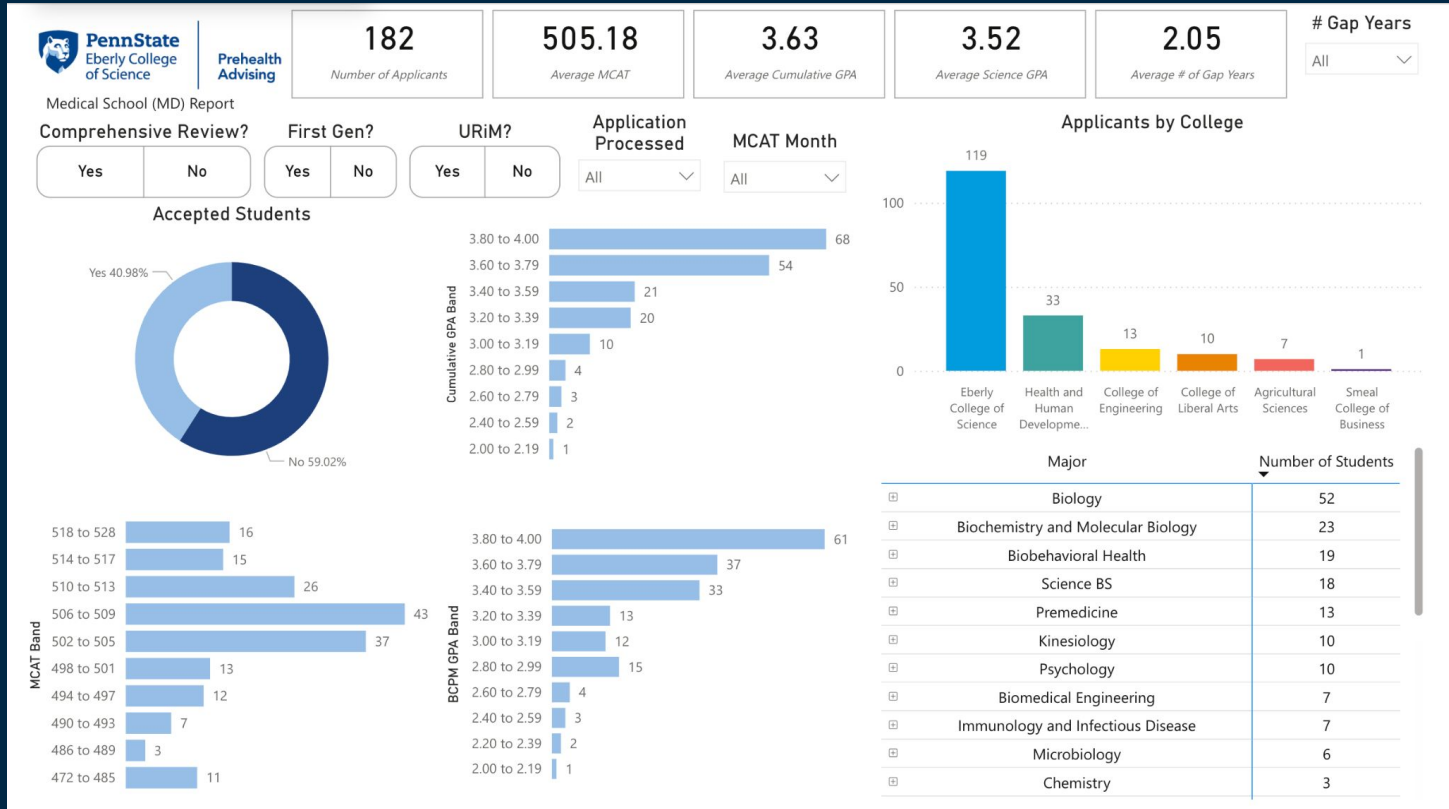
# Sample data visualizations

# Charts & Accessibility

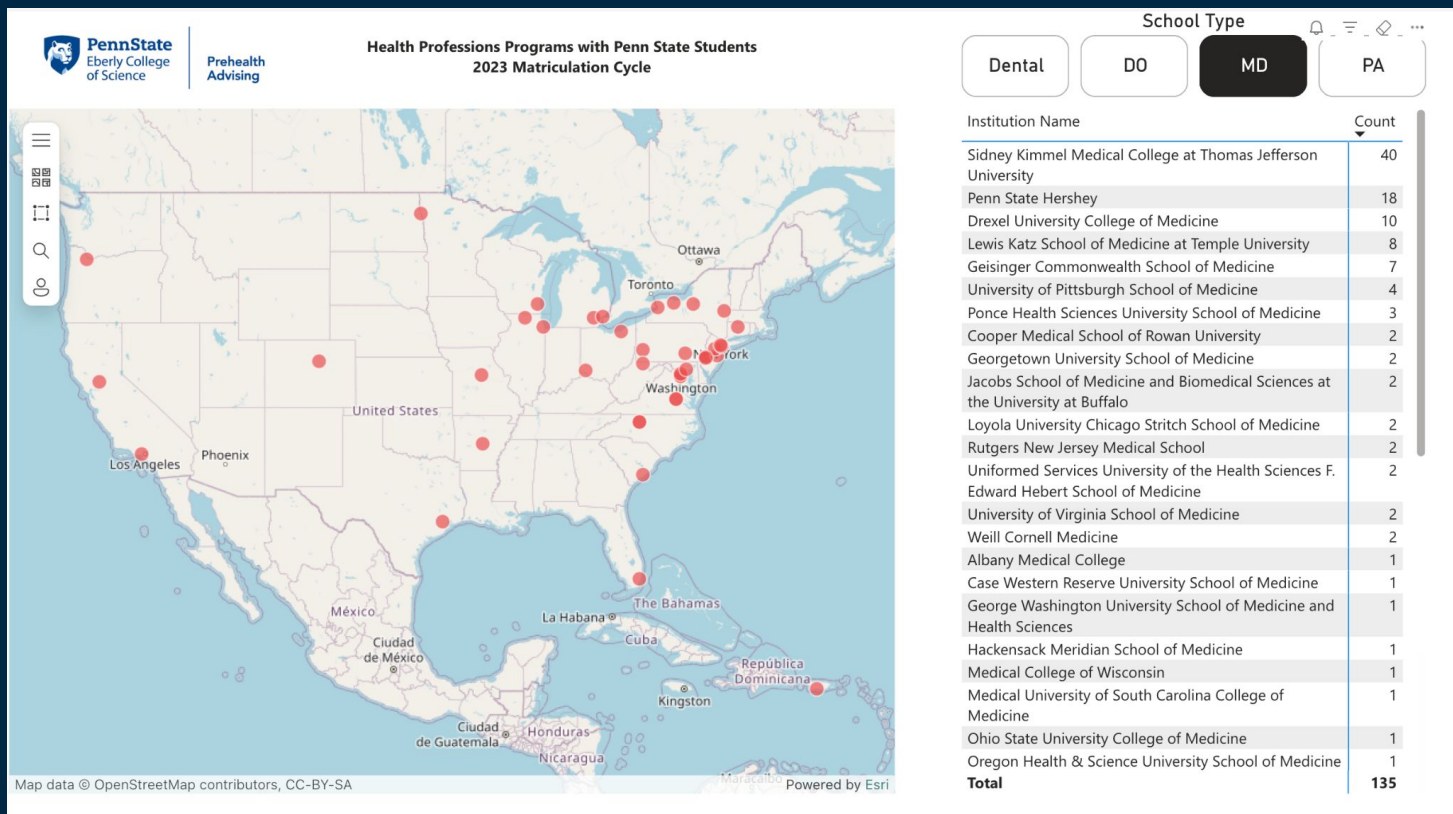
- Colors
  - Avoid red and green in the same visualization
  - Vary the brightness, line type (different dotted lines), and/or point shape
- Narrate your interpretation of the data during a presentation
- Provide the data in text or a simple chart with captions and a header row as an alternative



# Data Visualization @ Penn State



# Data Visualization @ Penn State



# GPA/MCAT Grid

GPA Total	MCAT Total											
	472 - 485	486 - 489	490 - 493	494 - 497	498 - 501	502 - 505	506 - 509	510 - 513	514 - 517	518 - 528	MCAT Not Provided	Grand Total
<b>3.80 - 4.00</b>		0%	0%	22%	50%	50%	75%	81%	85%	94%	40%	76%
Applicant		1	3	9	22	38	63	88	85	90	5	404
Accepted				2	11	19	47	71	72	85	2	309
<b>3.60 - 3.79</b>	0%	0%	0%	25%	40%	46%	65%	68%	75%	64%	100%	53%
Applicant	2	3	5	20	35	57	54	41	24	11	1	253
Accepted				5	14	26	35	28	18	7	1	134
<b>3.40 - 3.59</b>	0%	0%	0%	16%	28%	53%	48%	50%	55%	100%	20%	34%
Applicant	4	8	17	25	39	36	29	26	11	1	5	201
Accepted				4	11	19	14	13	6	1	1	69
<b>3.20 - 3.39</b>	0%	20%	20%	19%	25%	41%	60%	40%	25%	67%	100%	33%
Applicant	3	5	10	16	20	17	10	15	4	3	1	104
Accepted		1	2	3	5	7	6	6	1	2	1	34
<b>3.00 - 3.19</b>	25%	0%	0%	0%	20%	23%	42%	50%	25%		0%	22%
Applicant	4	1	7	8	10	13	12	4	4		1	64
Accepted	1				2	3	5	2	1			14
<b>2.80 - 2.99</b>	0%	0%	0%	0%	0%	50%	0%	50%	0%		0%	11%
Applicant	2	2	2	4	6	4	2	2	3		1	28
Accepted						2		1				3

# Data Visualization @ Penn State

Figure 1: Acceptance % by month of MCAT in 2022 (Penn State 2023 Matriculation Cycle Data from AIS)

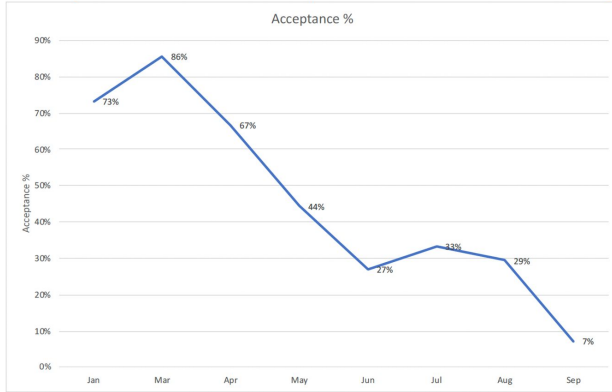
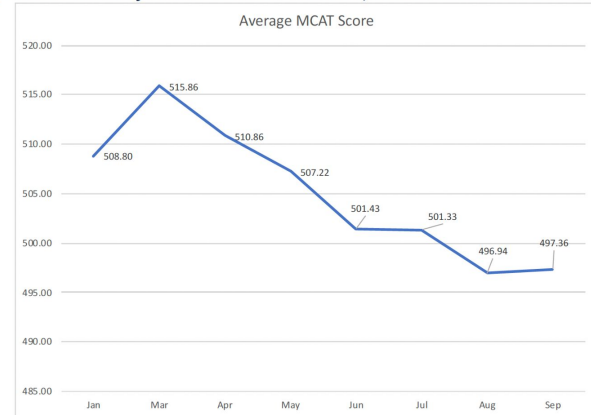
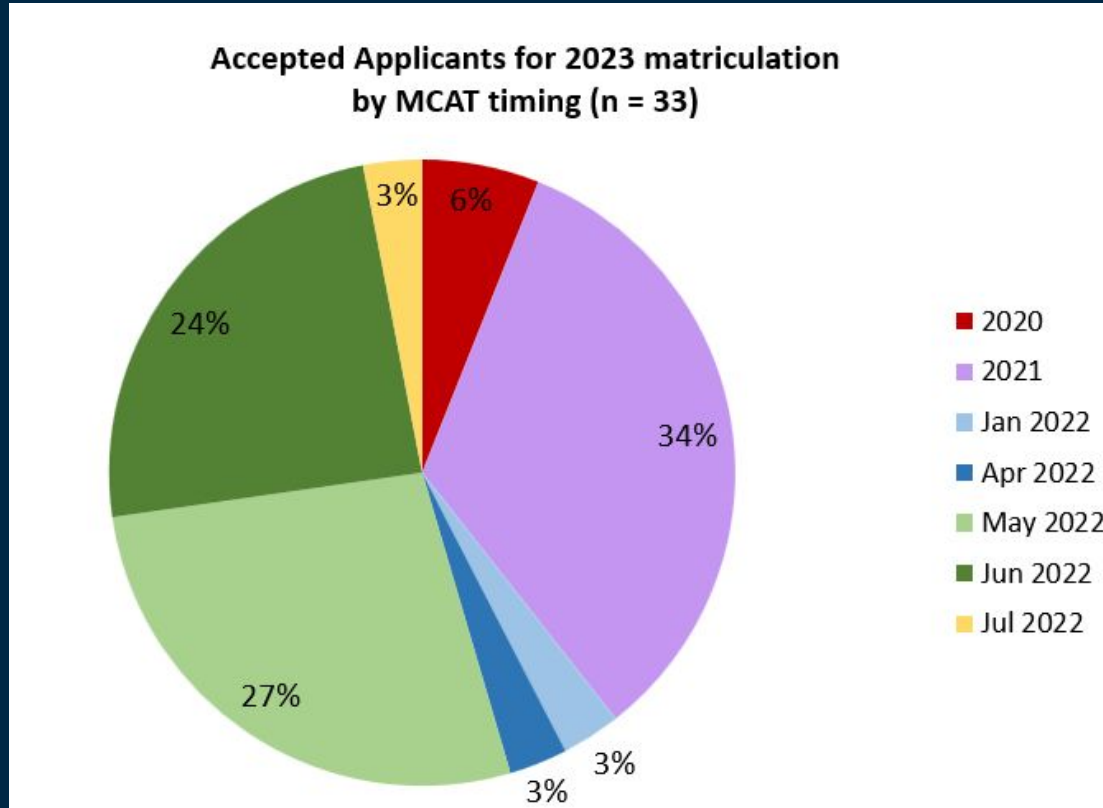


Figure 2: Average MCAT score by month of MCAT in 2022 (Penn State 2023 Matriculation Data from AIS)



# Pie charts



- + Familiar format
- + Easily visualize parts of a whole
- + Better when proportions are dissimilar
- + Better with five or fewer categories

# Pie charts we use

- Applicant pool by application timeline  
*(direct entry, 1 glide year, 2 glide years, 3-4 years, 5+ years)*
- Student appointments by class year  
*(first year, soph, junior, senior, alum)*
- Student appointments by topic  
*(general interest, academic preparation, experiential preparation, application process, postgrad planning)*



# Line graphs

## AMCAS Verification



+ Visualize changes over time

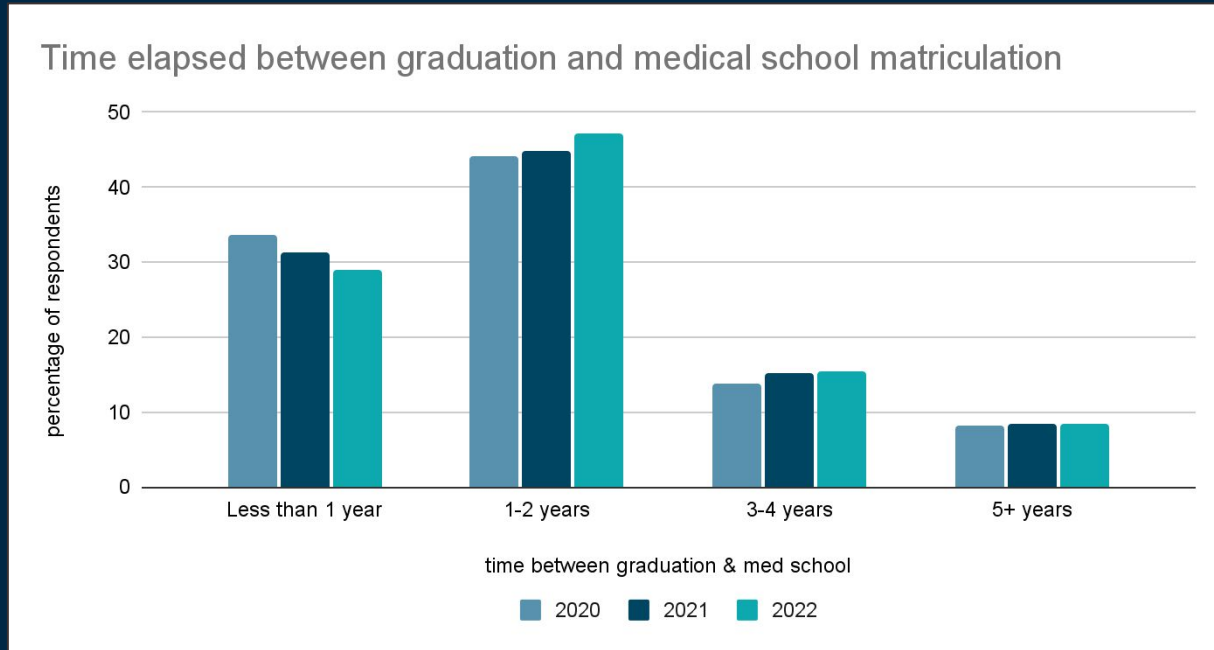
# Line graphs we use

- Number of professional school interview invitations by month  
→ share with applicants
- Number of student appointments by month  
→ annual report and strategic planning





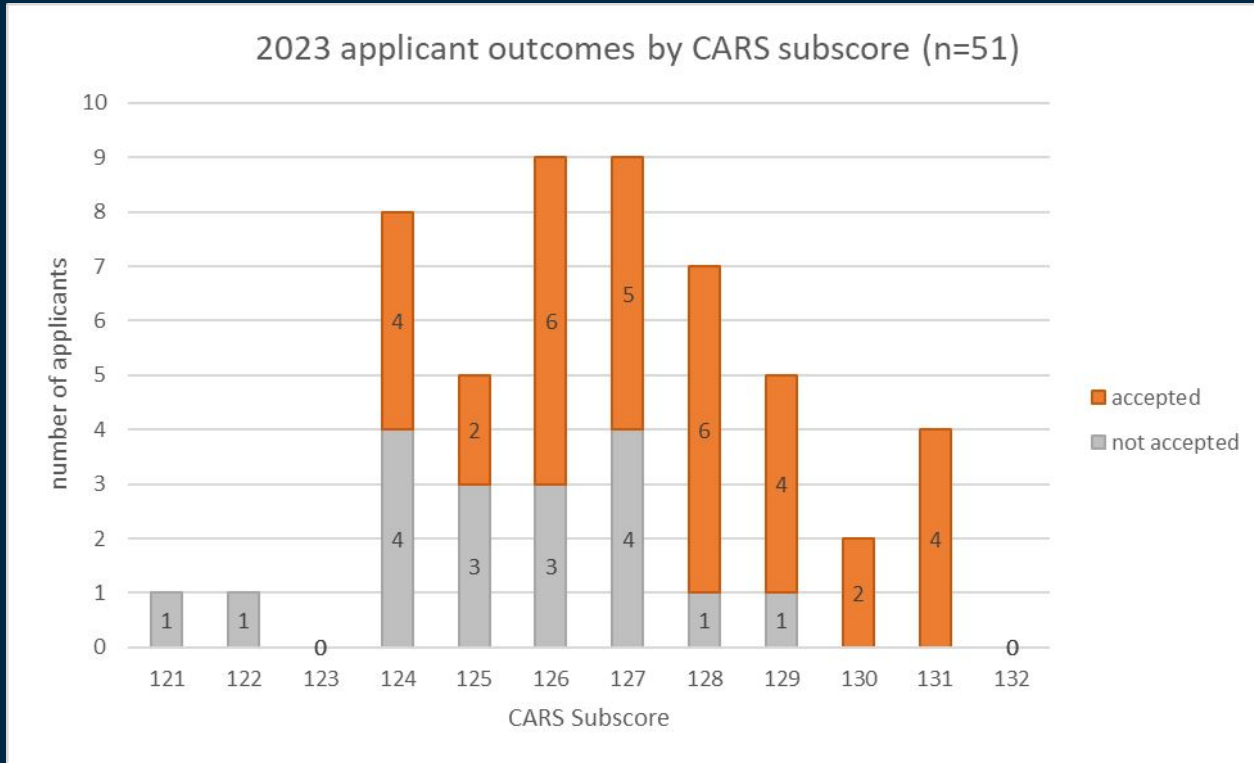
# Column chart



- + Compare between categories
- + Visualize changes over time

Source: AAMC Matriculating Student Questionnaire

# Stacked column chart

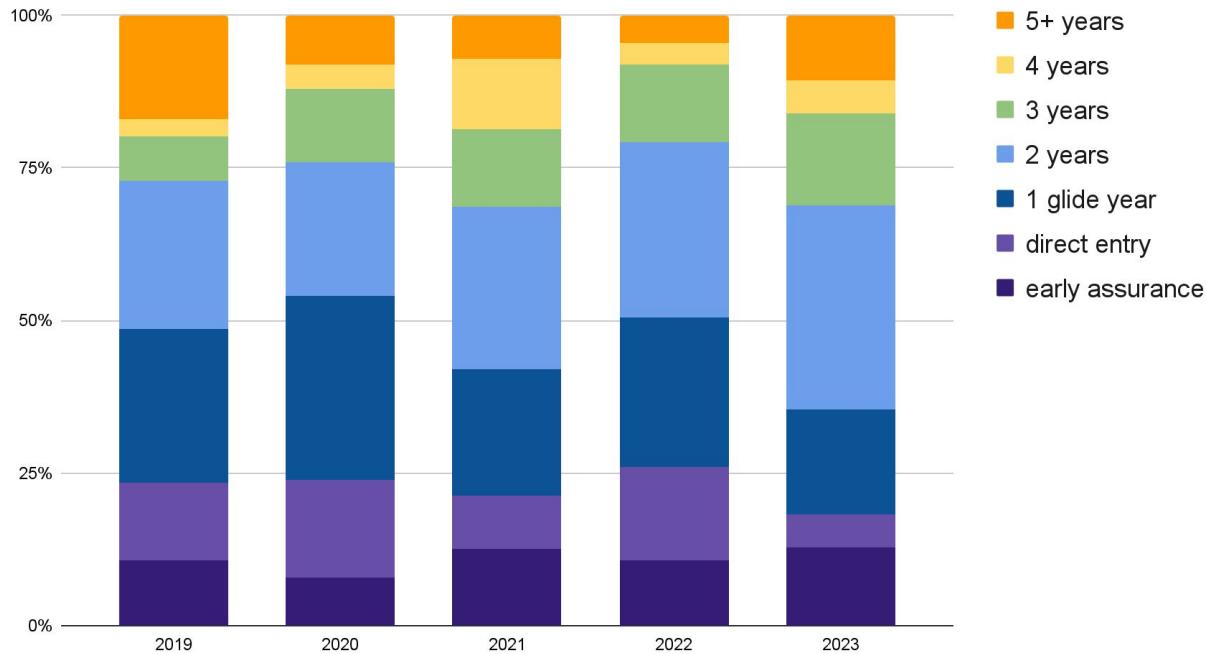


+ Comparison between categories

+ Distribution of data within cohort

# 100% Stacked Column Charts

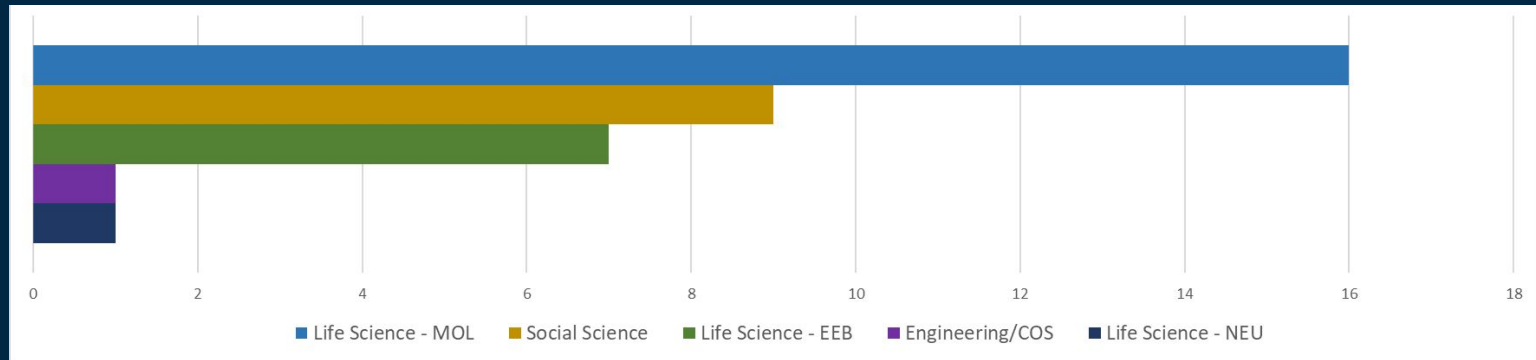
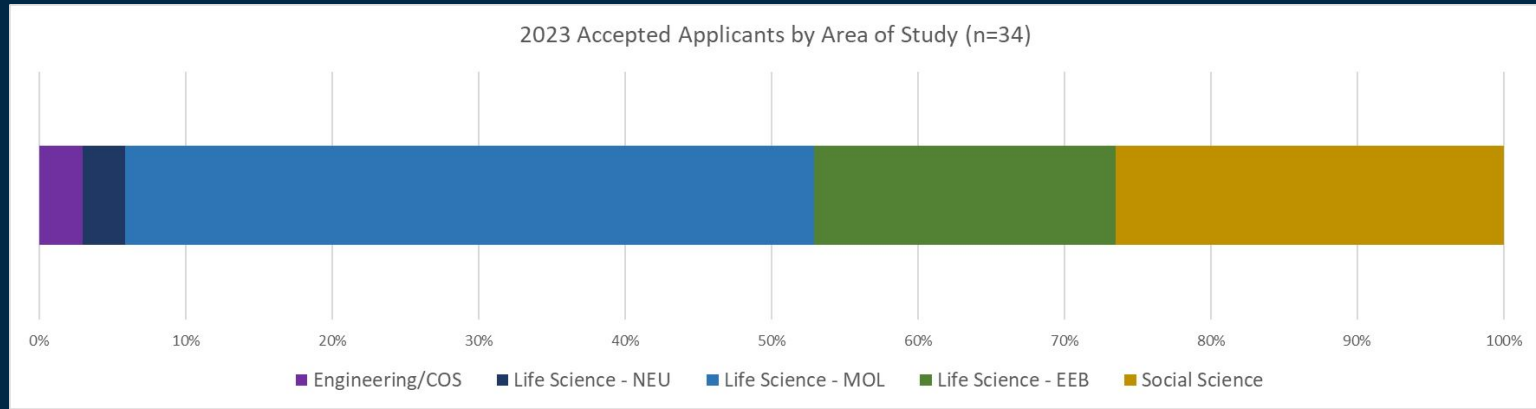
Princeton accepted applicants by application timeline



+ Visualize parts of a whole

+ Track changes over time

# 100% stacked bar vs regular bar chart

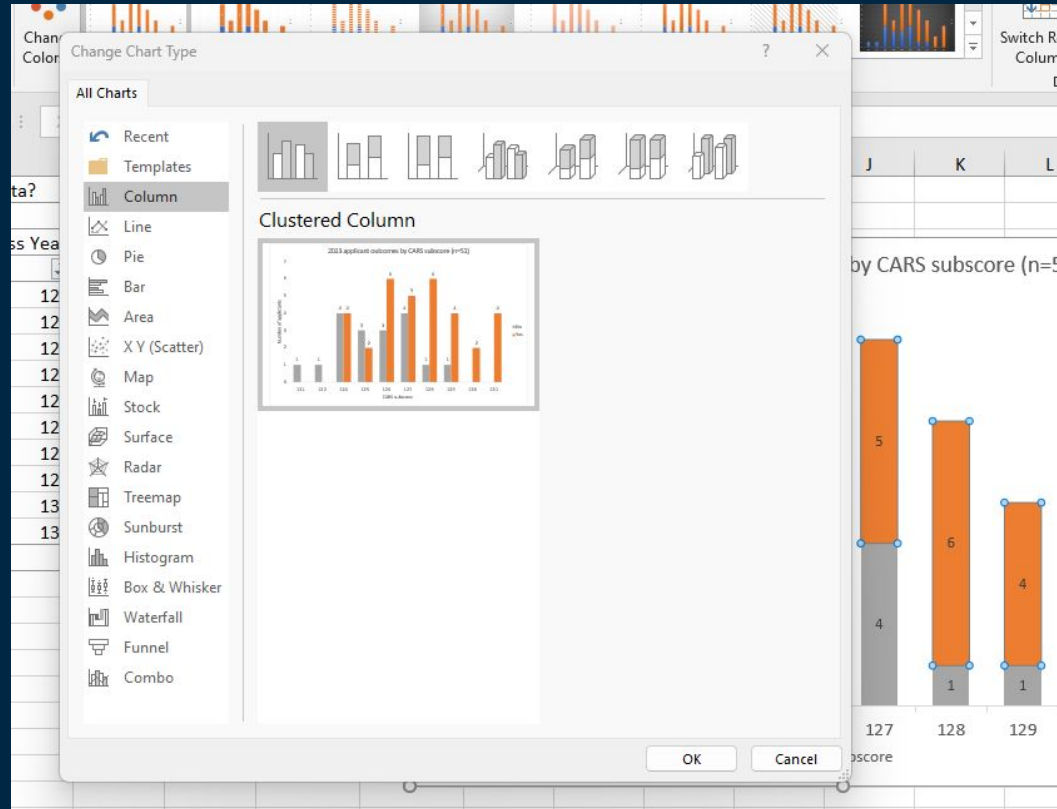


# Bar and column charts we generate

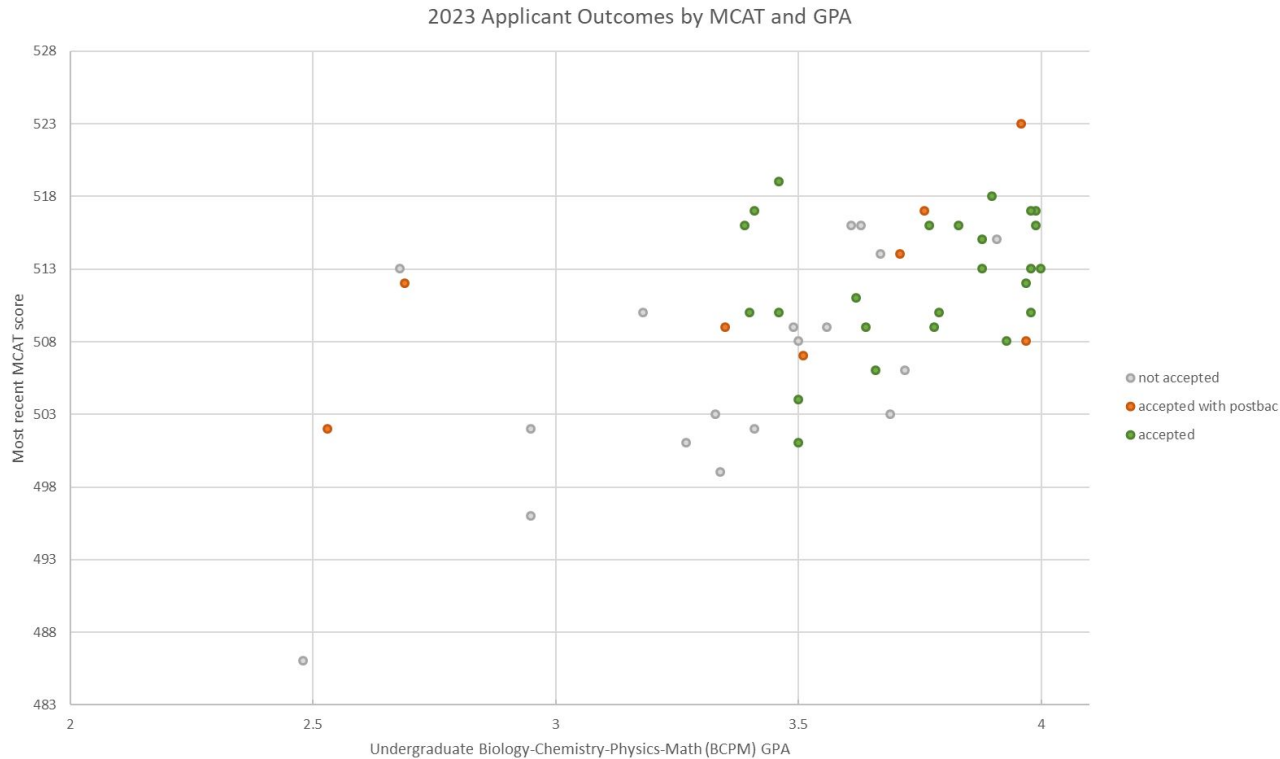
- Accepted/not accepted
  - By AMCAS processed/MCAT date (early June, early/late July, Aug+)
  - By BCPM credit hour ranges with postbac and w/o postbac
  - By CUM GPA ranges with postbac and w/o postbac
  - By BCPM GPA ranges with postbac and w/o postbac
  - By MCAT total (single score or ranges)
  - By MCAT subscores (single score or ranges)
- Early Assurance, Committee letter, Other applicant over the past five years
- Advisee traffic
  - by class year over the past five years
  - In-person vs online by class year

# Not sure which one to use?

Highlight your data (or create a pivot table and select create pivot chart), then tab through the chart types and see what best presents your data



# Scatter charts



- + Visualize data with two dimensions
- + Visualize trends in data (better with larger data sets)

# Scatter charts we generate

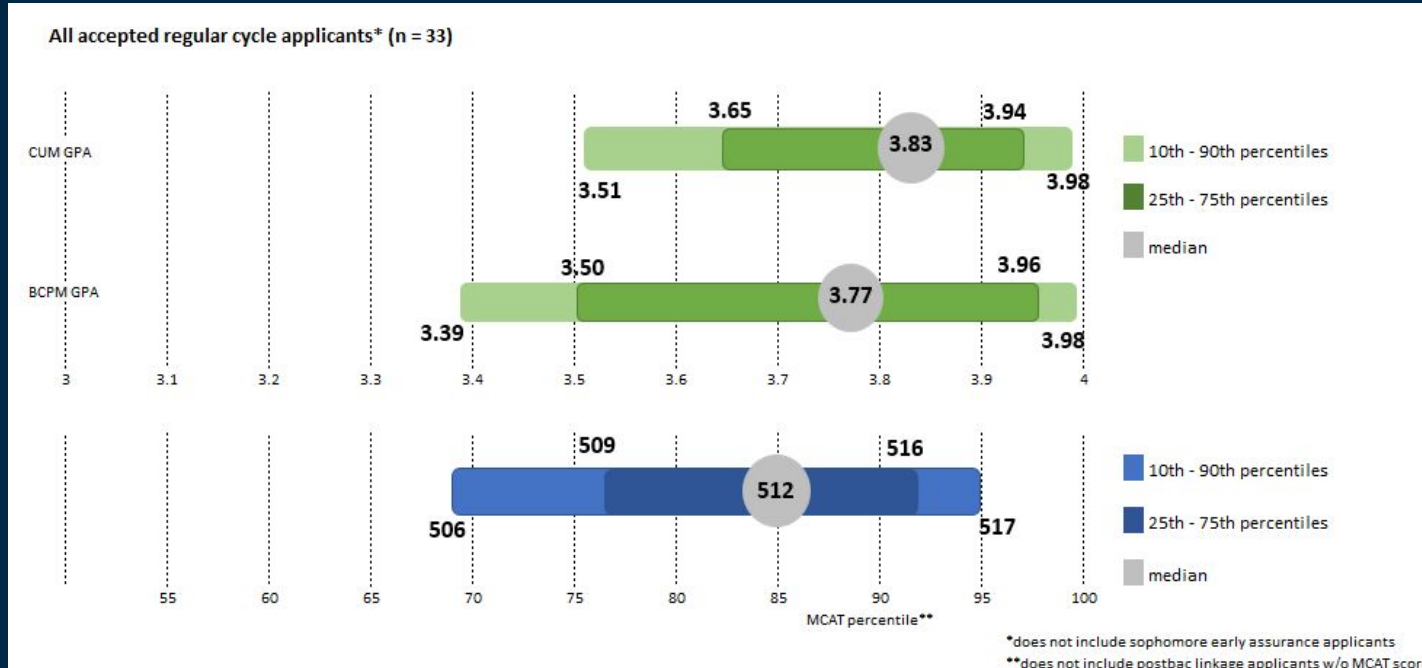
Acceptances by BCPM GPA + MCAT combination → accepted, accepted with postbac, not accepted *if >5 data points for each*

- By timeline (direct, 1 year, 2 years, 3-4 years, 5+ years)
- By profession (MD, MD/PhD, DO)
- By area of study
- For international students





# MSAR-style “bubble” charts



Be sure to provide data in an alternate format.

# Data shared within HPA team



Monthly

Advising traffic report - number of appointments, type, method with comparison to last year

Pre-applicant report - number of prospective applicants

Applicant progress report - number of applicants with interviews, acceptances, wait lists with comparison to last 3 years



# Data shared with faculty and administrators

- |               |   |
|---------------|---|
| August 2024   | Advising Outcomes Annual Report to supervisor<br>Demographics of current pre-health students to supervisor, advising deans, and faculty   |
| October 2024  | Preliminary 2024 Applicant Outcomes presented to faculty committee  |
| December 2024 | Application Outcomes Annual Report to supervisor and committee <ul style="list-style-type: none"><li>• 2023-24 Applicant outcomes</li><li>• 2020-2024 Five-Year Applicant Trends</li><li>• Applicant Survey results</li></ul> |

# Data shared with students & public

- October 2024      Applicant Guide for prospective 2026 cycle pulling data from 2019-2023
- January 2025      2024 Application Outcomes Data of Interest available
- Some public on website
  - Some to students behind a website login
  - Some to applicants on a Canvas site
- May 2025          2025 Acceptances Map available on website

*throughout the year in presentations, online guides, and in advising conversations*

# Resources

[Kate and Marc's sample data set](#) → will open in google sheets, but choose download as an excel file!

NAAHP Blog: [Creating an MCAT/GPA matrix](#)

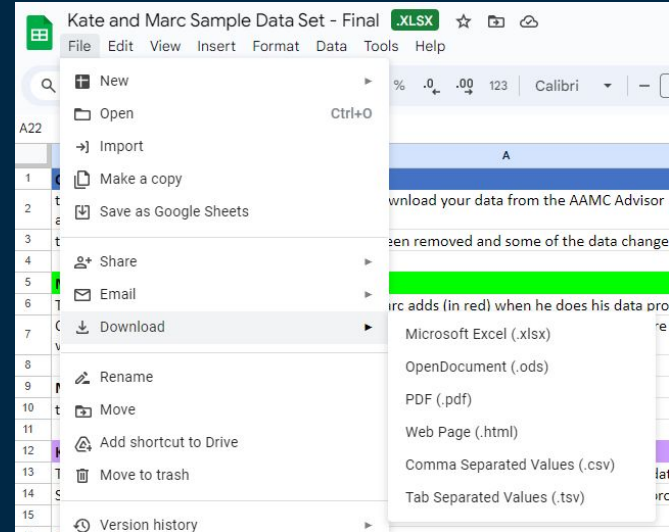
NAAHP-Ed: [Harnessing the Power of Application Data](#)

[AAMC How to get the most out of AIS](#)

[Excelisfun](#) (YouTube Channel to learn Excel)

[Chandoo](#) (Another Excel)

□ Institutional Research Offices at your office



Do you have any questions?

# THANKS

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