



Reverse Transfers and Swirlers: The Norm or the Exception?

Evidence from the Illinois Public High School Class of 2002

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The Study

- All 113,660 public high school students in the Illinois Class of 2002.
- Enrollments in institutions of higher education, public and private, in state and out of state, from the National Student Clearinghouse (NSC) each year.
- Following the Class for six years. We have analyzed data through the fourth year after high school (2005-2006).
- Broader than institutional studies and more up-to-date than studies using NELS

IERC College Readiness Index

College Readiness	Proportion of All Students	Expecting a Bachelor's Degree or Higher	Enrolled at Some Point in First Four Years
Not/Least Ready	34%	72%	57%
Minimally Ready	11%	84%	72%
Somewhat Ready	17%	90%	80%
More Ready	17%	96%	89%
Most Ready	20%	99%	92%
<i>Total</i>	<i>100%</i>	<i>87%</i>	<i>75%</i>

- Readiness is a combination of high school GPA and ACT
- Roughly 1/3 of the Class of 2002 are not/least ready for college, 1/3 are partially ready, and 1/3 are college ready
- Majority expect to earn a bachelor's degree
- Three quarters of all students have had a least some college by the fourth year after high school



Key findings from the first four years

- **Academic preparedness** is the major critical component to college access, the type of institution attended, and continuation.
- **Persistence** increases for all readiness groups as they attend more competitive institutions as compared to less competitive four-year and two-year institutions.
- Starting **part-time** is negatively related to persistence, both at two-year institutions and at four-year institutions.
- Our findings on persistence provide a **very different (and more positive) picture** of college-retention than looking at individual college persistence rates.



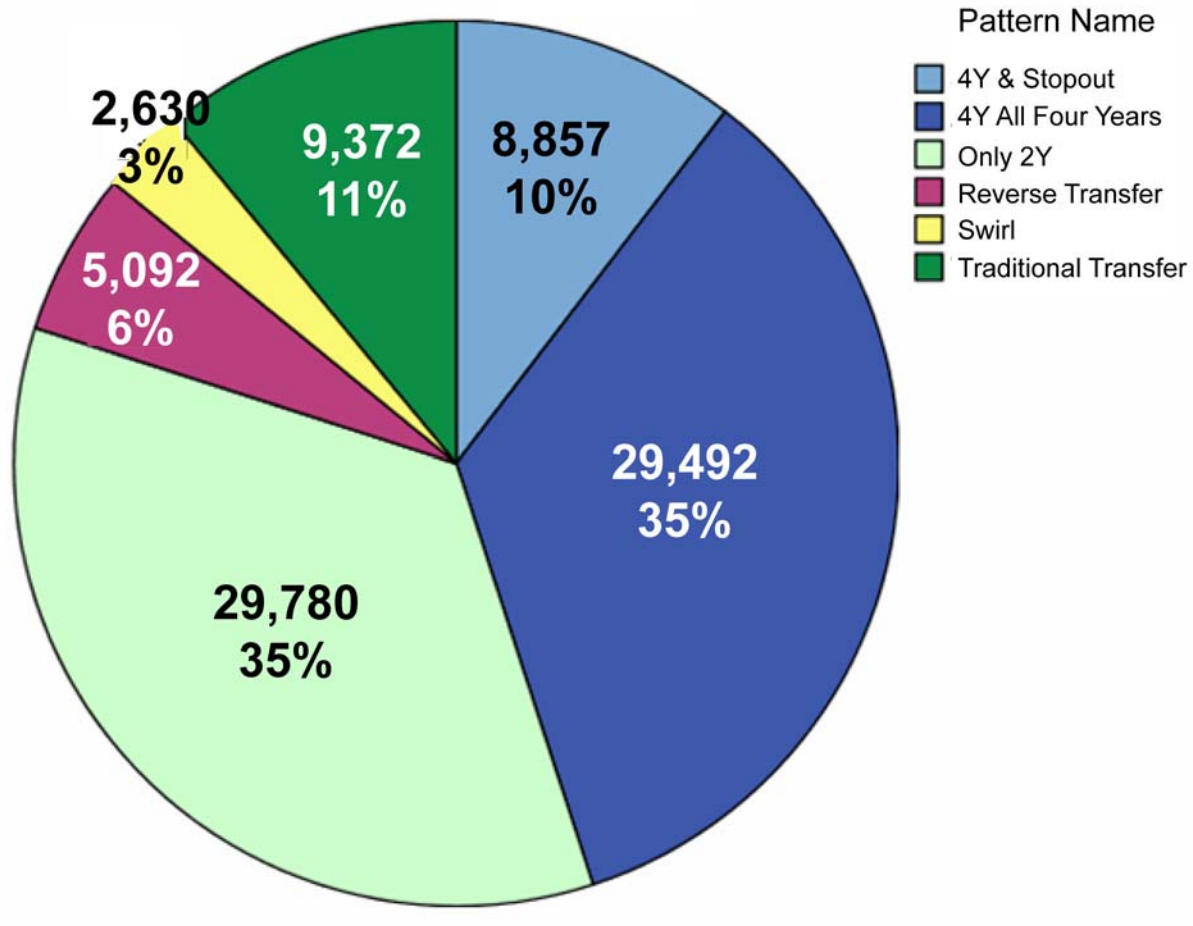
Enrollment Patterns Defined

Pattern Name	Description	Examples			
		03	04	05	06
Never Enrolled	Not enrolled in higher education as of 2006	--	--	--	--
2Y Only	Enrolled in two-year sector and never switched to four-year sector, but may have stopped out	2	2	2	2
		--	2	--	2
Traditional Transfer	Initially enrolled in two-year sector then moved to, and stayed in, four-year sector	2	2	4	4
		2	--	4	--
4Y All Four Years	Enrolled in four-year sector for all four years	4	4	4	4
4Y w/ Stopout	Enrolled in four-year sector and never switched to two-year sector, but stopped out or had a gap year	4	--	4	4
		--	--	--	4
Reverse Transfer	Initially enrolled in four-year sector then moved to, and stayed in, two-year sector	4	4	4	2
		4	2	--	--
Swirl	Initially enrolled at either two-year or four-year sector and subsequently switched between sectors at least twice	4	--	2	4
		2	4	4	2



Enrollment Patterns

(all college-goers, 2002-03 to 2005-06)



- Only 3% of all college-goers from the cohort swirl and 6% reverse transfer

- 12% of those who were enrolled in a four-year institution from 2002-03 to 2005-06 moved to another four-year institution at some point *[included, but not indicated on chart]*

28,437 students (25% of the cohort) have not yet enrolled in higher education *[not shown on chart]*



Reverse Transfer Patterns

Year				Frequency	Percent of Reverse Transfers	Cumulative Percent
03	04	05	06			
4	2	2	2	943	18.5	18.5
4	4	2	2	805	15.8	34.3
4	4	4	2	665	13.1	47.4
4	2			623	12.2	59.6
4	2	2		603	11.8	71.5
4	4	2		417	8.2	79.7
4	4		2	184	3.6	83.3
4		2	2	163	3.2	86.5
4	2		2	146	2.9	89.4
4		2		144	2.8	92.2
4			2	134	2.6	94.8
	4	2	2	78	1.5	96.3
	4	4	2	60	1.2	97.5
		4	2	44	0.9	98.4
	4	2		41	0.8	99.2
	4		2	30	0.6	99.8
4		4	2	12	0.2	100.0
Total Reverse Transfers				5092	100.0	

- 47% of reverse transfer students were enrolled for all four years
- 46% of reverse transfer students moved to the 2-year sector in their second year after high school



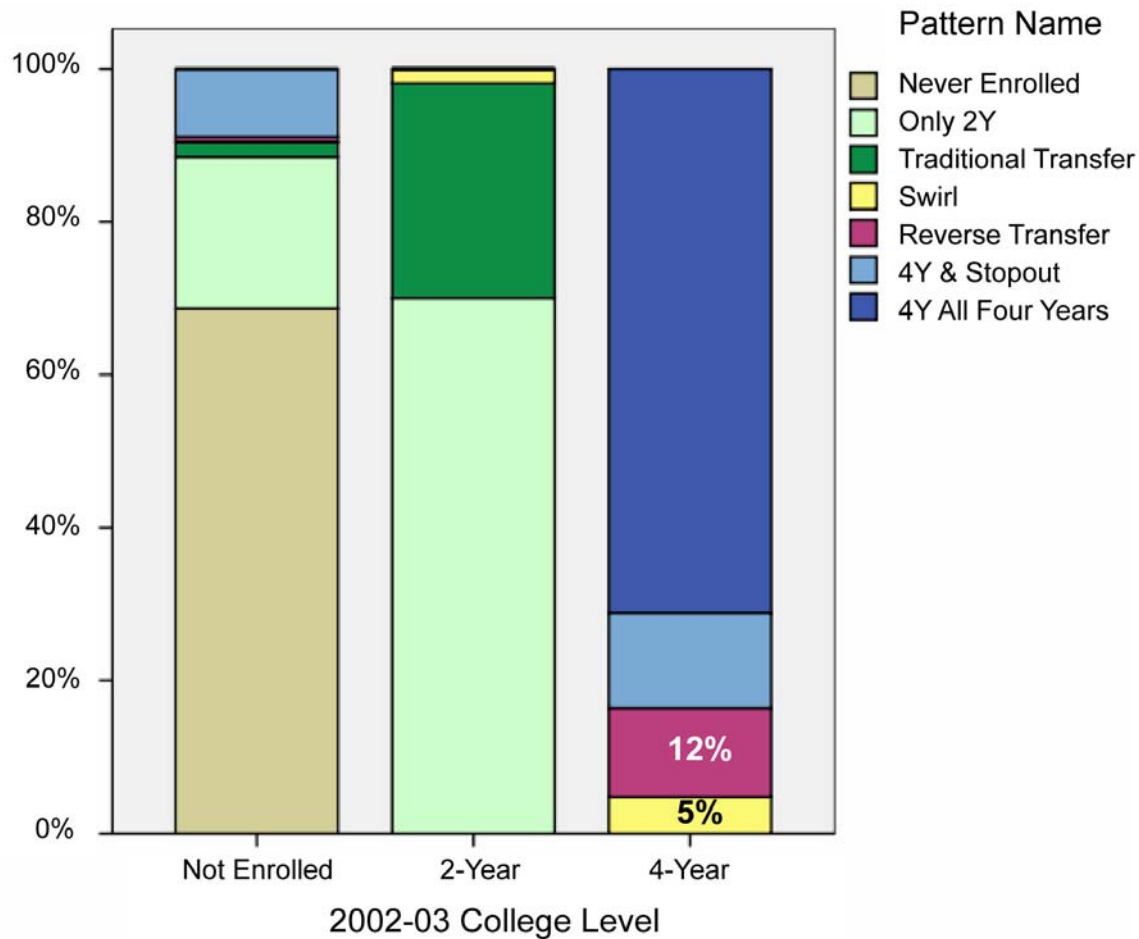
Swirl Patterns

Year				Frequency	Percent of Swirlers	Cumulative Percent
03	04	05	06			
4	2	4	4	697	26.5	26.5
4	4	2	4	542	20.6	47.1
4	2	2	4	512	19.5	66.6
2	2	4	2	255	9.7	76.3
2	4	2	2	96	3.7	80.0
4	2	4	2	88	3.3	83.3
4	2	4		78	3.0	86.3
2	4	2	4	70	2.7	89.0
2	4	4	2	66	2.5	91.5
2	4	2		64	2.4	93.9
	4	2	4	38	1.4	95.3
4	2		4	36	1.3	96.6
2	4		2	31	1.2	97.8
	2	4	2	25	1.0	98.8
4		2	4	18	0.7	99.5
2		4	2	14	0.5	100.0
Total Swirlers				2630	100.0	

- 76% of swirlers start at four-year institutions
- 44% of swirlers return to their original institution



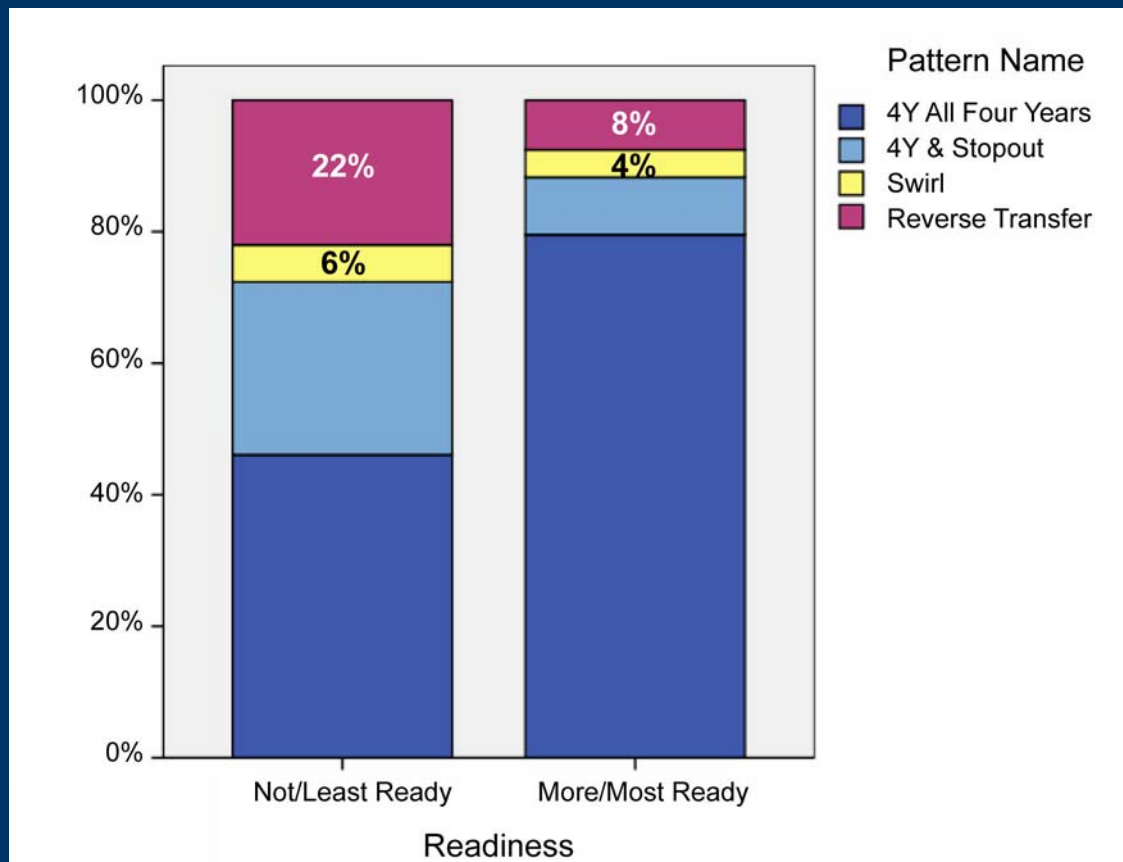
Enrollment Patterns (2002-03 to 2005-06) by Initial College Level



- Most students remain enrolled in their initial sector
- 2% of those who start at two-year institutions swirl and 28% of them transfer to the four-year sector
- 5% of those who start at four-year institutions swirl and 12% reverse transfer to the two-year sector
- Those who were not enrolled in 2002-03 have had less time in which to move between sectors



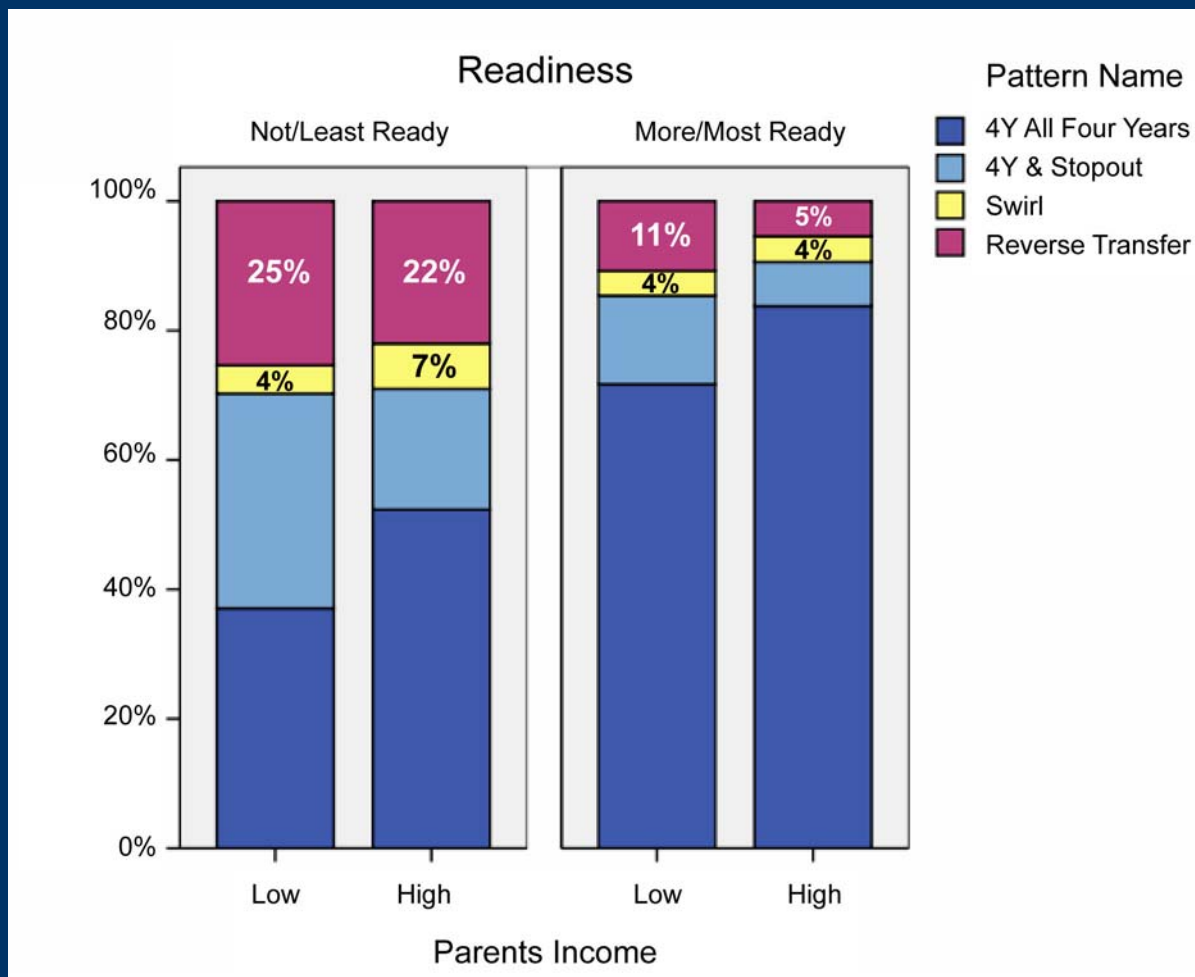
Enrollment Patterns by Student Readiness



- Of those who start in the four-year sector, college-ready students are less likely to switch sectors than non-ready students



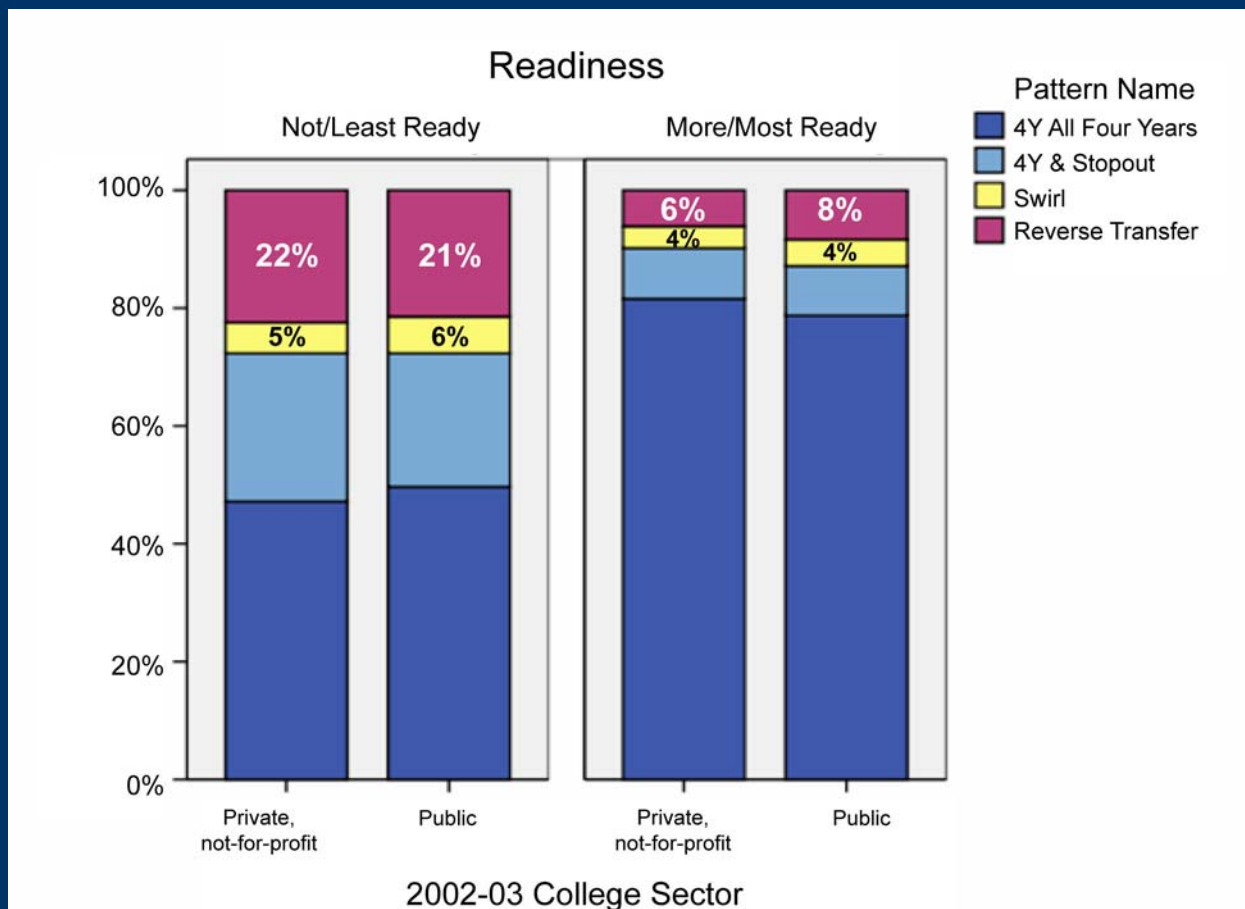
Enrollment Patterns by Parents' Income



- Of those who start in the four-year sector, low income students are slightly more likely than high income students to reverse transfer, but readiness still trumps income.



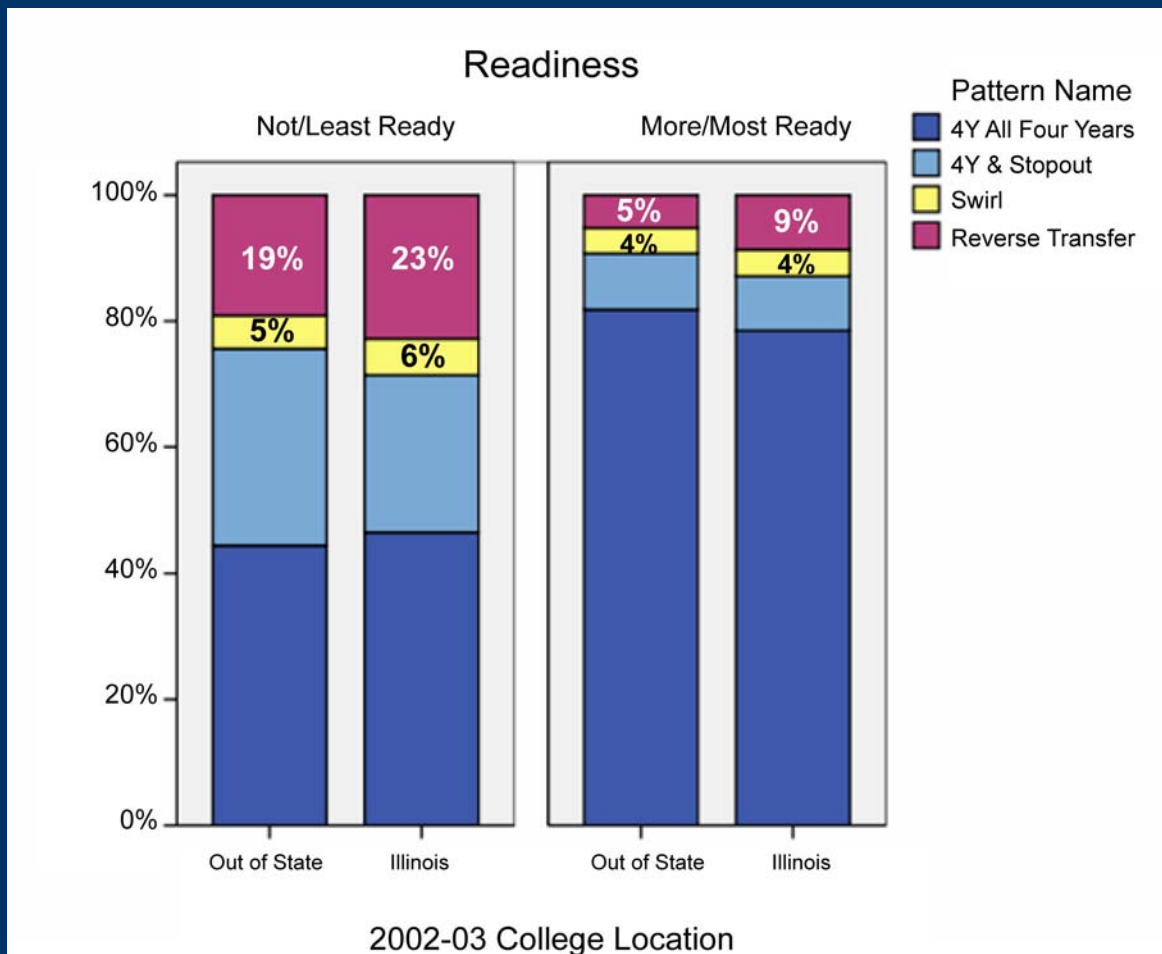
Enrollment Patterns Public vs. Private



- There is little difference between public and private four-year institutions in terms of students' subsequent enrollment patterns.



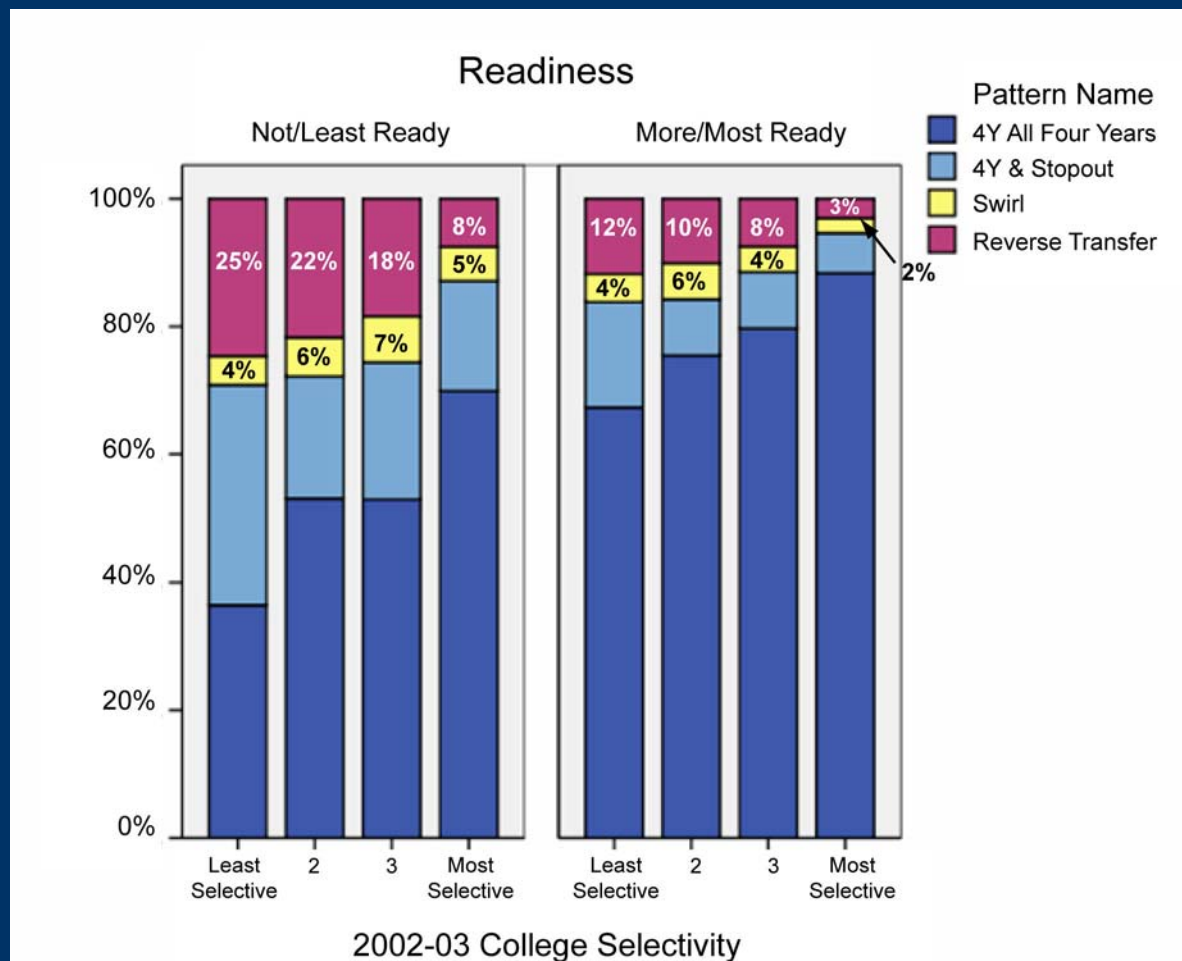
Enrollment Patterns In State vs. Out-of-State



- Students who start at in-state four-year institutions are slightly more likely to reverse transfer than those who start at out-of-state four-year institutions.



Enrollment Patterns by College Selectivity



- Students who begin at more selective four-year institutions are less likely to move to the two-year sector than those who begin at less selective four-year institutions.



How Does the Match Matter?

A popular notion:

A student would be better off by going to an institution where his/her academic preparation matches his/her classmates'.



The (Mis)Match Measure

Five groups to indicate student's position in academic preparation relative to their peers at the same institution

- 1) Equal to or above institution median ACT score
- 2) 1 or 2 points below median ACT score
- 3) 3 or 4 points below median ACT score
- 4) 5 or 6 points below median ACT score
- 5) 7 or more points below median ACT score



The Match Status of Four-Year Starters

Enrollment Pattern	Student's ACT Score in Comparison to the Median of First or Departing 4-year Institution Enrolled					N
	Equal to or Above	1 or 2 below	3 or 4 below	5 or 6 below	7 or more below	
4Y All Four Years	55%	20%	14%	7%	4%	28,493
Reverse Transfer	42%	21%	18%	11%	8%	4,578
Swirl	49%	20%	17%	9%	5%	1,818

- A higher proportion of reverse transfers and swirlers are mismatched, BUT
 - Over 2 in 5 of reverse transfers and swirlers are in the well-matched position
- Thus not all reverse transfers were “over their heads” at the 4Y institutions



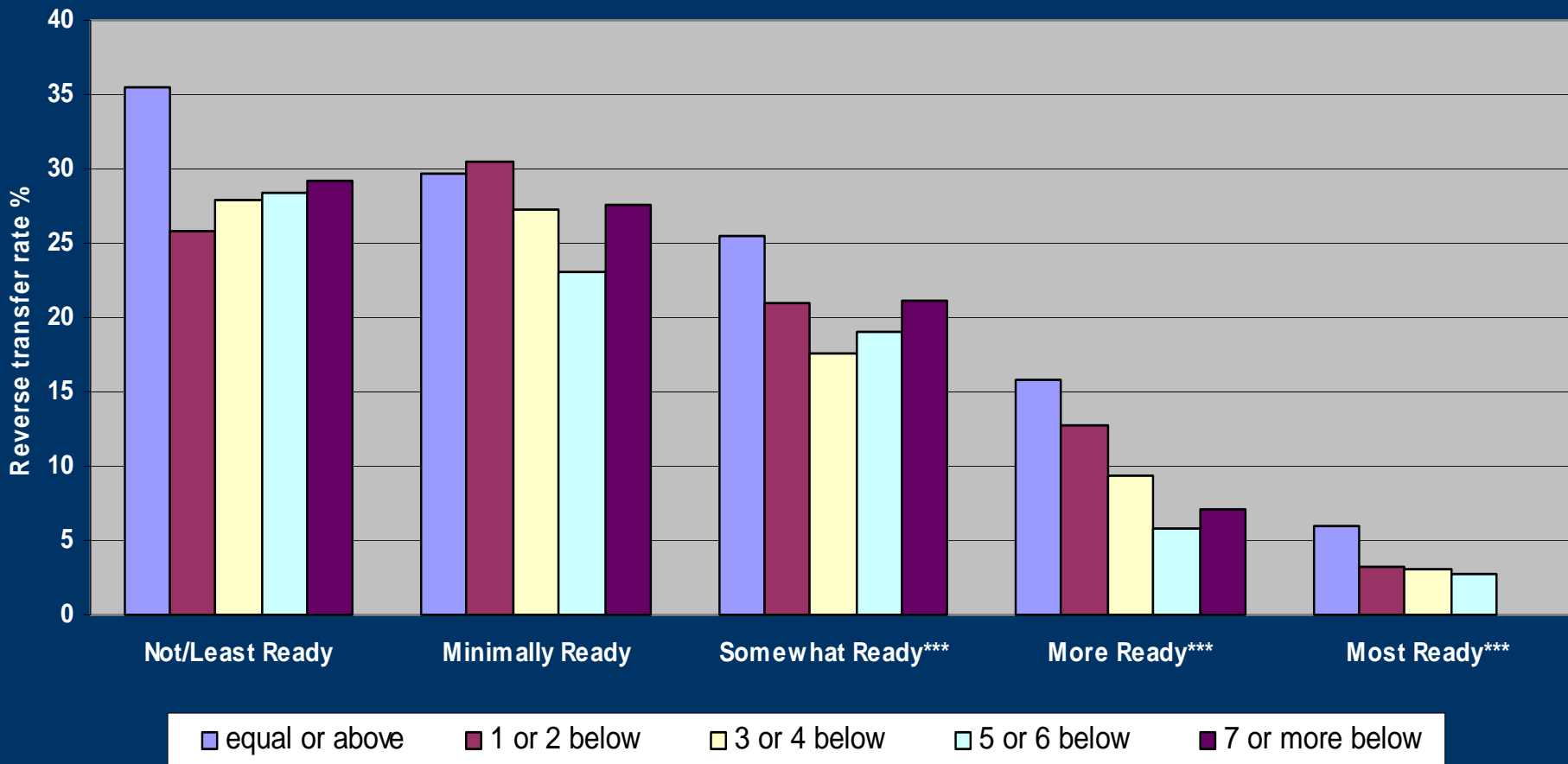
Readiness of Four-Year Starters

Enrollment Pattern	Not/Least Ready	Minimally Ready	Some-what Ready	More Ready	Most Ready	N
4Y for All Four Years	6%	4%	14%	27%	48%	28,493
Reverse Transfer	18%	11%	26%	27%	18%	4,578
Swirl	12%	8%	21%	31%	29%	1,818

- Reverse transfers and swirlers are not as college-ready as those who were enrolled at four-year institutions for all four years.



Reverse Transfer Rate by Readiness and Match Status (All four-year starters)



- Readiness matters for reverse transfer, BUT
- Given the same readiness level, those mismatched generally less likely to reverse transfer, especially for better prepared students, compared to these well matched.
- Confirming the conclusion from examining the effect of selectivity on reverse transfer₁₉

*** significant at 0.001



The Effect of Mismatch on Reverse Transfer and Swirl (Regression Results)

Distance from institutional median ACT	Effect	4Y All Four Years vs. Reverse Transfer		Swirl vs. Reverse Transfer		4Y All Four Years vs. Swirl	
		β	Odds Ratio	β	Odds Ratio	β	Odds Ratio
1 or 2 points below	vs. equal to or above median	0.3195	1.38	0.1124	1.12	0.2072	1.23
3 or 4 points below	vs. equal to or above median	0.5086	1.66	0.2253	1.25	0.2832	1.33
5 or 6 points below	vs. equal to or above median	0.5860	1.80	0.2481	1.28	0.3379	1.40
7 or more points below	vs. equal to or above median	0.5215	1.68	0.2214	1.25	0.3002	1.35
unknown group	vs. equal to or above median	-0.3406	0.71	-0.1911	0.83	-0.1496	0.86

- A mismatch of 5 or 6 points increases the odds of staying in the four-year sector rather than reverse transfer by 80%, and – after moving to the two-year sector – a mismatch of 5 or 6 points increases the odds of swirling back to the four-year sector by 28% (compared to attending a matching institution and controlling for many student and institutional attributes)

Shaded cells indicate insignificance at 0.05. Control variables include gender, race, parents' income, readiness, control of first or departing 4Y institutions, and HBCU or not.



Conclusions

- Within four years after high school graduation, **three quarters** of the Class of 2002 have had at least a taste of post-secondary education
- Even within the seven broad enrollment categories, we see **many different** attendance patterns
- Students generally tend to **stay** in the sector (not enrolled, two-year, or four-year) in which they start, however:
 - 28% of those who start at two-year institutions transfer to the four-year sector and stay (so far)
 - 6% of all college-goers (12% of all 4-year starters) reverse transfer and another 3% swirl between the two sectors – **norm or exception?**



Conclusions

- **Academic preparedness** is the major critical component to college participation, the type of institution attended, continuation, and enrollment pattern.
 - College-ready four-year starters are much less likely to swirl or reverse transfer than non-ready four-year starters
 - Institutional selectivity is also important
- **Relative academic preparedness** (compared to one's peers) also matters – but contrary to the popular notion, those attending “more stretching” institutions actually had better chance to stay in four-year institutions than to those in “less stretching” institutions.