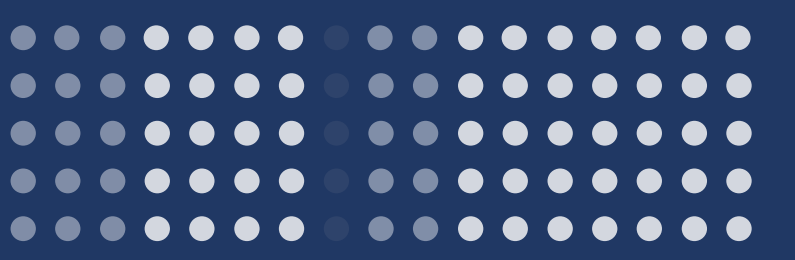


# Patient-Oriented Eczema Measure (POEM) Scores to Measure Patient Improvement with Specialty Medication for Atopic Dermatitis



Dana Simonson, PharmD, BCPS; Ann McNamara, PharmD; Ann Harty, PharmD; Alicia Zagel PhD, MPH

Fairview Pharmacy Services, Minneapolis, MN

## BACKGROUND

- **Severe Atopic Dermatitis (AD)** is chronic or recurrent, widespread skin lesions with persistent itching
  - Compromises a patient's quality of life
  - Often requires management with biologic medications available through specialty pharmacies
- **Patient-Oriented Eczema Measure (POEM)** is a validated patient-reported outcome tool used to monitor AD disease activity and assess response to therapy
  - 7 questions; Scores range 0-28 (**Table 1**)
- Published findings are limited regarding the trajectory of POEM scores and their utility in patient care and clinical decision-making throughout the specialty pharmacy patient journey.

## METHODS

- This was a retrospective cohort of patients with AD diagnosis in our health system-owned specialty pharmacy
  - New to biologic therapy between 4/2017- 12/2021
  - Filled 2+ dupilumab prescriptions within 6-months

**Table 1: POEM Scoring**

- 0 to 2 = Clear or almost clear
- 3 to 7 = Mild eczema
- 8 to 16 = Moderate eczema
- 17 to 24 = Severe eczema
- 25 to 28 = Very severe eczema

- Trends in POEM scores assessed by baseline AD severity:
  - Loess regressions examined inflection points
  - Linear mixed models controlled for effects of inpatient correlation to examine average decrease in POEM scores over time

## OBJECTIVE

To examine trends in AD severity, as measured by POEM scores, among patients with AD during their first 6-months of specialty pharmacy treatment within our health system-owned specialty pharmacy.

## RESULTS

**Table 2: Descriptive Statistics of 154 AD Patients Treated in Specialty Pharmacy**

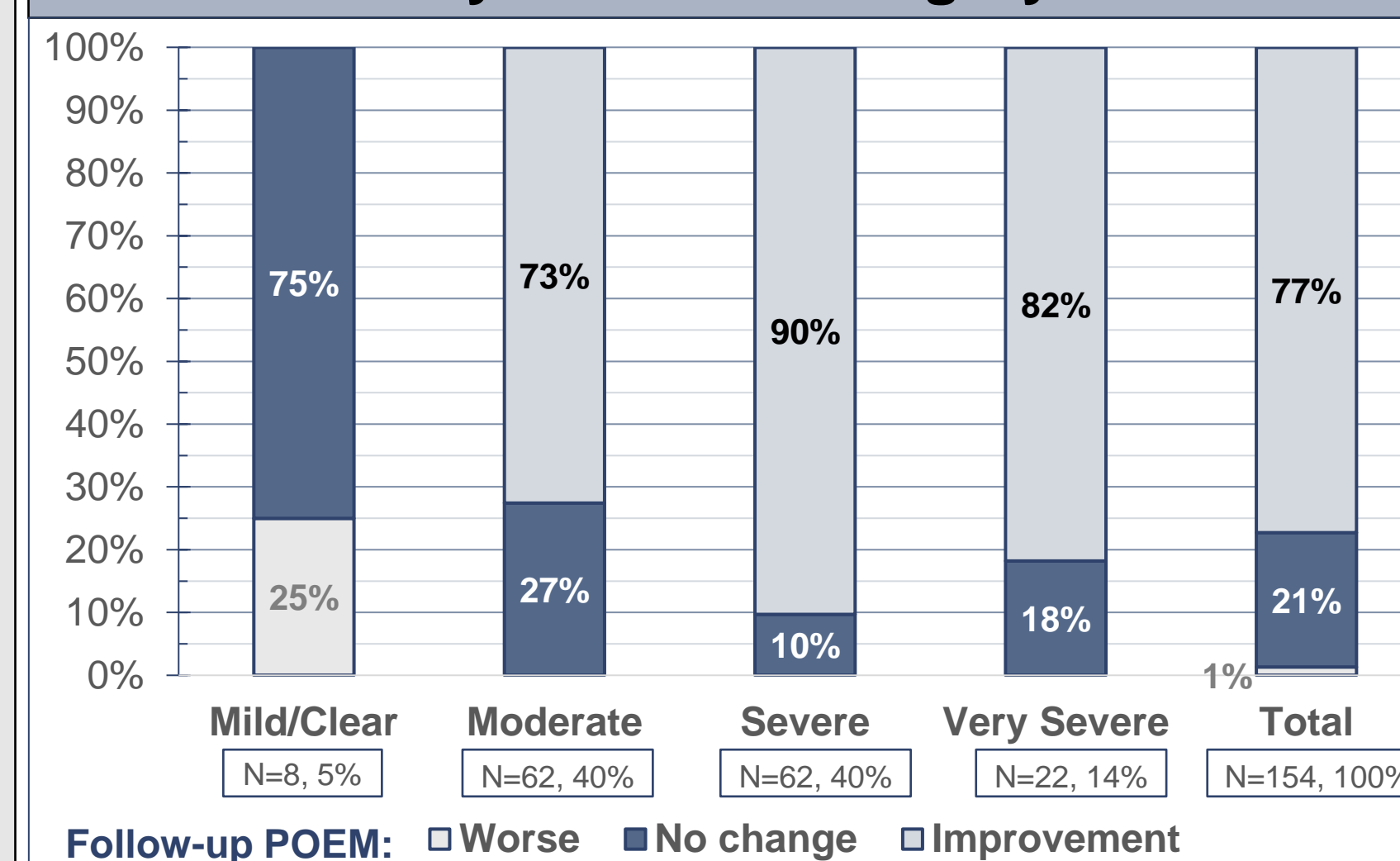
Variable	N (%)		Variable	N (%)	
Age group	< 18 years	32 (21%)	Baseline steroid use	Yes	101 (66%)
	18-64	109 (71%)		No	53 (34%)
	65+	13 (8%)	Baseline POEM Score, median (IQR)	18 (14, 22)	
Gender	Male	63 (41%)	Follow Up POEM Score, median (IQR)	8 (3, 14)	
	Female	91 (59%)	Adherence, median (IQR)	93 (63, 99)	
Percent of Body affected by AD	<10%	39 (25%)	Adherence (PDC)	≥ 80%	98 (64%)
	10-29%	29 (19%)		< 80%	56 (36%)
	30-69%	38 (25%)			
	70-100%	43 (28%)			
	Unknown	5 (3%)			

Among 154 eligible patients (**Table 2**):

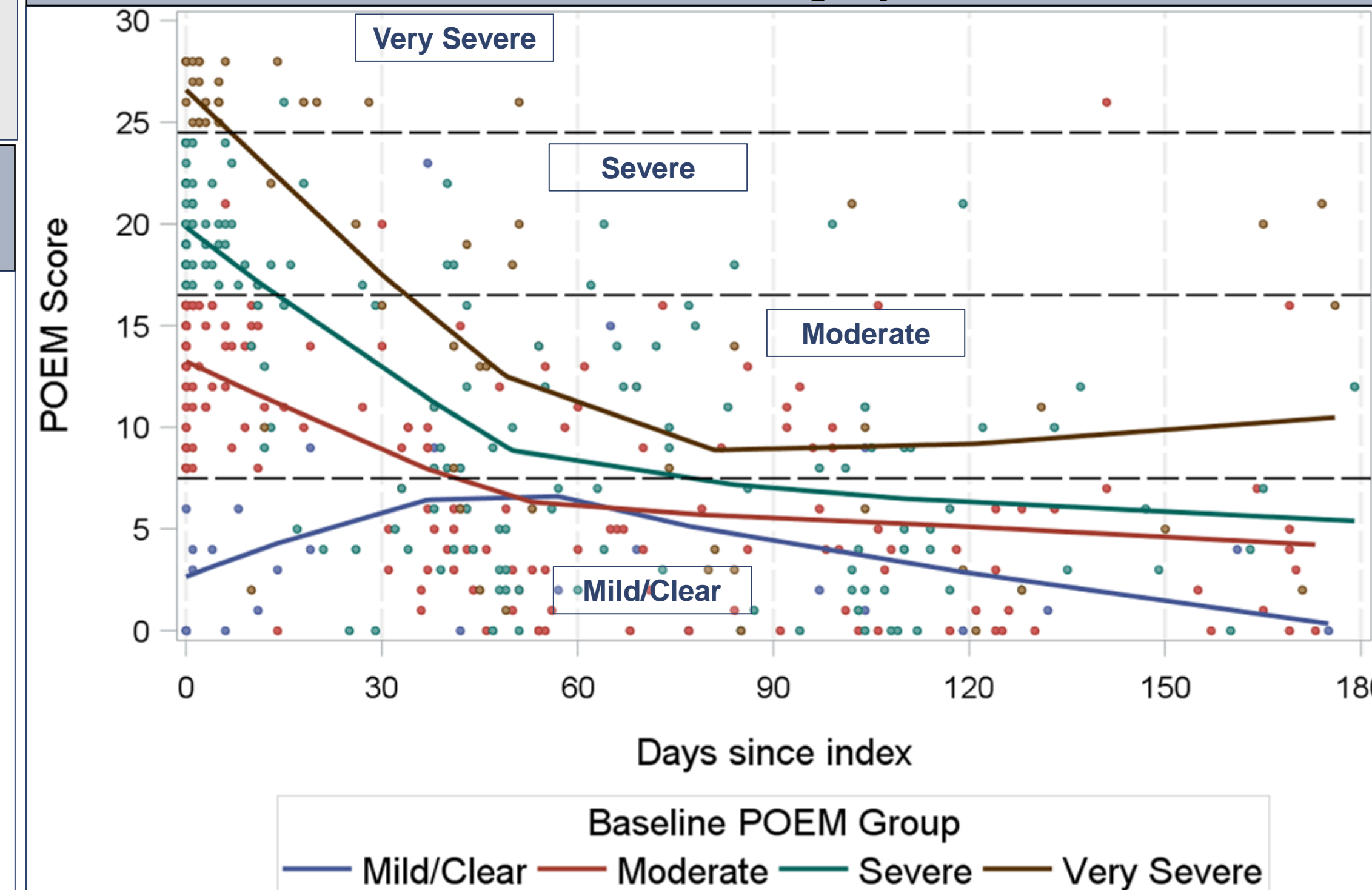
- Median Age: 38 years (IQR: 20-55 years)
- ~ 1/5 patients were pediatric
- ~ 1/3 patients reported ≥70% of their body affected by AD
- Adherence: Median proportion of days covered (PDC): **93%** (IQR: 63-99%)

- **POEM Baseline:** 55% patients **Severe or Very Severe**
- **POEM Follow-up:** 66% of patients **Mild or Clear** within 6-months
  - 77% of patients indicated at least some improvement at follow-up (**Figure 1**)

**Figure 1: Improvement in POEM Scores by Baseline Category**



**Figure 2: Trajectory of POEM Scores over 6-months by Baseline Category**



## RESULTS

- Most dramatic decrease in POEM scores occurred within ~45 days of starting biologic therapy (**Figure 2**)
  - Baseline Higher Severity groups had early, sharp declines in POEM scores that stabilized at Moderate to Mild/Clear between 60 and 90 days follow up
  - Baseline Mild/Clear patients remained fairly stable throughout
- Patients with higher severity baseline disease activity exhibited larger average POEM decreases in follow-up from 1- to 6-months (**Table 3**):
  - Moderate decreased 11 points
  - Severe decreased 20 points
  - Very Severe decreased 21 points

**Table 3: Average Decrease in POEM Score Over Time by Baseline POEM Category**

Baseline POEM Category	Mild/Clear	Decrease at	Decrease at	Decrease at	Decrease at	p-value
		30-days	60-days	90-days	180-days	
Mild/Clear		0.13	0.26	0.40	0.79	0.81
Moderate		1.87	3.75	5.62	11.25	<.0001
Severe		3.28	6.55	9.83	19.66	<.0001
Very Severe		3.57	7.13	10.70	21.40	<.0001

## CONCLUSIONS

- Adult and pediatric patients generally had high AD disease severity when starting dupilumab with a health system-owned specialty pharmacy
- Patients with AD rapidly moved to a lower disease activity
- Minimally clinically important differences in POEM scores have been reported in the literature to range from a decrease in ~3 to 9 points<sup>1</sup>
  - Study patients at baseline Moderate to Very Severe categories all met these thresholds within 1- to 6-months of dupilumab treatment

## REFERENCE

1. Speckaert R, Belpaire A, Herbelet S, Lambert J, van Geel N. Credibility and Generalization of the Minimally Important Difference Concept in Dermatology: A Scoping Review. *JAMA Dermatol.* 2022;158(11):1304-1314. doi:10.1001/jamadermatol.2022.3511



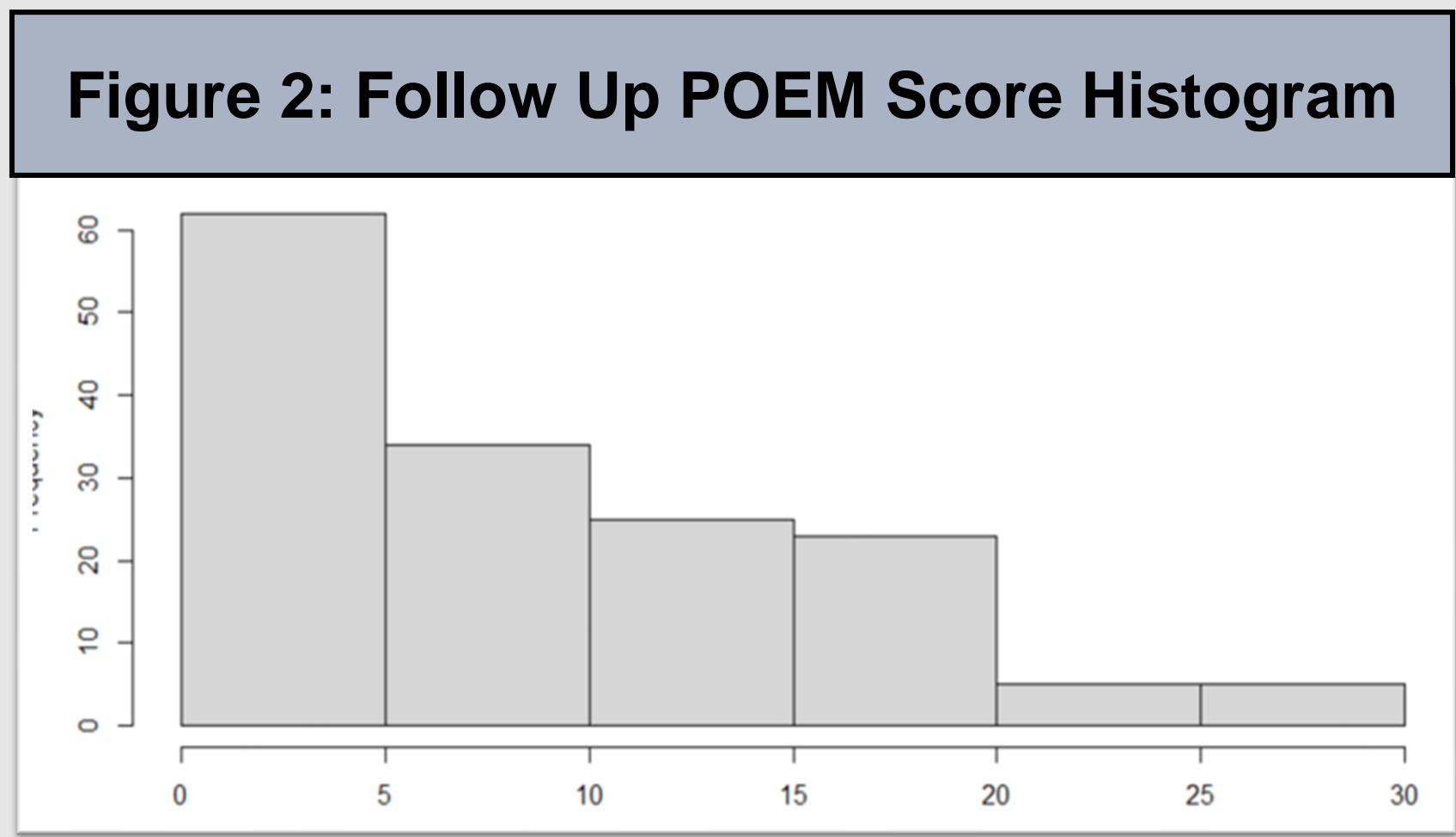
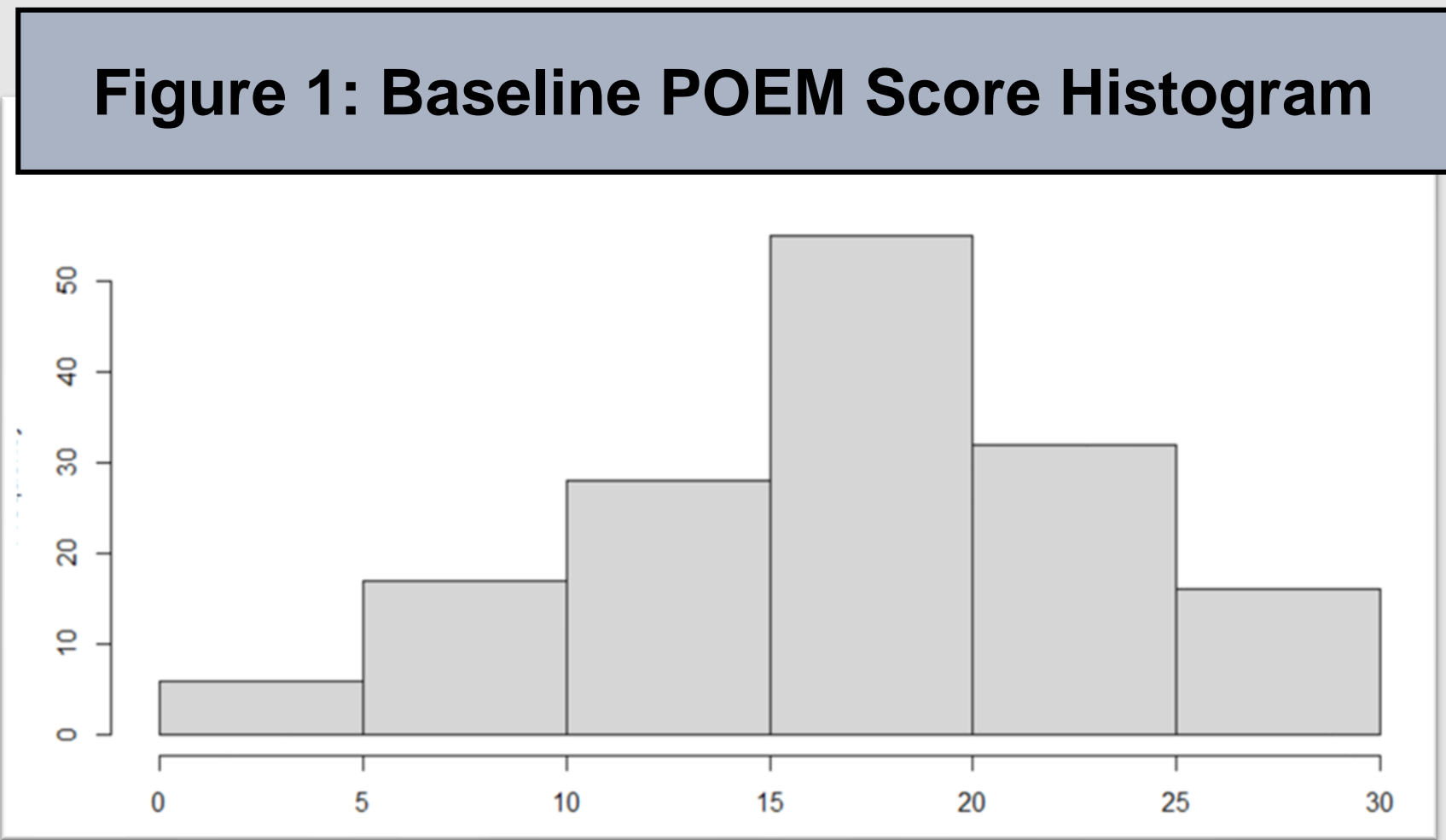
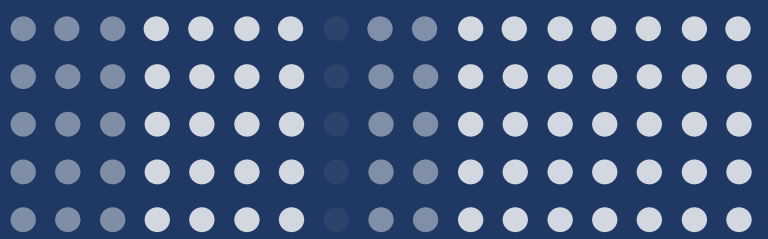


Table 2: Descriptive Statistics		
Variable		Value
Age, years		38 (20, 55)
Age group	< 18 years	32 (21%)
	18-64	109 (71%)
	65+	13 (8%)
Gender	Male	63 (41%)
	Female	91 (59%)
Percent of Body affected by AD	<10%	39 (26.2%)
	10-29%	29 (19.5%)
	30-69%	38 (25.5%)
	70-100%	43 (28.9%)
	Unknown	5 (3.4%)
Baseline steroid use	Yes	101 (65.6%)
	No	53 (34.4%)
Baseline POEM Score	Clear	3 (1.9%)
	Mild	5 (3.2%)
	Moderate	62 (40.3%)
	Severe	62 (40.3%)
	High Severity	22 (14.3%)
Follow Up POEM Score	Clear	8 (3, 14)
	Mild	30 (19.5%)
Follow Up POEM Score category	Mild	42 (27.3%)
	Moderate	57 (37%)
	Severe	20 (13%)
	High Severity	5 (3.2%)
# of POEM scores in 1 year	2	38 (25%)
	3	35 (23%)
	4	40 (26.3%)
	5+	39 (25.7%)
FU POEM Scores in time period=Yes	10-91 days	141 (91.6%)
	91-182 days	90 (58.4%)
	182-274 days	62 (40.3%)
	274-365 days	50 (32.5%)
Adherence, continuous		92.82 (63.33, 98.9)
Adherence	≥ 80%	98 (63.6%)
	< 80%	56 (36.4%)

# Academic Poster Brand Standards

- Helvetica font – mixed use of regular, bold, and italic depending on need.
- CAPS for section headings
- Section boxes can range in width and height ye do not use more than two different width section boxes per poster.
- Keep equal, consistent space balance between section blocks
- Size – this PPT file is 45” x 22.5”, if you need to adjust to another size that is NOT a 2:1 ratio, please contact the designer for assistance as the logo and other features may not resize correctly.
- Main Colors:



RGB: 46, 66, 107



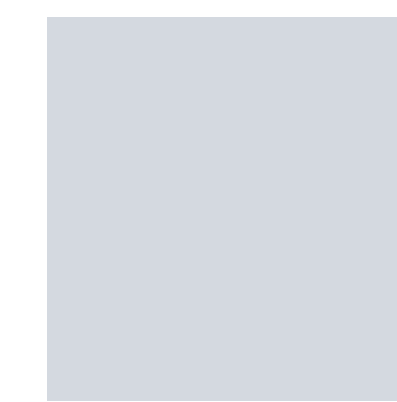
RGB: 84, 105, 138



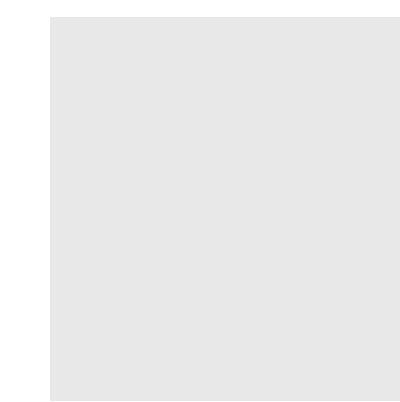
RGB: 127, 143, 167



RGB: 170, 179, 196

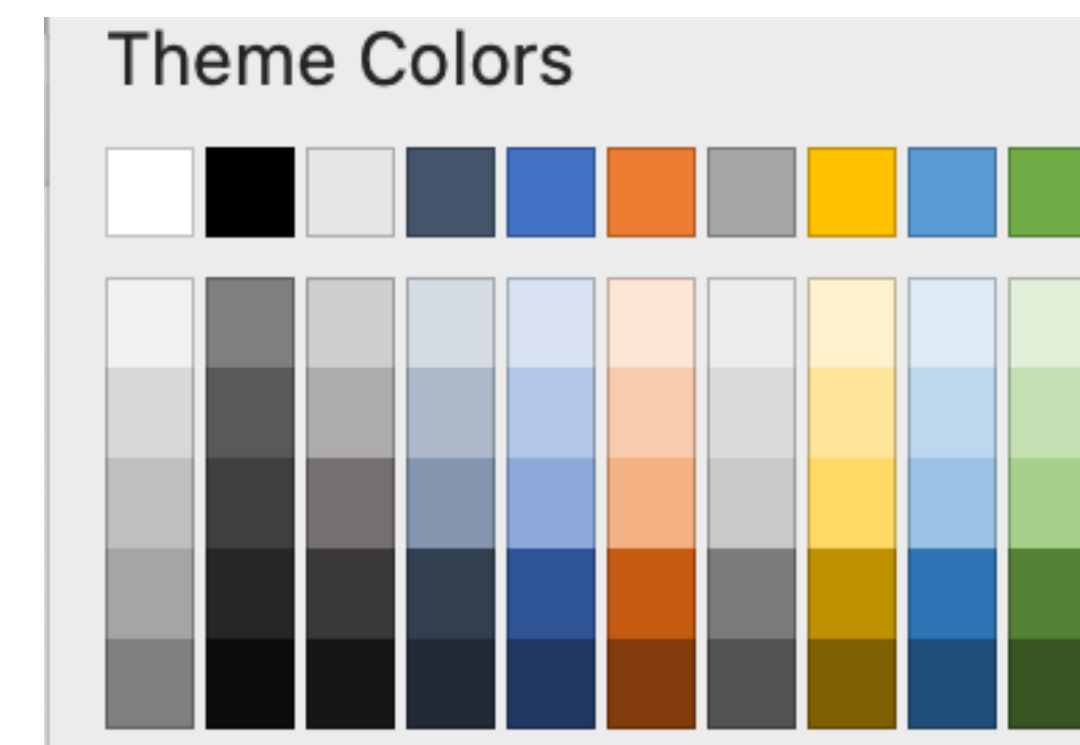


RGB: 212, 217, 224



RGB: 232, 232, 232

- Additional Colors:

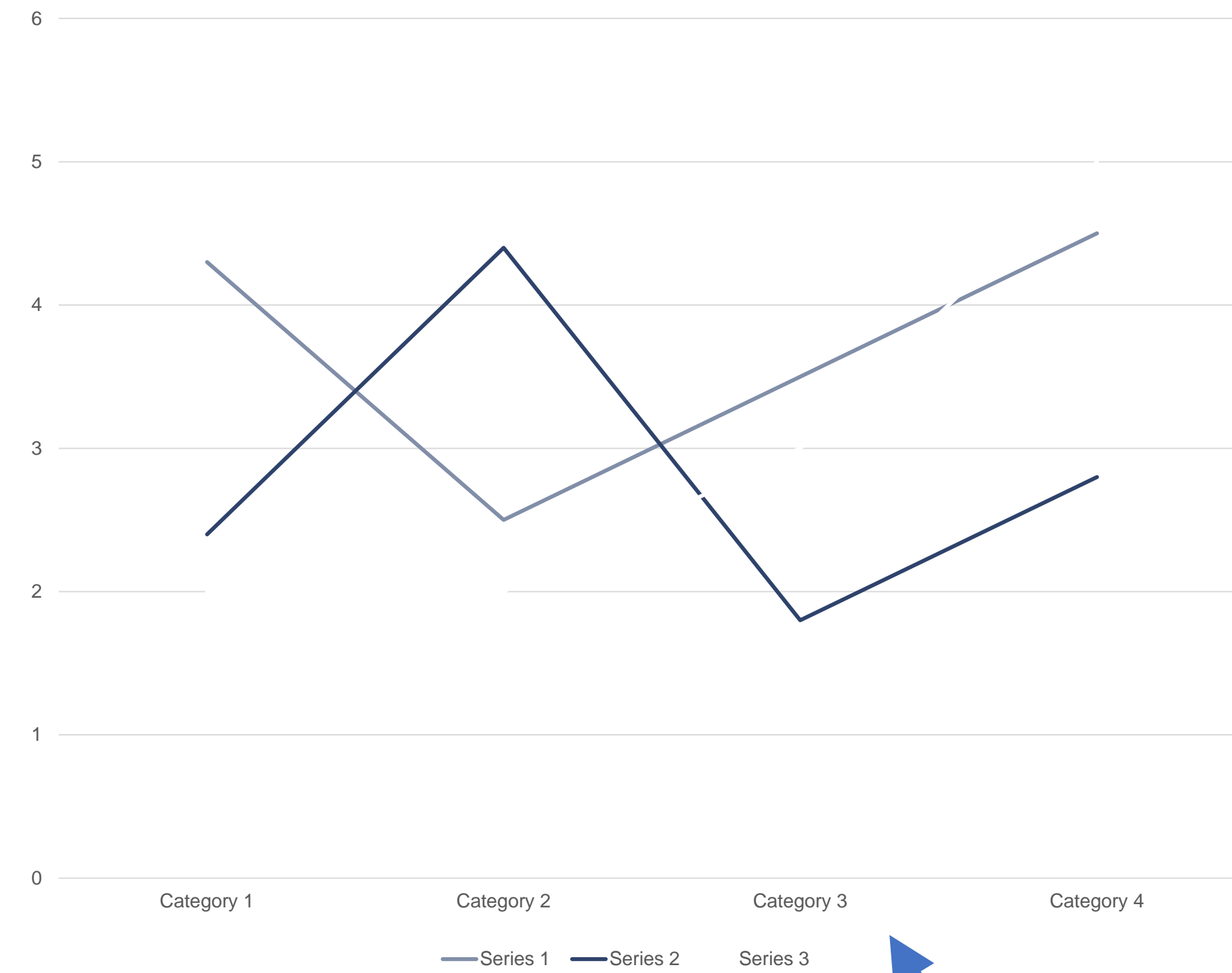


- Fairview logo – see Fairview Brand Standards. (essentially there must be sufficient white space around the logo) Use the letter ‘e’ from the Fairview logo to measure appropriate amount of white space around the Fairview logo.

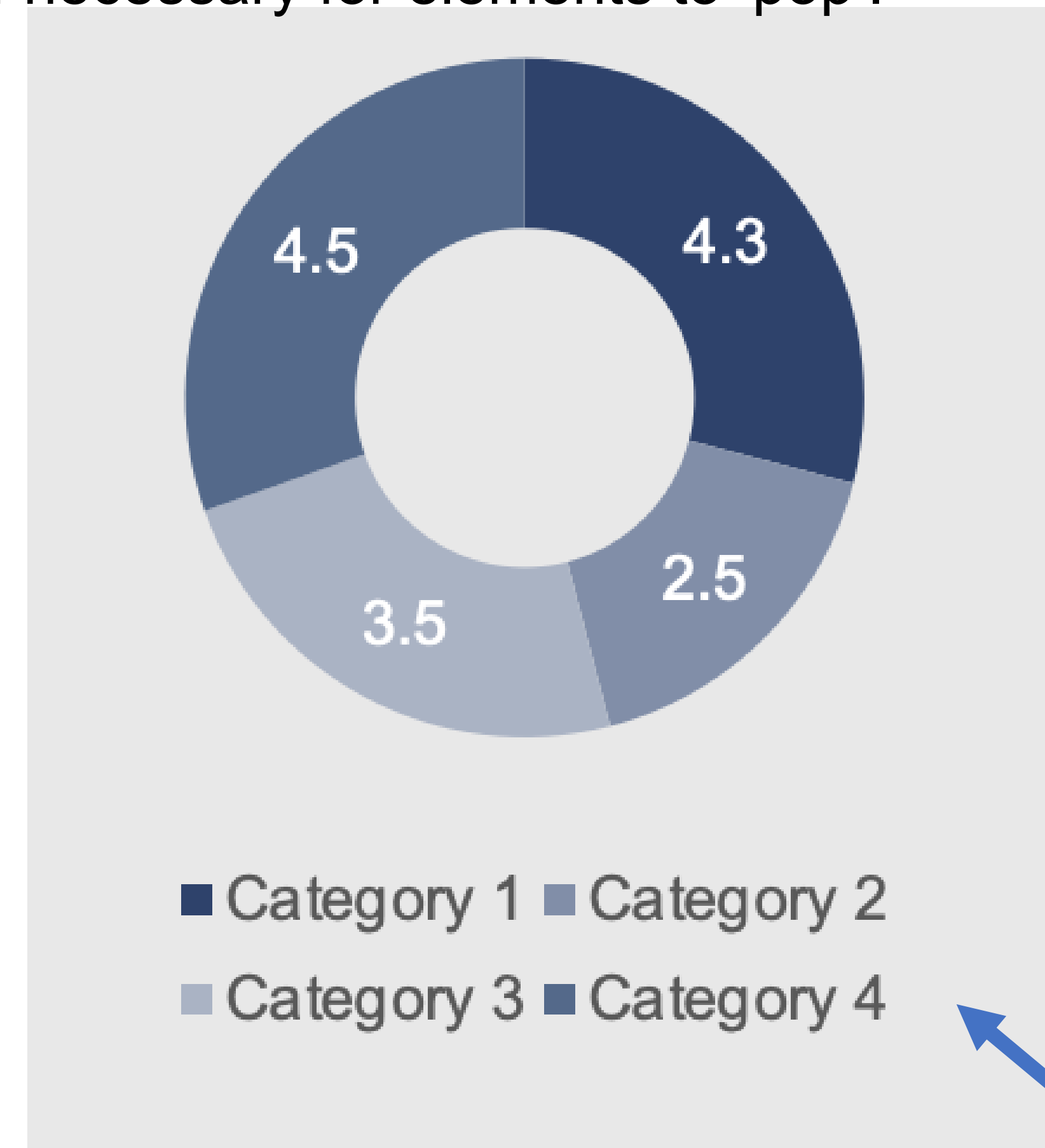


# Graph/Chart samples

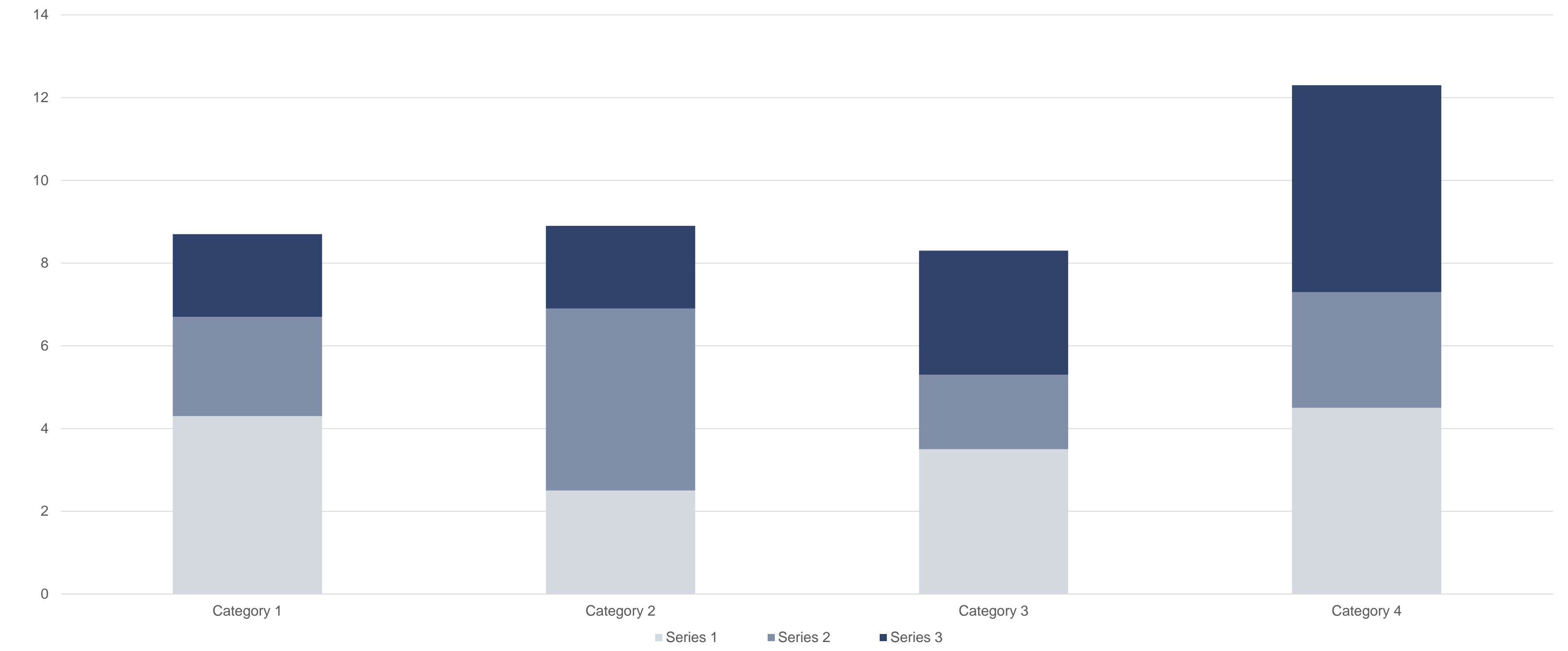
Graph, chart and table styles can be of the author's choice as long as they use the brand colors and font. Use an appropriately sized font for category and element titles that is large enough to ensure readability. Add color boxes behind charts if necessary for elements to 'pop'.



Font size too small



Good font size



Font size too small

Lorem Ipsum	Lorem Ipsum	Lorem Ipsum	Lorem Ipsum	Lorem Ipsum
Duis autem vel	Duis autem vel	Duis autem vel	Duis autem vel	Duis autem vel
Duis autem vel	Duis autem vel	Duis autem vel	Duis autem vel	Duis autem vel
Duis autem vel	Duis autem vel	Duis autem vel	Duis autem vel	Duis autem vel
Duis autem vel	Duis autem vel	Duis autem vel	Duis autem vel	Duis autem vel