FA22 SRS EAB Overlap and Performance

*Note: The SP23 persistence rates in this report are based on older methodology and will not align with SP23 persistence rates once the new methodology is implemented.

Findings

- In the first-time, full-time cohort of undergraduates entering CSU in FA22, 811 of the 5,358 (15%) were students recommended for support (SRS). This share corresponds with trends in prior cohorts.

- The FA22 cohort is the first for which we captured EAB support priority level data (e.g., Low, Moderate, and High) at three distinct time points in the semester: (1) Census, (2) after Early Performance Feedback (EPF) had been entered, and (3) at end-of-term (EOT). We examine the overlap between these priority levels, SRS status, and academic performance outcomes in this report.

- **Altogether, the evidence for SRS students suggests that a switch from using the SRS flag to using the EAB support priority level as an indicator of a student needing support/intervention is best if it occurs at EOT in the student's first semester at CSU, as opposed to mid-semester (EPF).**

- 99% of students (SRS and non-SRS) have the same EAB support priority level at Census as they do at EOT, suggesting that EPF data is not weighed heavily, if at all, in the EAB predictive modeling. Conversely 45% of students experience a change in their EAB support priority level between EPF and EOT. (Figure 1)

- Assuming the "High" priority label is the only one that matters in identifying a student needing additional support or intervention, if we were to use a student's EAB support priority level at EPF, we risk *under-identifying* the number of SRS students in need of support by 186 when EOT comes around. (Table 1)
    - Between EPF and EOT, the relative share of SRS students in the High priority group increases the most, from 2.5% to 25.4% (20 students to 206 students).
    - Meanwhile the share of SRS students in the Low priority group decreases 16.5 PP from 34.5% to 18% (280 students to 146 students).

- The overall FA22 academic probation rate among SRS students is 26% compared to 10.7% among non-SRS. The overall SP23 persistence rate among SRS is 92.2% compared to 95.7% among non-SRS.

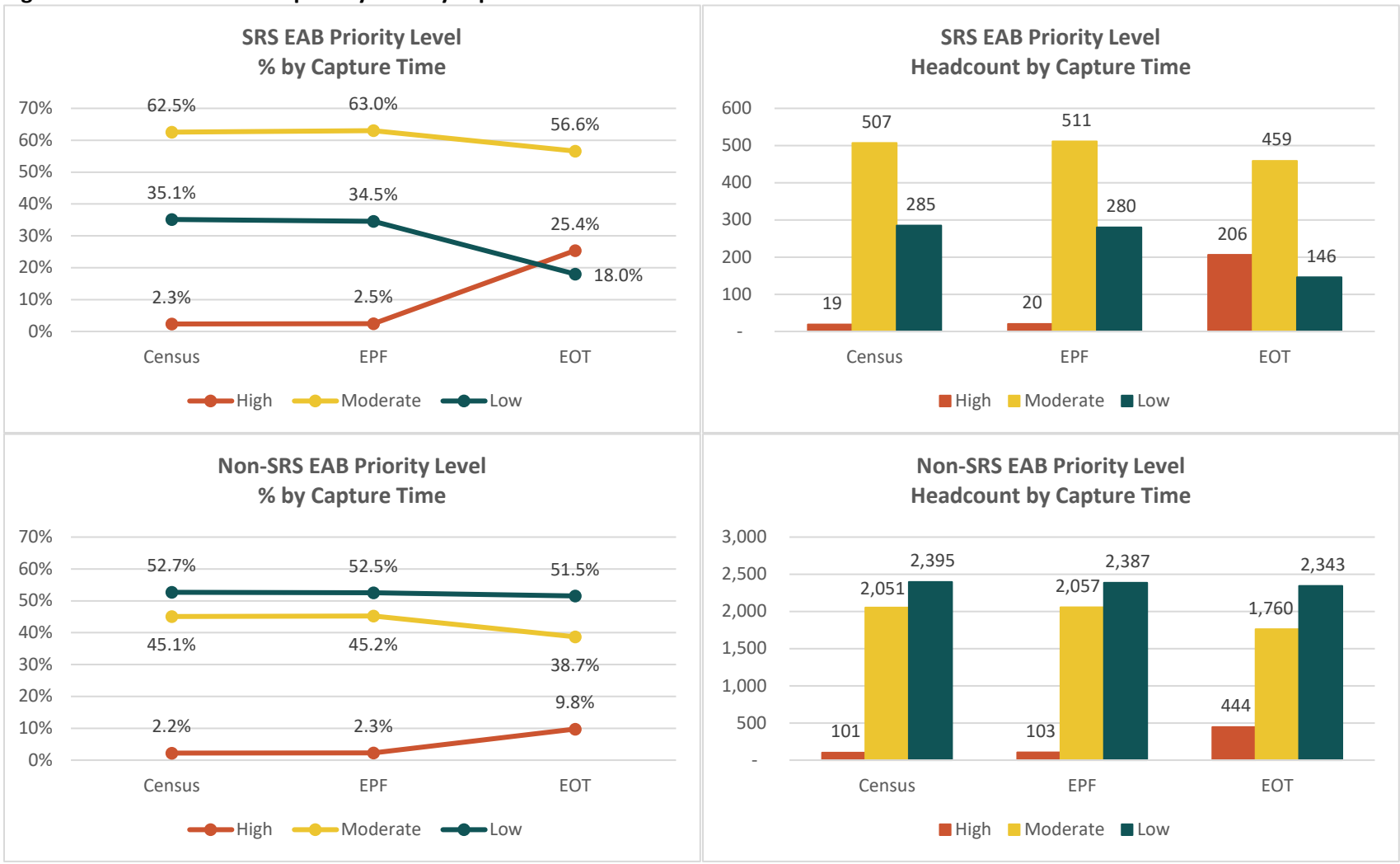
- A student's EAB support priority level is most predictive of their eventual FA22 academic probation rate and of their subsequent persistence to SP23 at the EOT capture time (versus the EPF capture time). (Figures 2 & 3)
    - This is most likely because a student's academic performance in the first semester (e.g., GPA, credits completed, etc.) is weighted heavily in the EAB predictive model, and this data can only be integrated at EOT.

- Among the 63 SRS students who did not persist to SP23, they are more likely to be first generation (by 10.2 PP) and nonresidents (by 7.3 PP) compared to the SRS students who did persist to SP23. They are also more likely to have received no support in the FA22 term by 6.4 PP (65.1% compared to 58.7% among SRS students who persisted to SP23). (Table 2 & 3)

SRS and EAB Priority Level

Figure 1 shows the relative share (%) and corresponding headcount of students within each EAB priority level by unique capture time, separately for FA22 SRS students and Non-SRS students. For example, among the 811 SRS students, at Census 35.1% (285) were Low priority, 62.5% (507) were Moderate priority, and 19 (2.3%) were High priority.

Figure 1: Distribution of EAB priority level by capture time and FA22 SRS status



There are several key takeaways from Figure 1:

- There is very minimal movement in EAB priority level between Census and EPF, but much more between EPF and EOT, especially among the SRS population.
    - Among both SRS and Non-SRS students, 99% of students have the same EAB priority level at Census as they do at EPF.
    - Between EPF and Census, 45% of students experience a change in their EAB priority level.
- Between EPF and EOT, the relative share of students in the High priority group increases the most, especially among the SRS group.
    - Among the SRS group, the increase is from 2.5% to 25.4% (+22.9 PP or 186 students).
    - Among the non-SRS group, the increase is from (2.3% to 9.8% (+7.5PP or 341 students).
- By EOT, 18% of SRS students are considered Low priority (down from 34.5% at EPF); 51.5% of non-SRS students are considered Low priority (about equal to the 52.5% at EPF).

Given the minimal change between Census and EPF, the rest of the discussion focuses on EPF and EOT differences. Table 1 shows the cross tabulation of students' EAB priority levels at EPF and EOT among the FA22 SRS group.

Table 1: Headcount cross tabulation between EPF and EOT priority level among FA22 SRS

FA22 SRS					
		EOT Priority Level			
		High	Moderate	Low	*EPF Total*
EPF Priority Level	High	7	10	3	*20*
	Moderate	148	301	62	*511*
	Low	51	148	81	*280*
	EOT Total	*206*	*459*	*146*	*811*

Table 1 shows that the increase in the number of SRS students who are considered High priority from 20 students to 206 students between EPF and EOT is mostly due to the movement of students from Moderate priority (148) followed by Low priority (51). The remaining 7 represent those who were High priority at EPF as well.

At the same time, it illustrates that the large decline in the share of SRS students who are Low priority at EOT (18% from 34.5% at EPF) is mostly represented by the movement of students from Low to Moderate priority (148 of the 280 at EPF). Meanwhile, 81 students who were Low priority at EPF remain so at EOT, while the other 51 move straight from Low to High priority.

Altogether, when an SRS student does experience a change in their EAB priority level between EPF and EOT, it is most often a shift in their support level by one step, Low → Moderate or Moderate → High (with a notable number of Low → High as well). On net, the Moderate priority levels loses the fewest students (-52), followed by the Low priority level (-134), while the High priority level gains the combined difference (+186).

The information provided in Figure 1 and Table 1 provides important content to consider in the SRS committee's discussions about the timing of *when* the university should switch from using the SRS flag to using the EAB

support priority level in determining whether a student needs additional support or interventions. Framing this content, we should consider the added context of two additional questions as well:

1. What does knowing a students' level of support need – whether it comes from their SRS status or EAB priority level – past Census and before EOT allow us? Is that information actionable mid-semester?

2. How are we operationalizing EAB support priority levels? Are High and Moderate given the same level of attention? Or is High a distinct group?

Figure 1 and Table 1 show the possible disadvantages of moving away from the SRS identification flag to the EAB support priority level early or mid-semester (EPF). In the FA22 term, if we had used the EAB priority level at EPF to identify SRS students in need of support we would have flagged only 20 out of the 811 who originally came in with an SRS flag. If Moderate priority level is considered similarly important, we would have flagged 511 additional SRS students. For the remaining 280 (34.5%), we would have thought them Low priority (and therefore in low need of support).

However, by EOT once term academic performance has been accounted for in the EAB predictive models, we would perhaps think that we had *under-identified* the number of SRS students really needing support by 186 (High priority previously 20, now 206). Conversely, we would perhaps think we had *over-identified* the number of SRS students not really needing support by 134 (Low priority previously 280, now 146). [Of note: if Moderate priority level is considered similarly important to High, we would have *over-identified* 52 SRS students (Moderate previously 511 at EPF and now 459 at EOT), so on net, the number of under-identified students in need of support would be 134 in this context (+186 (High) – 52 (Moderate))].

Given the shifts in FA22 SRS students' EAB support priority levels between EPF and EOT, especially the movement from Low to Moderate and High priority, relying on their EAB priority level at EPF – as opposed to their initial SRS flag – to determine support allocation may risk undercounting the true number of students we believe need support. Only at EOT, once the EAB models can account for students' academic performance do we get a more informed picture of students' likelihood of persisting to the next term (what the EAB predictive model measures) or, symmetrically, their risk of dropping out.

FA22 SRS Performance Outcomes

This section looks at two academic performance outcomes, FA22 academic probation rates and SP23 persistence rates (note the caveat at the top of this report regarding the impending persistence rate methodology change). Though only SRS outcomes are discussed, non-SRS numbers are presented as well for additional context.

The overall FA22 academic probation rate among SRS students is 26% (compared to 10.7% among non-SRS). The overall SP23 persistence rate among SRS is 92.2% compared to 95.7% among non-SRS. Figures 2 and 3 show how these overall rates are broken down by students' EAB support priority level at EPF (left column) and EOT (right column).

Key takeaway from this section: A student's EAB support priority level is most predictive of their eventual FA22 academic probation rate and of their subsequent persistence to SP23 at the EOT capture time (versus the EPF capture time). This is most likely because a student's academic performance in the first semester (e.g., GPA, credits completed, etc.) is a key variable used in the EAB predictive model, and this data can only be integrated into EAB's model at EOT. Furthermore, the differences between SRS and non-SRS students' probation rates and persistence rates by EAB priority level is minimal at EOT, but not so at EPF. Together, these points offer further support for switching from the SRS flag to the EAB support priority flag at EOT and not early or mid-semester.

Figure 2 displays FA22 academic probation rates among SRS (top) and non-SRS (bottom) by EPF capture time (left) and EOT capture time (right). Within each panel, rates (%) and headcounts (N) are displayed separately by EAB support priority level at the capture time of interest. The size of the vertical bar indicates the total number of students in each support priority level (Low, Moderate, High). The **darkly shaded** portion of each bar represents the number of students who were on academic probation in FA22.

Figure 2: FA22 academic probation rates by SRS status, capture time, and EAB support priority level

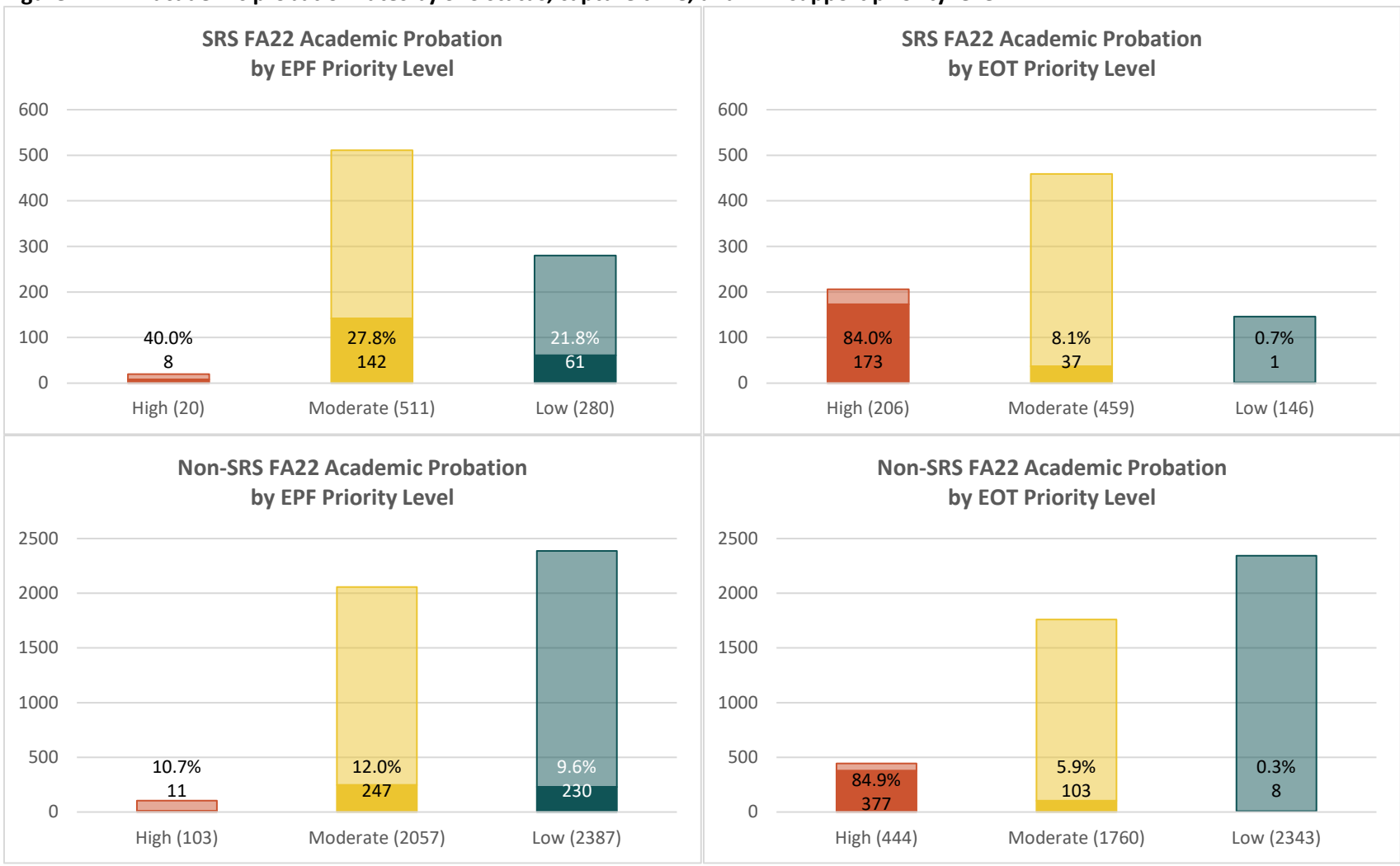
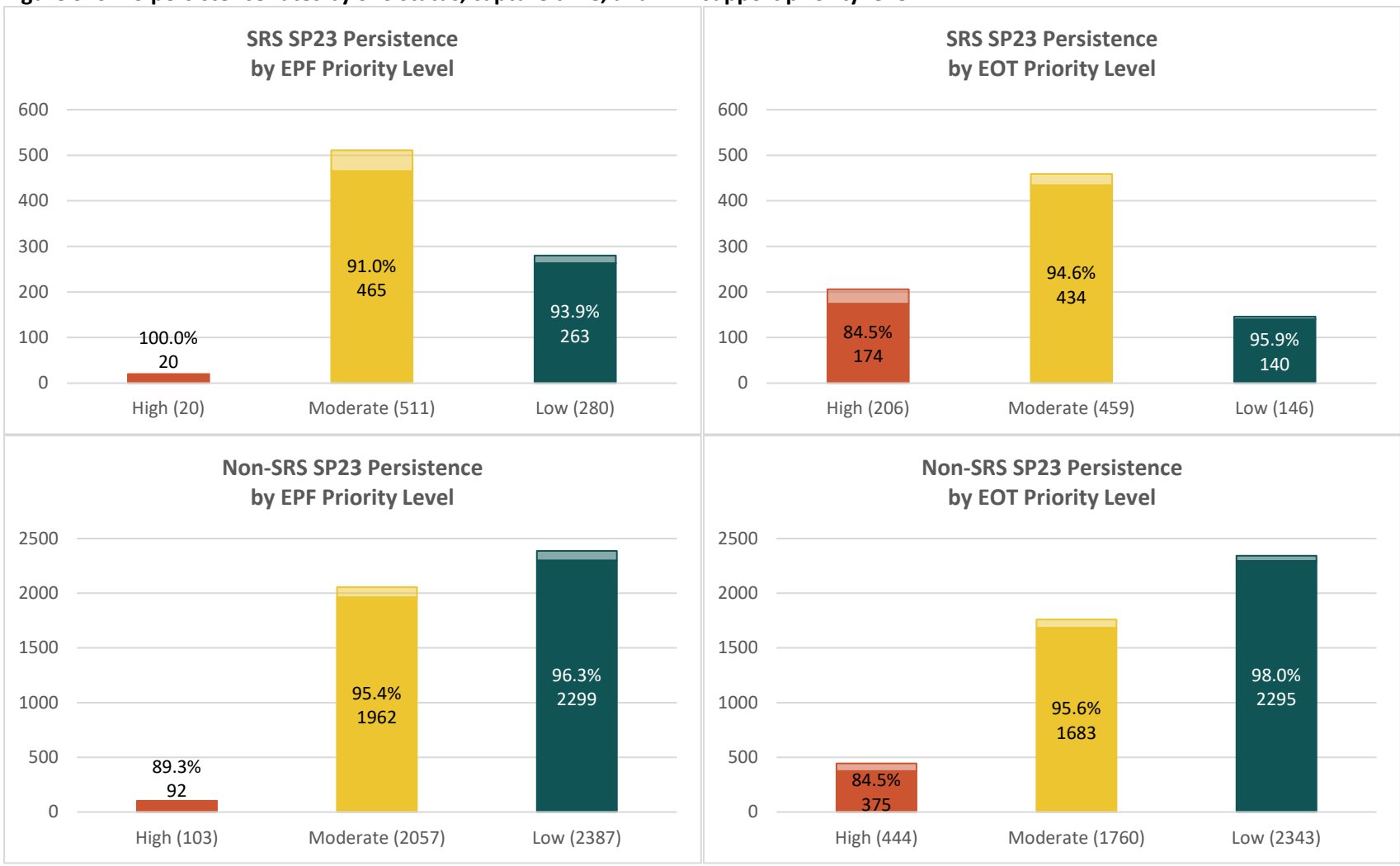


Figure 3 displays SP23 persistence rates among SRS (top) and non-SRS (bottom) by EPF capture time (left) and EOT capture time (right). Within each panel, rates (%) and headcounts (N) are displayed separately by EAB support priority level at the capture time of interest. The size of the vertical bar indicates the total number of students in each support priority level (Low, Moderate, High). The **darkly shaded** portion of each bar represents the number of students who persisted to SP23.

Figure 3: SP23 persistence rates by SRS status, capture time, and EAB support priority level



Key takeaways for the SRS population from Figure 2:

- The overlap between high FA22 academic probation rates and "High" EAB support priority level is greatest at the EOT capture time (compared to EPF).
    - At EPF, while only 20 SRS students were identified as High priority, 8 (40%) of these students are eventually on academic probation by the end of the term.
    - At EOT, among the 206 SRS students identified as High priority, 173 (84%) are on academic probation by the end of the term.
- The discrepancy in academic probation rates by "High" support priority level between EPF and EOT suggests that the EAB predictive model heavily weights academic performance outcomes (which can only be included at EOT) in its modeling.
    - The close similarities in FA22 academic probation rates at EOT by support priority level between SRS and non-SRS students is further evidence of this.

Key takeaways for the SRS population from Figure 3:

- Though the overall SP23 persistence rate among SRS students (92.2%) is relatively high regardless, the overlap between low SP23 persistence rates and "High" EAB support priority level is strongest at the EOT capture time (compared to EPF).
    - At EPF, 20 SRS students were identified as High priority, however, all 20 (100%) eventually persist to SP23. Among the 511 students identified as Moderate, 465 (91%) persist, and among the 280 students identified as Low, 263 (93.9%) persist.
    - At EOT, 206 SRS students were identified as High priority and 174 (84.5%) of them persist to SP23. Among the 459 students identified as Moderate, 434 (94.6%) persist, and among the 146 students identified as Low, 140 (95.9%) persist.
- The EAB support priority level at EPF is better correlated with SP23 persistence rates among the non-SRS population but is still better at EOT.

SRS Students Who Did Not Persist

This section ignores the crossover between SRS status and EAB support priority level and instead just focuses on what we know about the 63 (out of 811 FA22 students) who did not persist to SP23. Table 2 shows how these 63 students compare to the other 748 along commonly-considered demographic dimensions.

Table 2: Demographic comparison between SRS students who did not persist and those who did to SP23

	Did Not Persist	Persisted	Difference
Headcount	*63*	*748*	
Male	46.0%	49.7%	-3.7 PP
Racially Minoritized	31.7%	37.7%	-6 PP
First Generation	44.4%	34.2%	10.2 PP
Limited Income*	33.3%	30.7%	2.6 PP
Nonresident	42.9%	35.6%	7.3 PP
HS GPA	3.14	3.21	-0.06

Notes: *Limited income identifies both Pell grant recipients and students who've earned institutional grant aid.

Table 2 shows that SRS students who did not persist are more likely to be first generation (by 10.2 PP) and nonresidents (by 7.3 PP) compared to the SRS students who did persist to SP23. They are slightly less likely to be racially minoritized (by 6 PP) and male (by 3.7 PP).

Table 3 shows the types of supports SRS students received in the FA22 semester, broken out by whether the student persisted to SP23 or not. A limitation with this table is that it cannot capture the support a student may be planning to receive in SP23 if they persist. The table displays both percentages and headcounts in parentheses.

Table 3: Support type between SRS students who did not persist and those who did to SP23

	Did Not Persist	Persisted
Headcount	*63*	*748*
AAC	0% (0)	0.9% (7)
Athletics	0% (0)	2.7% (20)
C4E	7.9% (5)	10.7% (80)
Key	6.3% (4)	13.1% (98)
IU 172	12.7% (8)	16.3% (122)
FSP	4.8% (3)	1.2% (9)
Other LC	7.9% (5)	8.8% (66)
No Support	65.1% (41)	58.7% (439)

Table 3 shows that a significant share of SRS students did not receive support in FA22, and that even still, there is a notable difference in the share with No Support between those who persisted and those who did not. Among the 63 SRS students who did not persist, 41 or 65.1% did not receive support in FA22 compared to 58.7% of the 748 SRS students who did persist – a gap of 6.4 PP.

This gap is notable because if we instead focus on how receiving support is correlated with a student's likelihood of persisting, the difference between No Support and Support is much smaller. Out of the 811 SRS students in FA22, 331 received some form of support (as in the type identified in Table 3) while the other 480 received no support in their FA22 semester. Among the 331 students who received support, 93.4% persisted to SP23. This is only 1.9 PP higher than the persistence rate among the 480 students who received no support at 91.5%.

Appendix

Table A1: Demographic comparison between EPF and EOT by EAB support priority level, among SRS (N=811)

	High		Moderate		Low	
	EPF	EOT	EPF	EOT	EPF	EOT
Headcount	20	206	511	459	280	146
Male	60.0%	55.3%	48.7%	49.7%	50.0%	40.4%
Racially Minoritized	60.0%	44.7%	42.1%	33.1%	26.8%	39.7%
First Generation	90.0%	44.7%	47.6%	32.9%	8.2%	28.1%
Limited Income	80.0%	42.7%	41.9%	32.9%	22.5%	37.0%
Nonresident	25.0%	36.4%	29.5%	32.0%	33.9%	19.9%
HS GPA	3.24	3.00	3.17	3.17	3.26	3.59