

# Disproportionate Impact Analysis 2023

Institutional Research and Planning

Palomar College

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# Introduction

The purpose of this study was to examine the equity of outcomes experienced by students at Palomar College. AB 504 directed California Community Colleges to conduct a disproportionate impact analysis using data disaggregated by specific demographic variables (described in Methodology section) in order to assess student equity. This analysis was done to help gauge the impact of the college's efforts in achieving equity among students on a particular set of outcomes: Successful Enrollment, Retention, Completed Transfer-level Math and English, Completion, and Transfer.

This report describes the methodology used to determine disproportionate impact, assesses the progress made on achieving student equity as indicated by these metrics, and summarizes the disproportionate impacts identified for Palomar students. Appendix A contains an explanation of how disproportionate impact was determined.

# Methodology

## Data

Disproportionate impact refers to when a subpopulation experiences an appreciably lower outcome rate on a particular measure relative to the rest of the population. AB 504 mandated that the California Community Colleges assess disproportionate impact by (a) examining specific success indicators (b) disaggregated by a specified list of subpopulations (c) following a common methodology. The California Community College Chancellor's Office (CCCCO) has prescribed the methodology to be used, and made datasets available to the colleges that meet these conditions. The CCCCO provided a student equity dataset in 2022 that allowed for the identification of disproportionate impacts at Palomar. The CCCCO provided an updated dataset in 2023 which allows the college to monitor the progress made on these metrics by the disproportionately impacted subpopulations. This data was derived from the collective MIS data submissions of the colleges as well as data from CCCApply. The methodology for determining disproportionate impact is described in Appendix A. Four important aspects of this student equity dataset should be noted.

**System-wide Perspective**. Because the CCCCO compiled MIS data from all colleges in the system, the dataset was constructed with a system-wide perspective. That is, data for students who attended multiple colleges is aggregated so that the data reflects a more complete picture than is possible using only local college data.

**Aggregated Data**. The CCCCO provided data in aggregated form rather than individual-level data. Therefore, disaggregation of this data at levels beyond what is presented in this report is not possible.

**Cohort View**. The CCCCO adopted a cohort view in the construction of this dataset. Consequently, all subpopulations are examined from the same starting point for a given metric, allowing for a more effective assessment of differences among subpopulations.

**Baseline Years**. The baseline year for each metric is the most recent year for which complete data is available. Because different metrics allow for different spans of time for completion, the baseline year differs by metric. For example, the Completion of Transfer-level Math and English metric requires math and English to be completed within the student's first academic year, so the baseline year is 2020-21. However, the Completion metric allows for three years for the student

Table 1. Baseline Year by Metric								
Metric	Baseline							
Successful Enrollment	2020-21							
Retention	2019-20							
Transfer-Level Math and English	2020-21							
Completion	2017-18							
Transfer	2016-17							

to complete a degree or certificate, so the baseline year for this metric is 2017-18. The baseline year for each metric is displayed in Table 1.

#### **Metrics**

The five student equity metrics included in the dataset dovetail with the student journey. These metrics are described below:

- Successful Enrollment Of applicants who indicated an intent to enroll at Palomar in a given year, excluding special admit students, the percent who enrolled at Palomar in the next year.
- **Retention** Of first-time students enrolled in a primary term, the percent who enrolled in the subsequent primary term.
- **Completed Transfer-level Math and English** The percent of students who completed both transfer-level math and English in their first academic year of credit enrollment within the district.
- Completion The percent of first-time cohort students who Attained the Vision for Success Completion (earned a Chancellor's Office approved certificate or associate degree) within three years.
- **Transfer** Of students in a first-time cohort who earned 12 or more units at Palomar and exited the college in the selected year, the number of students who enrolled in any four-year postsecondary institution in the subsequent year.

## **Data Disaggregation**

The analysis involved examination of each of the success metrics described above by the subpopulations below, split out by gender. Most of these subpopulations were specified in AB 504, though the data also allows for disaggregation by first generation status.

- Race and Ethnicity
  - o American Indian or Alaska Native
  - o Asian
  - Black or African American
  - o Hispanic
  - Native Hawaiian or Other Pacific Islander
  - o White
  - Some Other Race
  - More Than One Race
- LGBT
- Economically Disadvantaged
- First Generation Status
- Foster Youth
- Disability Status
- Veterans
- Homeless

In the initial analysis these subpopulations were assessed for disproportionate impact for the metrics at an overall level, and further disaggregated by gender. However, the analysis of successful enrollment was limited to (a) race and ethnicity and (b) gender. Unlike the other metrics, successful enrollment relies, in part, on data from CCCApply. Data from CCCApply, alone, is not sufficient to classify students into the other subpopulations effectively. Therefore, the data from the CCCCO does not include disaggregation for the other subpopulations on the Successful Enrollment metric.

# **Disproportionate Impacts from the Baseline Analysis**

#### Previous Analysis

Baseline data from the 2022 student equity dataset was used previously in order to determine which subpopulations were disproportionately impacted on the five student equity metrics described above. Three principles were used to give focus to that analysis. First, because subpopulations with particularly low Ns do not provide stable statistics, populations of less than

40 were excluded from the analysis. Additionally, populations that have not been historically underrepresented, such as white males, were not focused on in the analysis. Finally, non-definitive categories, such as "Unknown," were excluded from the analyses.

For the previous disproportionate analysis, each metric was examined to determine if any subpopulations at the college experienced disproportionate impact on that metric. Through that analysis, a number of subpopulations were identified as disproportionately impacted on the student equity metrics. The results of that analysis were described in detail in last year's report, *Student Equity Plan Disproportionate Impact Analysis 2022*. For the present report, these disproportionate impacts were re-examined with data updated for the 2023 dataset to determine what progress had been made on these inequities.

# Data Changes for the 2023 Student Equity Dataset

There were some changes to the student equity data in 2023 from the 2022 dataset which provided the initial baseline results. These changes mean that the baseline outcome rates identified in the previous report had to be adjusted. The key changes are described below.

## Successful Enrollment

Cases of confirmed fraud were eliminated from the denominator of the Successful Enrollment metric. This reduced the number of applicants included in the denominator. In the course of making these changes, the CCCCO found a coding error that incorrectly impacted some applicants. This adjustment resulted in a significant change in the Successful Enrollment rates across all subpopulations. While these adjustments affected the data for colleges throughout the system, the extent to which they impacted the data varied by college.

# Transfer to a Four-year Institution

There were two relevant changes that impacted the transfer metric: one to the metric definition and one to the process of matching data with the UC, CSU, and National Student Clearinghouse systems. The numerator of the transfer metric now includes the condition that the student exited the system and had earned 12 or more units. Additionally, more information was exchanged between the systems resulting in a more effective matching process. These factors had a minor net impact on the transfer metric.

Variations in the data, including those described above, resulted in changes in some disproportionate impact outcomes, especially for the successful enrollment metric. Specifically, for the Successful Enrollment metric, two subpopulations (Filipino Female students and Female students) that had initially been identified as disproportionately impacted revealed no disproportionate impact in the updated data, and two subpopulations (American Indian or Alaska Native students and Non-binary students) that had not been identified as disproportionately impacted as disproportionately impacted as disproportionately impacted.

# Results

## **Overall Metrics**

The different metrics have different timeframes for determining whether or not the outcome was achieved, and therefore different baseline years for each metric. Table 2 displays overall outcome rates for both the baseline year of the metrics and the year following the baseline year. Successful Enrollment, Retention, Completion, and Transfer rates all increased over their baseline rates.

Table 2. Overall Metrics from Baseline									
		Y							
				Change from					
Metric	Baseline	Baseline	Year 2	Baseline					
Successful Enrollment	2020-21	7.4%	19.2%	11.8%					
Retention	2019-20	66.9%	68.4%	1.5%					
Transfer-Level Math and English	2020-21	12.3%	12.4%	0.1%					
Completion	2017-18	9.7%	11.0%	1.3%					
Transfer	2016-17	22.7%	26.1%	3.4%					

#### **Successful Enrollment**

The data for the Successful Enrollment metric changed significantly for the 2023 build of the equity dataset due to changes in methodology and the correction of a programming error. These data also show a dramatic decrease in numbers of applicants from the baseline year to one year after baseline. These factors suggest that the Successful Enrollment rates should be viewed with caution until they exhibit greater stability.

The Successful Enrollment metric varied considerably from the baseline to Year 2 of the data. Each of the subpopulations that were identified as having experienced disproportionate impact showed increases from the baseline levels, as indicated in Table 3. The table shows the Successful Enrollment outcome rate for the subpopulation as well as the comparison rate, which is the Successful Enrollment rate for everyone outside the target population. For example, at baseline the Successful Enrollment rate for American Indian or Alaska Native students was 0.8%. Successful Enrollment for all other students aside from American Indian or Alaska Native students was 7.7%. That 6.9 percentage point gap represents a disproportionate impact for American Indian or Alaska Native students. In Year 2, the Successful Enrollment rate rose from 0.8% to 9.4%, but the overall rate increased even more, so American Indian or Alaska Native students remained disproportionately impacted.

Table 3. Disproportionate Impact on Successful Enrollment in the First Year									
			Baseline		Year 2				
			Successful	Comparison			Successful	Comparison	
	DI	N	Enrollment Rate	Rate	DI	N	Enrollment Rate	Rate	
American Indian/Alaska Native	Yes	2,220	0.8%	7.7%	Yes	106	9.4%	19.2%	
Asian	Yes	3,107	4.7%	7.6%	No	687	17.3%	19.2%	
Black or African American	Yes	2,467	3.7%	7.6%	No	513	16.8%	19.2%	
Pacific Islander or Hawaiian Native	Yes	1,868	0.9%	7.6%	No	79	13.9%	19.2%	
Female	No				Yes	7,819	18.0%	20.2%	
Non-Binary	Yes	281	3.6%	7.4%	No	120	16.7%	19.2%	

#### Retention

Table 4 displays the Retention rates (persistence from first primary term to second primary term) for each subpopulation that has been disproportionately impacted in the baseline or subsequent year. Looking back at Table 2, the overall Retention rate increased by 1.5 percentage points. Table 4 reveals some positive and some negative changes in Retention rates. The Retention rate for Black or African American students went from 53.9% in the baseline year to 63.0% in the subsequent year. On the other hand, Retention went from 57.6% to 55.7% for LGBT students, showing a slight decrease in Retention. In the baseline year, Hispanic male students were disproportionately impacted, having a Retention rate of 61.8%. In Year 2, Hispanic students overall were disproportionately impacted with a Retention rate of 66.1%.

Table 4. Disproportionate Impact on Persisted First Primary Term to Subsequent Primary Term (Retention)								
			Baseline		Year 2			
			Persisted to				Persisted to	
			Subsequent				Subsequent	
			Primary Term	Comparison			Primary Term	Comparison
	DI	N	Rate	Rate	DI	N	Rate	Rate
Black or African American	Yes	193	53.9%	67.3%	No	119	63.0%	68.5%
Hispanic Male	Yes	1,486	61.8%	68.6%	No	1,117	62.4%	
Hispanic	No				Yes	2,237	66.1%	70.6%
First Generation Student	Yes	2,334	63.8%	69.0%	Yes	1,663	62.4%	71.8%
Homeless	Yes	66	53.0%	67.1%	No	48	68.8%	68.4%
LGBT	Yes	231	57.6%	67.3%	Yes	183	55.7%	68.9%
Perkins								
Economically	Yes	1,766	64.4%	68.0%	No	1,240	69.1%	68.1%
Disadvantaged Male								
Veteran	Yes	162	50.6%	67.4%	No	38	65.8%	68.4%

## **Transfer-level Math and English**

Overall, the proportion of first-time students completing both transfer-level Math and English and remained unchanged. However, Table 5 shows that for most of the subpopulations disproportionately impacted on the metric, Completion of Transfer-level Math and English rates increased. The gap for Hispanic students, though, widened by 1.5 percentage points. That is, at baseline the gap between Hispanic students and their comparison rate was 3.7 (14.1% - 10.4%) percentage points, and at Year 2 it increased to a 5.2 percentage point gap.

Table 5. Disproportionate Impact on Completed Both Transfer-Level Math and English in the First Year									
	Baseline					Year 2			
		Completed Both					Completed Both		
			Transfer-Level				Transfer-Level		
			Math and English Comparison				Math and English	Comparison	
	DI	N	Rate	Rate	DI	N	Rate	Rate	
Black or African American	Yes	119	5.0%	12.5%	No	106	12.3%	12.4%	
Hispanic	Yes	2,237	10.4%	14.1%	Yes	2,027	9.8%	15.0%	
First Generation Student	Yes	1,663	7.2%	15.2%	Yes	1,398	7.7%	14.9%	
Homeless	Yes	48	4.2%	12.4%	No	10	10.0%	12.4%	
LGBT	Yes	183	4.4%	12.7%	Yes	189	7.9%	12.6%	

## Completion

The overall rate for completion increased from 9.7% in the baseline year to 11.0% in the subsequent year. Table 6 shows that modest gains in Completion were made for all the disproportionately impacted subpopulations except for Foster Youth students. Similarly, the gaps in Completion rates generally decreased slightly for each of the other disproportionately impacted subpopulations except for Foster Youth.

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Table 6. Disproportionate Impact on Attained the Vision for Success Definition of Completion within Three Years									
	Baseline				Year 2				
		Attained Vision				Attained Vision			
			for Success	Comparison			for Success	Comparison	
	DI	N	Completion Rate	Rate	DI	N	Completion Rate	Rate	
American	Yes	49	2.0%	9.8%	Yes	45	4.4%	11.1%	
Indian/Alaska Native									
Black or African American	Yes	220	4.5%	9.9%	Yes	206	6.3%	11.2%	
Hispanic	Yes	2,828	7.6%	11.6%	Yes	3,035	9.2%	12.8%	
First Generation Student Male	Yes	1,966	6.3%	11.4%	No	1,859	8.0%		
First Generation Student	No				Yes	3,549	10.1%	12.2%	
Foster Youth	Yes	383	5.2%	10.0%	Yes	837	3.7%	12.2%	
LGBT Male	No				Yes	40	2.5%	11.1%	
Perkins									
Economically	No				Yes	1,959	7.9%	12.5%	
Disadvantaged Male									
Perkins									
Economically	Yes	3,935	8.9%	11.2%	No	3,847	10.4%	12.0%	
Disadvantaged									
Veteran	Yes	301	5.0%	10.0%	No	242	8.3%	11.1%	

#### Transfer

The three-year Transfer rates for the populations disproportionately impacted on this metric are shown in Table 7. Overall Transfer rates increased by 3.4 percentage points, and Transfer rates for each of the disproportionately impacted subpopulations except Economically Disadvantaged students increased from the baseline to the subsequent year. The largest gain was for Asian students, who increased their Transfer rate by 8.3 percentage points. However, the Asian subpopulation is the only one that decreased the gap in their outcome rate compared to their outgroup. The gap increased for Hispanic students by 2.0 percentage points.

Table 7. Disproportionate Impact on Transferred to a Four-Year Institution within Three Years									
	Baseline					Year 2			
				Comparison				Comparison	
	DI	N	Transfer Rate	Rate	DI	N	Transfer Rate	Rate	
Student Who									
Received Disability	Yes	78	14.1%	22.9%	No	131	15.3%		
Services Male									
Student Who									
Received Disability	No				Yes	199	18.1%	26.7%	
Services									
Asian	Yes	169	16.6%	23.1%	No	173	24.9%	26.2%	
Hispanic	Yes	1,282	16.2%	28.2%	Yes	1,379	18.6%	32.6%	
First Generation	Ves	1 468	10 3%	26.4%	Ves	1 827	23.2%	30.6%	
Student	105	1,400	17.570	20.470	103	1,027	23.270	50.070	
Foster Youth	No				Yes	184	19.0%	26.6%	
Perkins									
Economically	Yes	932	20.2%	23.9%	No	1,120	20.7%		
Disadvantaged Male									
Perkins									
Economically	No				Yes	2,011	23.8%	30.9%	
Disadvantaged									

#### **Equity Metrics Across Years**

The results presented here reveal a considerable amount of disproportionate impact for the student equity metrics for both the baseline and subsequent year. Table 8 summarizes these effects, showing that each metric revealed disproportionate impacts on several subpopulations. In the table, the subpopulations that were disproportionately impacted for a given metric are listed below that metric. Where only one gender was disproportionately impacted, that gender is identified by an initial in parentheses. Where the subpopulation was disproportionately impacted for both the baseline and Year 2, the subpopulation is bolded. In some cases disproportionate impact was identified for only part of a subpopulation for one year, and the entire subpopulation for another. In these cases a slash is used to differentiate the subpopulations. For example, on the Retention metric Hispanic male students were disproportionately impacted in the baseline year, but only Hipanic students overall were disproportionately impacted in Year 2.

The table reveals consistent disproportionate impact for Hispanic students and for First Generation students, though there is quite a bit of overlap between these categories. American Indian or Alaska Native students were disproportionately impacted at both the baseline and Year 2 for two equity metrics, and Black or African American Students were disproportionately impacted across four metrics, including at both baseline and Year 2 for the Completion metric.

Table 8. Disproportionately Impacted Subpopulations at Baseline Summary									
		Transfer-Level Math							
Successful Enrollment	Retention	and Eng.	Completion	Transfer					
				DSPS/DSPS (M)					
American			American Indian/Alaska						
Indian/Alaska Native			Native						
Asian				Asian					
Black or African	Black or African	Black or African	Black or African						
American	American	American	American						
	Hispanic (M)/Hispanic	Hispanic	Hispanic	Hispanic					
Pacific Islander or									
Hawaiian Native									
	<b>First Generation</b>	<b>First Generation</b>	<b>First Generation/First</b>	<b>First Generation</b>					
	Student	Student	Generation Student (M)	Student					
			<b>Foster Youth</b>	Foster Youth					
Female									
Non-Binary									
	Homeless	Homeless							
	LGBT	LGBT	LGBT Male						
				Economically					
	Economically		Economically	Disadvantaged/ Econ.					
	Disadvantaged (M)		Disadvantaged	Disad. (M)					
	Veteran		Veteran						
		$P = \frac{1}{1} $	× 1 1						

Note: Successful Enrollment was disaggregated by Race and Ethnicity and Gender only.

Note: Bolded subpopulations were disproportionately impacted on the indicated metric for both the Baseline and Year 2.

# Summary

The five student equity metrics were examined to determine where disproportionate impacts existed for Palomar College students. Successful Enrollment, Retention, Completion, and Transfer rates all increased in Year 2 over their baseline rates. However, the analysis reveals that two thirds of the disproportionate impacts identified in the baseline year were still present in Year 2, and a few new disproportionate impacts arose in Year 2.

The subpopulations that experienced disproportionate impact across the most outcomes were Hispanic students, Black or African American students, First Generation students, and Economically Disadvantaged students. Overall, Hispanic students and First-generation students did not see a reduction in the disproportionate impact they experienced. Black or African American students and Economically Disadvantaged students, however, did experience a narrowing of the equity gaps that they faced.

Two caveats should be considered when reviewing these results. First, the Successful Enrollment data has changed so much that the related results should be viewed with considerable caution until this data has stabilized. Second, since there is only one year of data following the baseline, it is as yet unclear how much the differences between the years reflects actual change versus random variability in the metrics.

# **Appendix A – Determining Disproportionate Impact**

The CCCCO has prescribed the Percentage Point Gap Minus One (PPG -1) methodology to determine if a given subpopulation has experienced disproportionate impact. The methodology entails, for each subpopulation, (a) computing a percentage point gap, (b) computing a threshold, and then (c) comparing the percentage point gap to the threshold to determine if disproportionate impact exists for that subpopulation.

#### Computing the PPG -1

The PPG -1 is computed by identifying the outcome rate for the target population, and subtracting that outcome rate from the outcome rate for that population's outgroup (everyone who is not in that subpopulation). Using Retention for Hispanic male students as an example, male Hispanic students had a retention rate of 62%. All non-Hispanic male students serve as their outgroup. This outgroup had a retention rate of 69%. So, the PPG -1 for male Hispanic students on the Retention metric is 69% - 62% = 7%.

#### Computing the Threshold

The threshold is based on a calculation of the margin of error for the target group on the given metric. Specifically, it is the greater of the margin of error or 2%. That is, if the calculated margin of error is less than 2%, then the threshold is 2%. If the margin of error is 2% or greater, the margin of error serves as the threshold. In the example of Retention for male Hispanic students, the margin of error is 2.5%, so the threshold for this assessment is the margin of error (2.5%) for the target population on that metric.

#### Comparing PPG -1 to the Threshold

The PPG -1 is compared to the threshold. If the PPG -1 is greater than the threshold, then disproportionate impact is present. Continuing with the previous example, because the PPG -1 (7%) is greater than the threshold (2.5%), the conclusion is that male Hispanic students were disproportionately impacted on the Retention metric.



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