

# Reverse Transfer Students and Postsecondary Outcomes: A Potential Opportunity



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# Reverse Transferring vs. Reverse Articulation

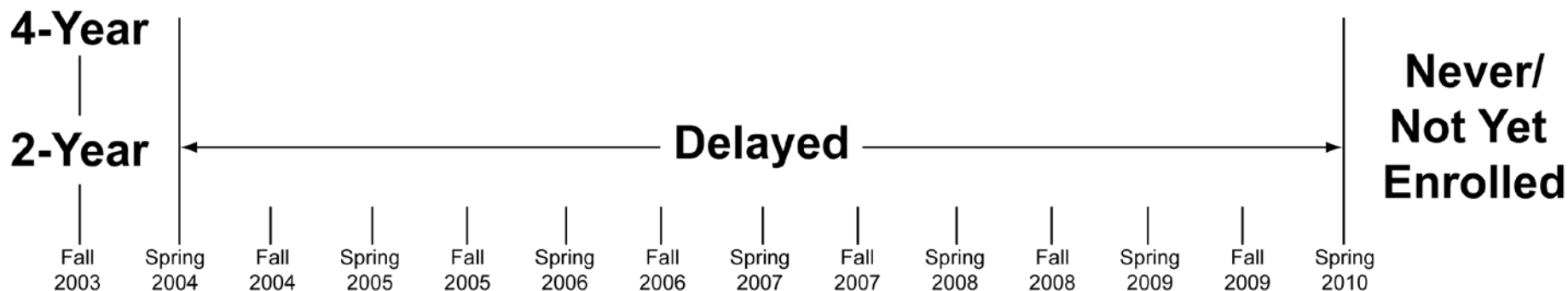
## Reverse Transferring

- Pertains to students who start at a four-year college and later transfer to a community college.
- The term has been used in educational research for the past 20 years.
- The definition usually excludes concurrent enrollment and summer school enrollment.
- A transfer takes place.

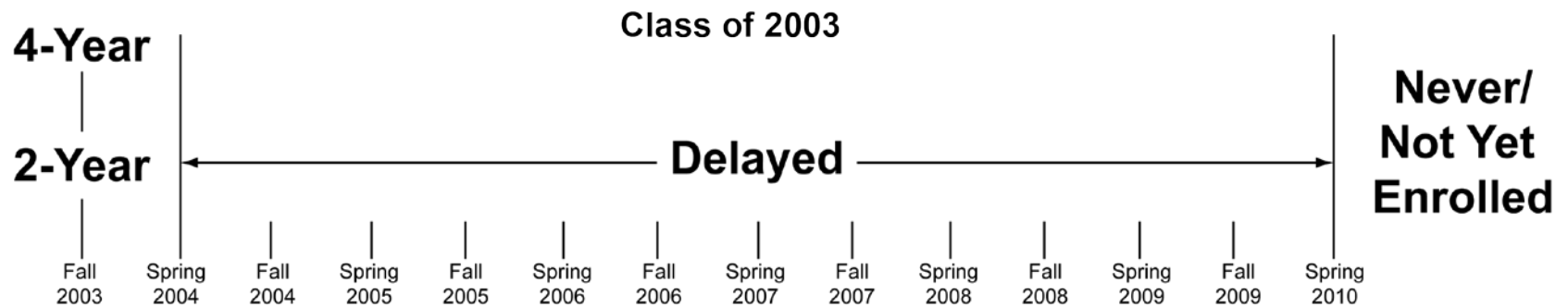
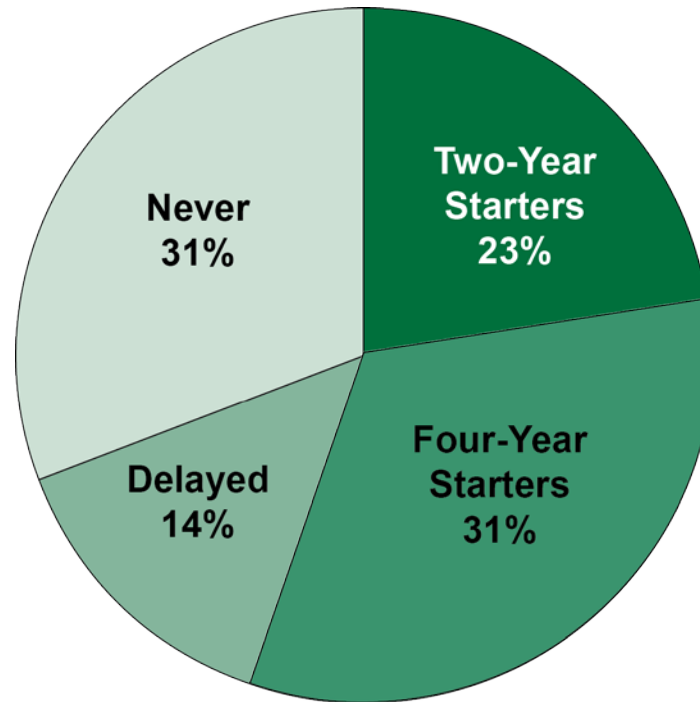
## Reverse Articulation

- Pertains to students who start at a community college and later transfer to a four-year without earning an associate's degree (vertical).
- Involves the post-transfer articulation of credit from the four-year college to the original community college.
- The emphasis is on the ex post facto awarding of associate's degrees for vertical transfer students by using credits earned at the four-year to fulfill associate's degree requirements.

# Basic Types of Postsecondary Enrollment

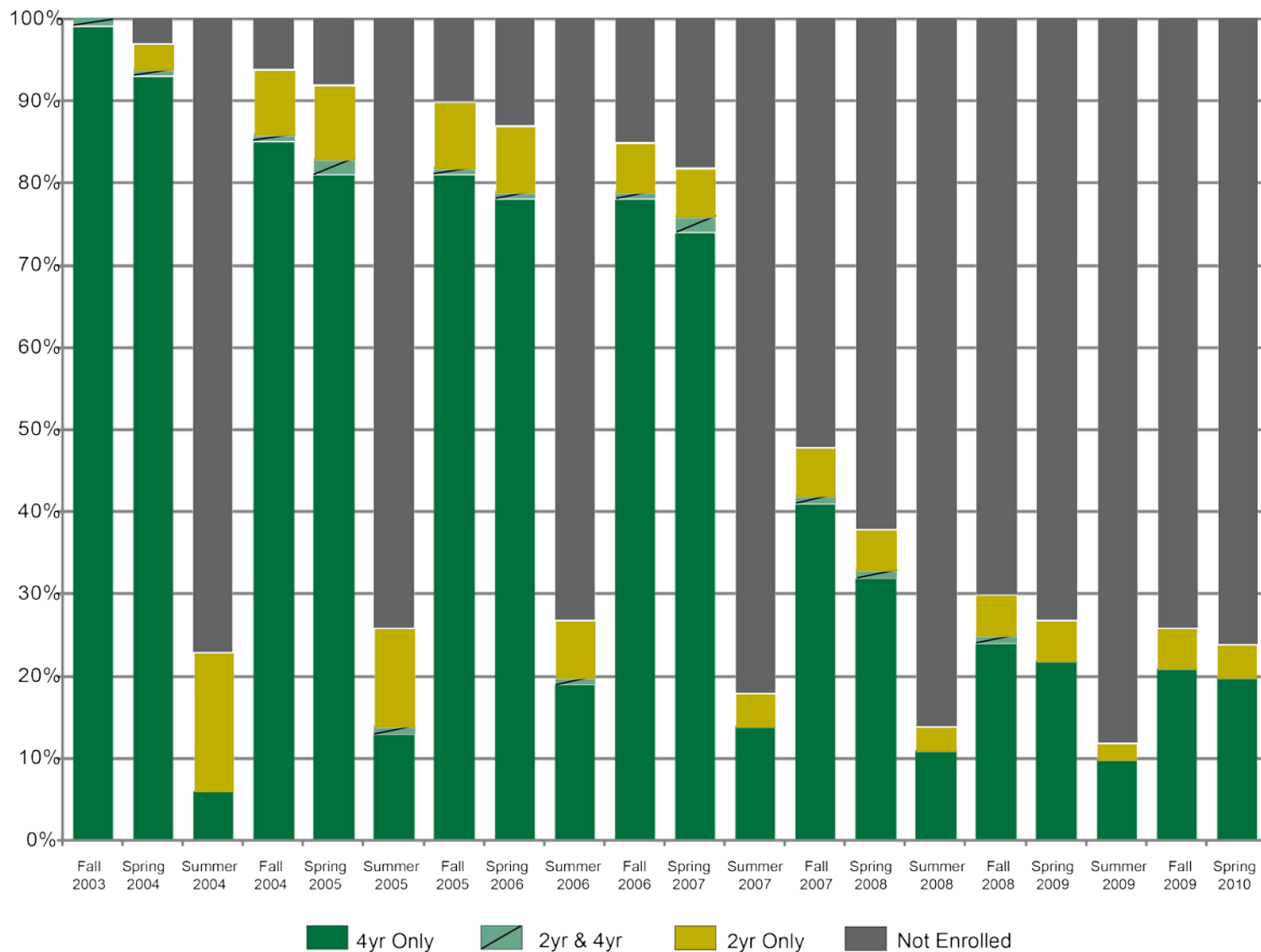


**The study starts with the portion of the Illinois High School Class of 2003 (N=115,677) that enrolled at a four-year college during the fall semester of 2003.**

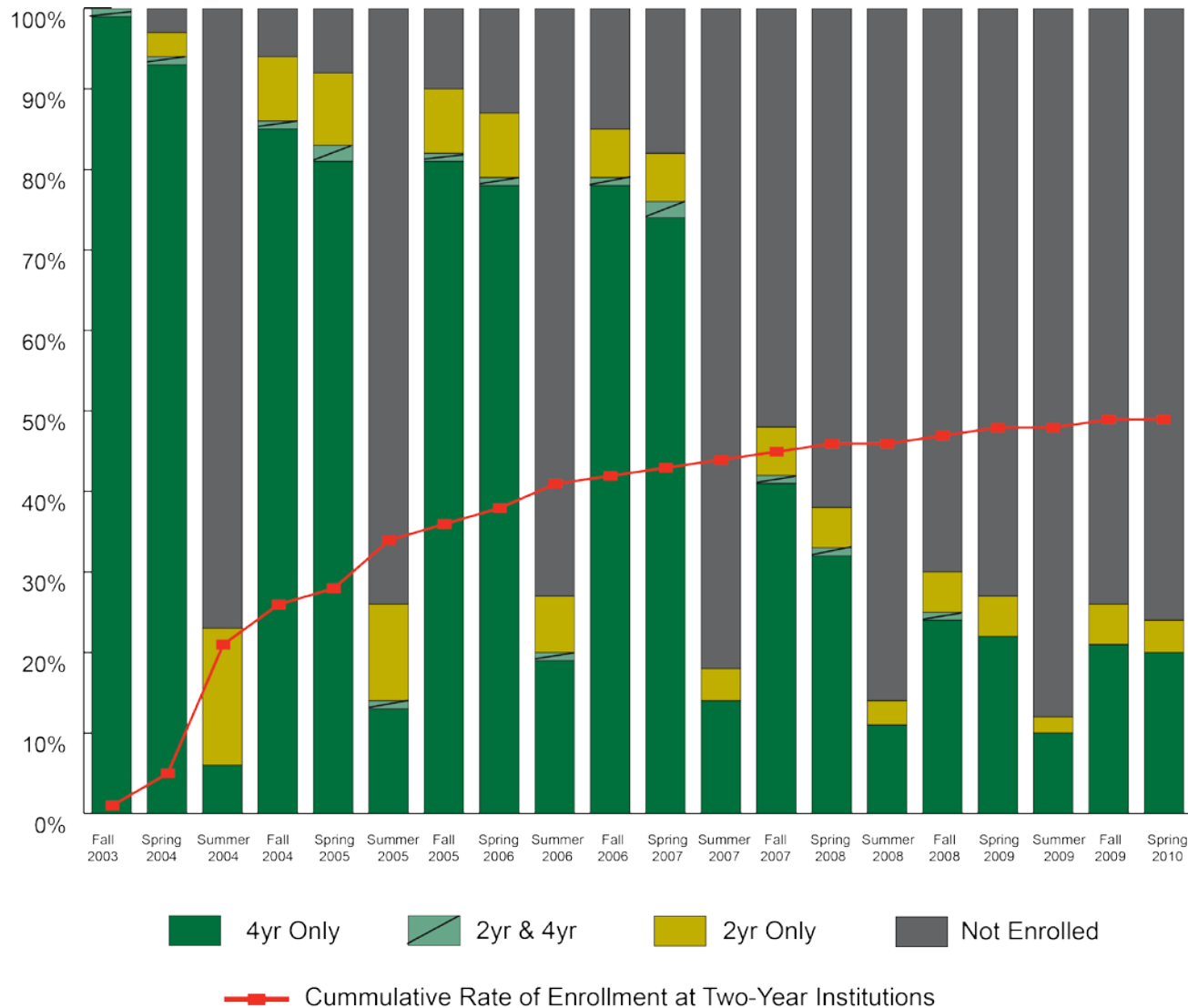


**In total, there were 37,165 four-year starters.**

# Enrollment at 4yr and 2yr Institutions



# Enrollment Trends for Four-Year Starters

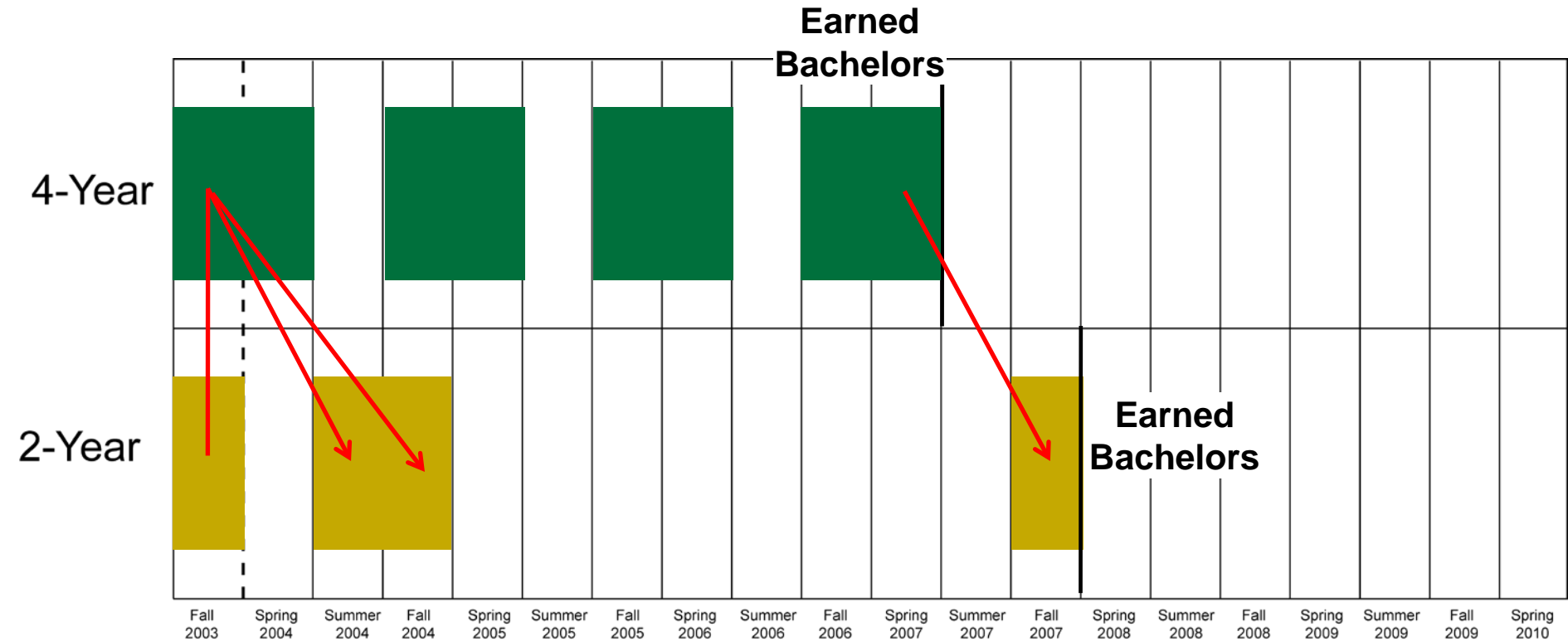


# There are different ways the four-year starters utilize the community college system.

- During summer session
- By sake of reverse transferring
- After earning a bachelor's degree
- Concurrently with a four-year institution
- To finish a graduation requirement at a four year institution(<1%)

**These are not mutually exclusive**

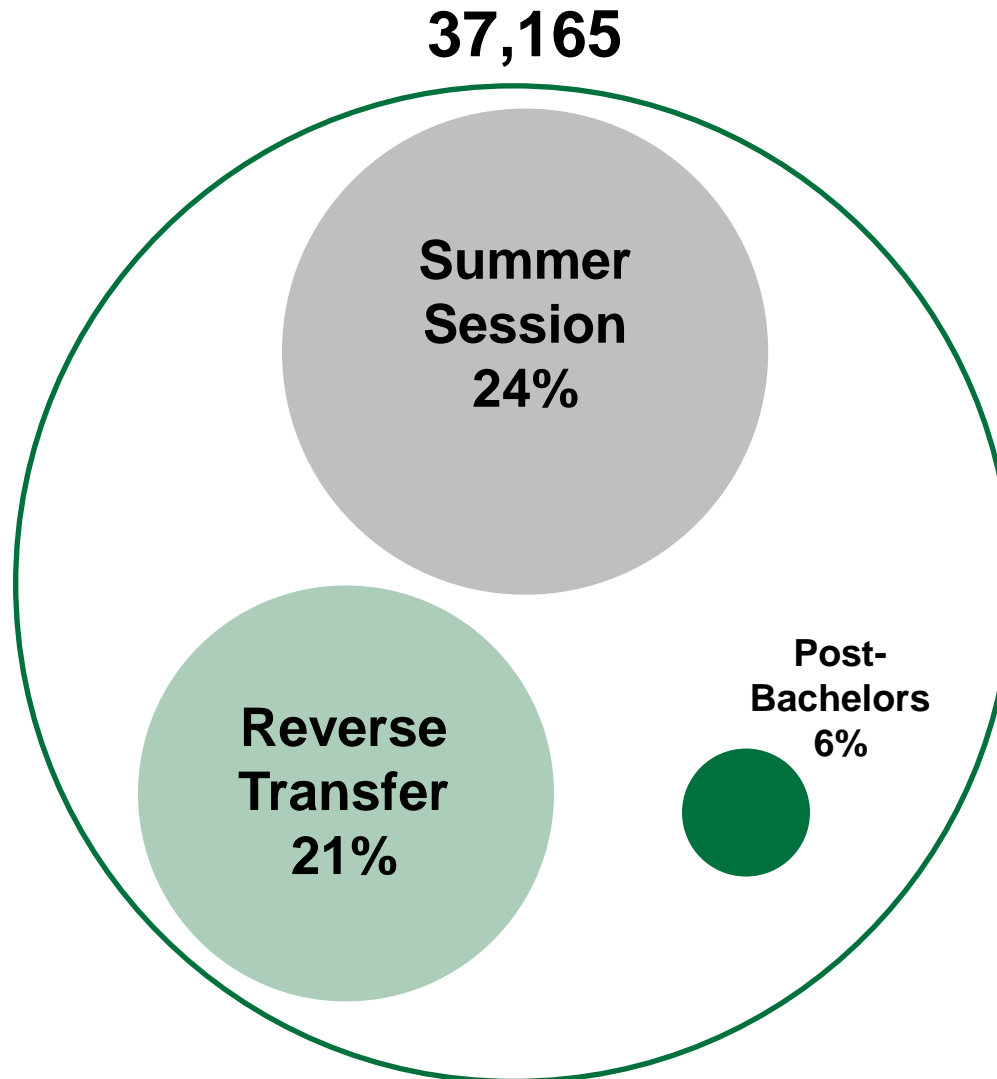
# Different Types of 2-Year Enrollment



- Concurrent
- Summer
- Reverse Transfer
- Post-Bachelors



# The Overlap of Types of Utilization



# Rationale for Study

- Only half of reverse transfer students make it back to a four-year institution.
- One-fifth of reverse transfer students eventually earn a bachelor's degree and even fewer (around 15%) earn a certificate or an associate's degree during their stay at a community college.
- The low rate of degree completion associated with reverse transferring makes it the form of student mobility most deserving of attention (Goldrick-Rab and Pfeffer, 2009).

# Reverse Transferring

## Good, Bad, Ugly, or Benign?

- Reverse Transferring Diminishes Diplomas
- Reverse transfer students head in the wrong direction
- Reversing the course
- Community colleges, universities may have new relationship

# Who are Reverse Transfer Students?

- More similar to community college entrants and 4-yr college drop-outs than to other 4-yr starters and bachelor's completers.
- Lower SES, lower parental education, more likely to be from the working class.
- Similar to other 4-yr starters in terms of the college saving behaviors of their parents and the discussions about college admissions with their parents.
- Academic difficulties during college
  - Traced back to high school preparation
  - In terms of academic preparedness they fall somewhere between other 4-yr starters and community college entrants.

# Sources of Data

- **ACT-Prairie State Achievement Examination** and the Student Interest Profiler
- **National Student Clearinghouse**-covers 92% of all postsecondary enrollment
- **Illinois High School Report Card**-institutional characteristics of the high schools
- **Barron's**-selectivity of the four-year institutions

# Research Questions: Conditional Upon Initially Enrolling at a Four-Year Institution:

1. What factors are related to an shortened time to reverse transfer?
2. Among reverse transfer students, which outcomes were attained at the community college (e.g., associate's completion)?
3. Among reverse transfer students, what factors are related to an shortened time to return to a four-year institution?
4. Among those returning, what factors are related to an shortened time to bachelor's completion?

# Factors

Category	Variables
<b>Student Characteristics</b>	Gender & Race
<b>Student Academic Characteristics</b>	HS class rank, HS GPA, highest expected degree, HS program type, core curriculum, ACT subject tests, AP participation, stated need for help
<b>Ability to Pay/ Financial Aid</b>	Parental income, number of siblings, expecting to receive financial aid, expecting to work while enrolled
<b>High School Characteristics</b>	Region, Mean HS Composite ACT, Distance to 1 <sup>st</sup> Four-Year, Distance to CC, Distance to Four-Year of Return
<b>Four-Year Characteristics</b>	Sector, selectivity, state

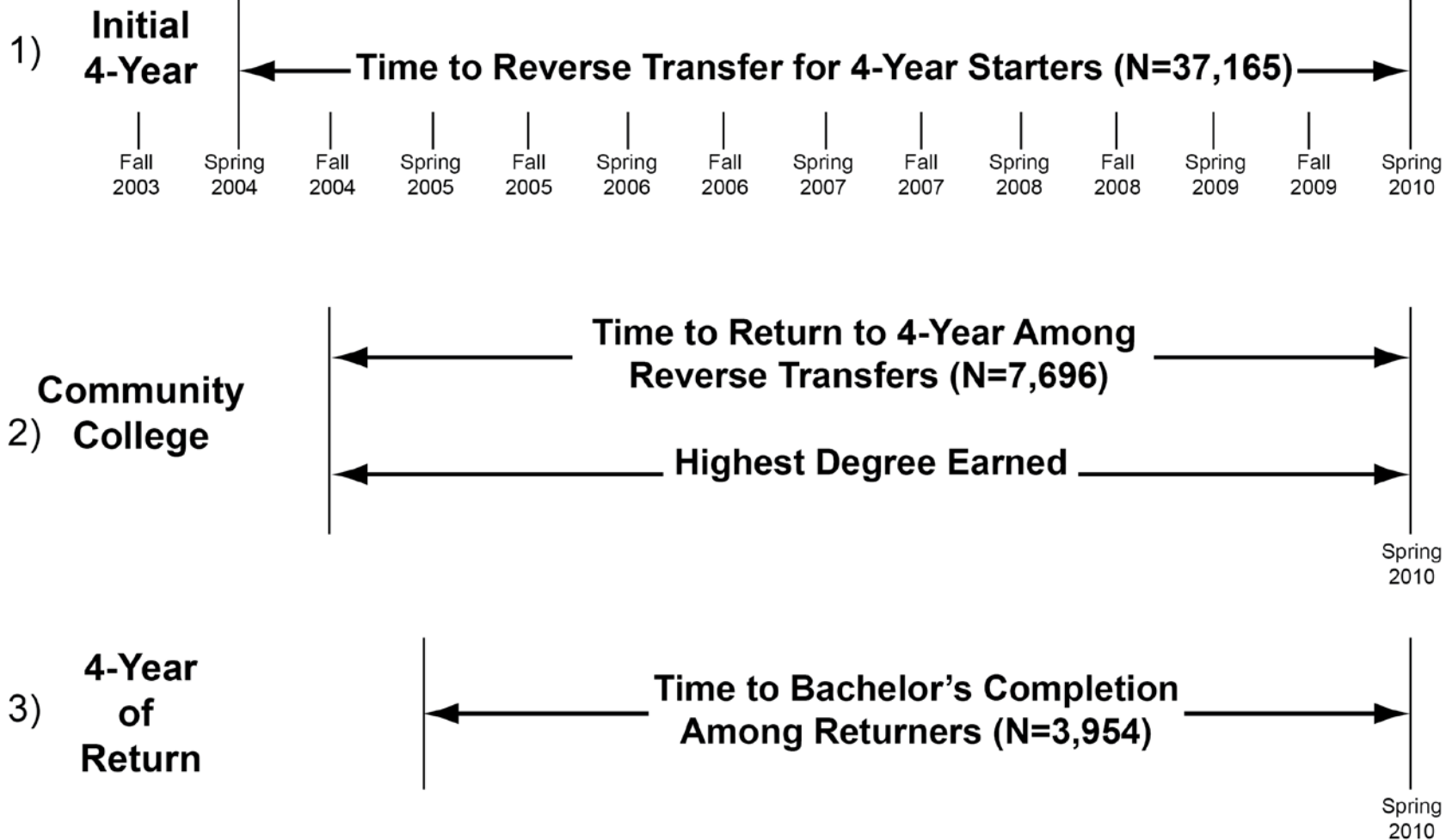
# Outcomes

Outcome	Description
<b>Reverse Transfer</b>	Dichotomous indicator of whether a 4-yr starter ever enrolled at a community college excluding summer enrollment, concurrent enrollment, and post-bachelor's enrollment.
<b>Highest CC Degree</b>	Ordinal measure of a student's highest level of degree attainment while enrolled at a community college. Ranked as follows: a) associate's; b) certificate; and c) no degree.
<b>4-yr Return</b>	Dichotomous indicator of whether a reverse transfer student ever returned to a 4-yr institution after their community college enrollment.
<b>Bachelor's Completion</b>	Dichotomous indicator of whether a returner earned a bachelor's degree by the end of the spring semester of 2010.



Distance

## Outcomes



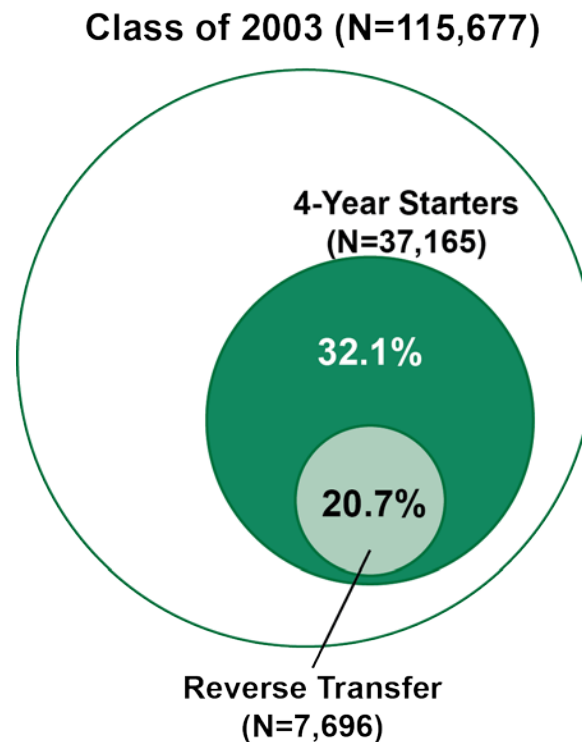
Spring 2010

Spring 2010

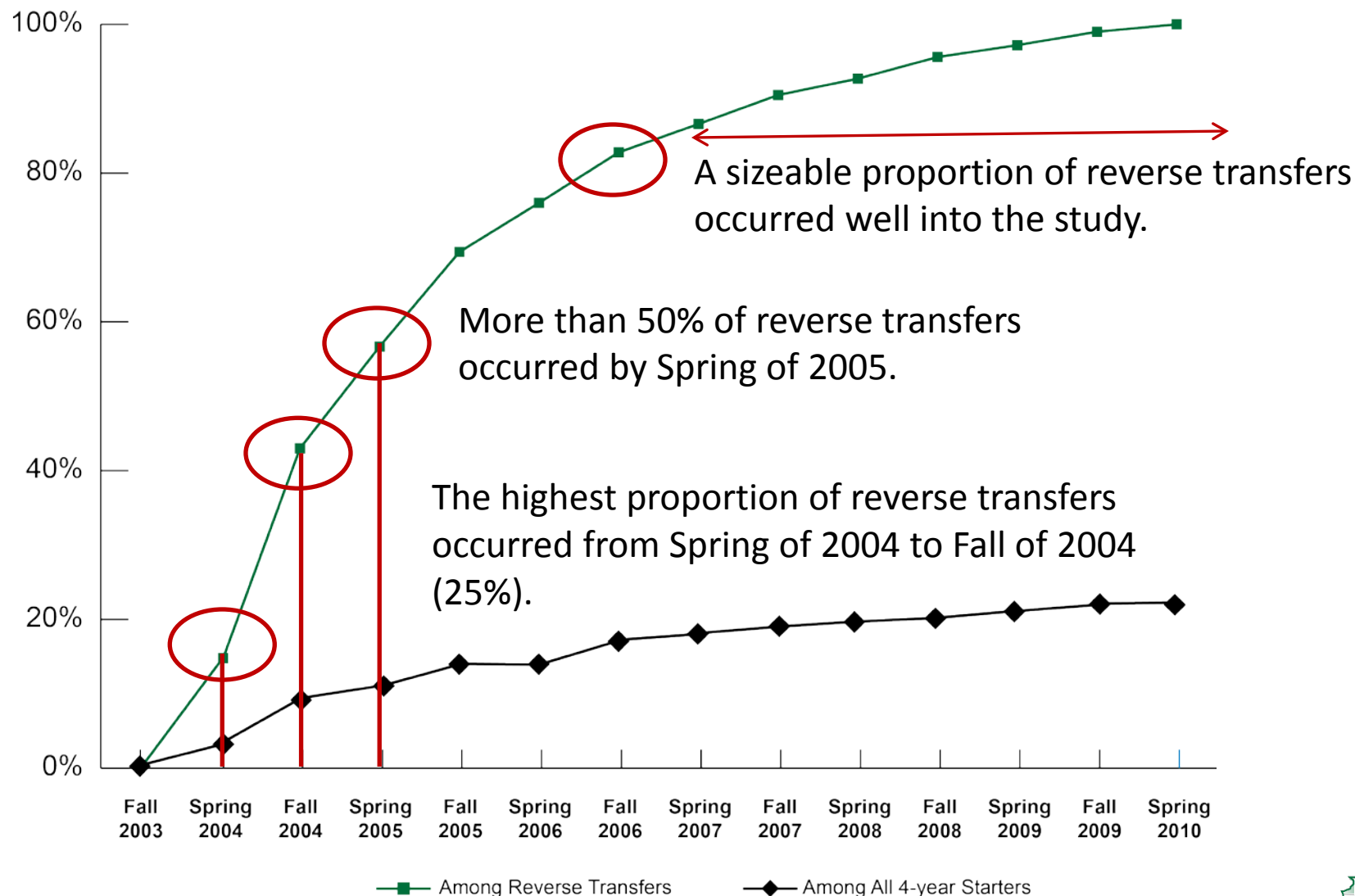
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# Reverse Transfers

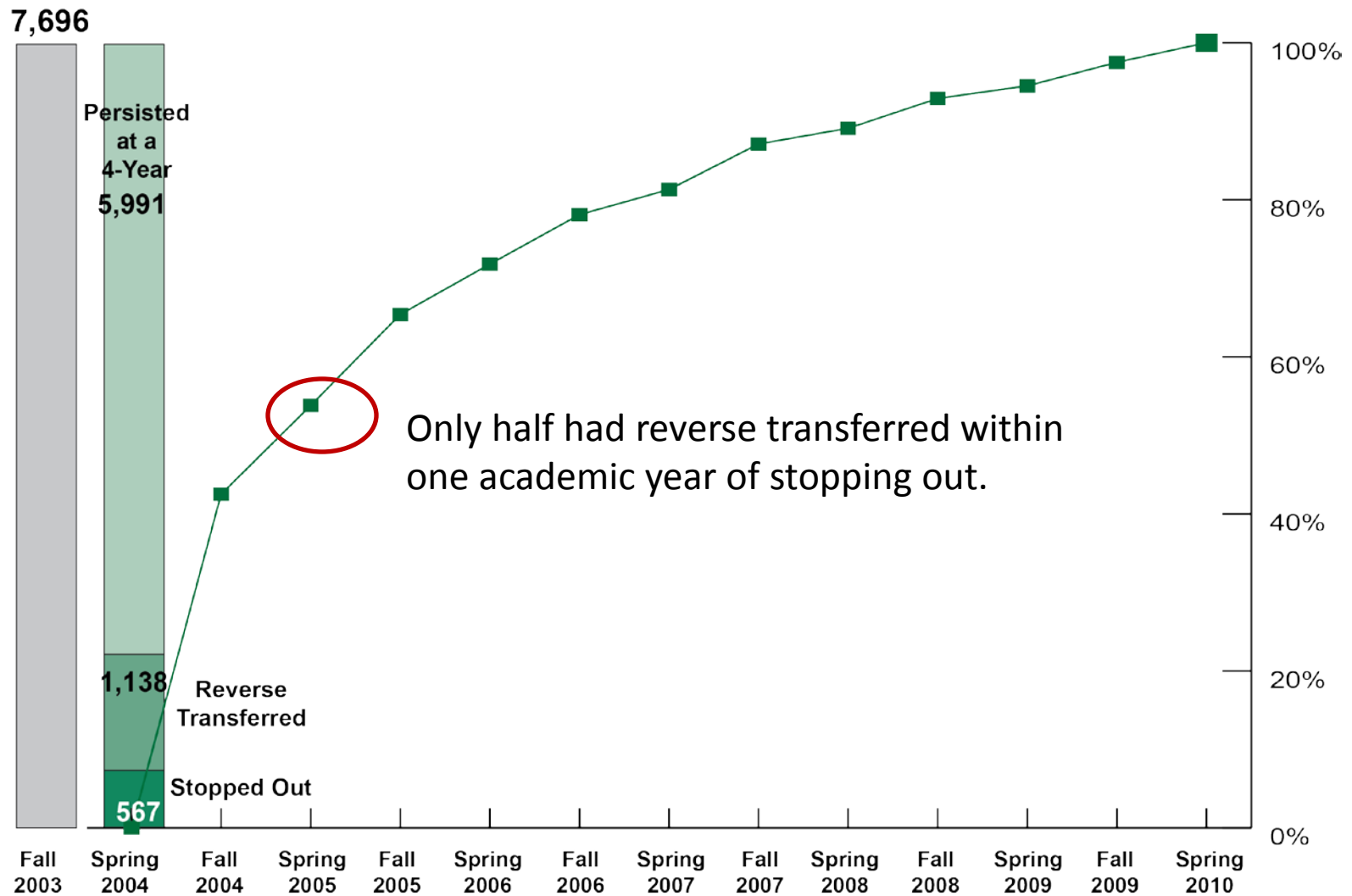
- More than one out of every five four-year college entrants met this distinction (21%)
  - Does not include summer enrollment
  - Does not include concurrent enrollment
  - Does not include post-bachelor's enrollment



# Cumulative Rate of Reverse Transfer



# Cumulative Number of Semesters to Reverse Transfer for Initial Stopouts (n=567)



# Survival Analysis (Cox Regression)

- Traditionally used in medical and epidemiology research.
- Used to explore the relationship between a set of explanatory variables and a time-based event of interest (number of semesters until reverse transfer).
- Provides an estimate of the treatment effect (odds ratios) on survival after adjusting for the explanatory variables.

# Research Question 1: Reverse Transfer

	B	Sig.	Odds Ratio
<b>HS GPA</b>		.000	
2.5-2.9 to ≤2.4	-.125	.022	.882
3.0-3.4 to ≤2.4	-.369	.000	.692
≥3.5 to ≤2.4	-.909	.000	.403
<b>Number of Siblings</b>	.035	.005	1.035
English	.060	.140	1.062
AP Social Studies	-.090	.030	.914
AP Math	-.012	.774	.988
AP Foreign Language	-.090	.026	.914
AP Science	.086	.037	1.090
Public to Private	.170	.000	1.185
In-state to Out-of-State	.126	.005	1.135
Highly/Most Competitive to Other	-.357	.000	.700

# Research Question 1 Continued: Reverse Transfer

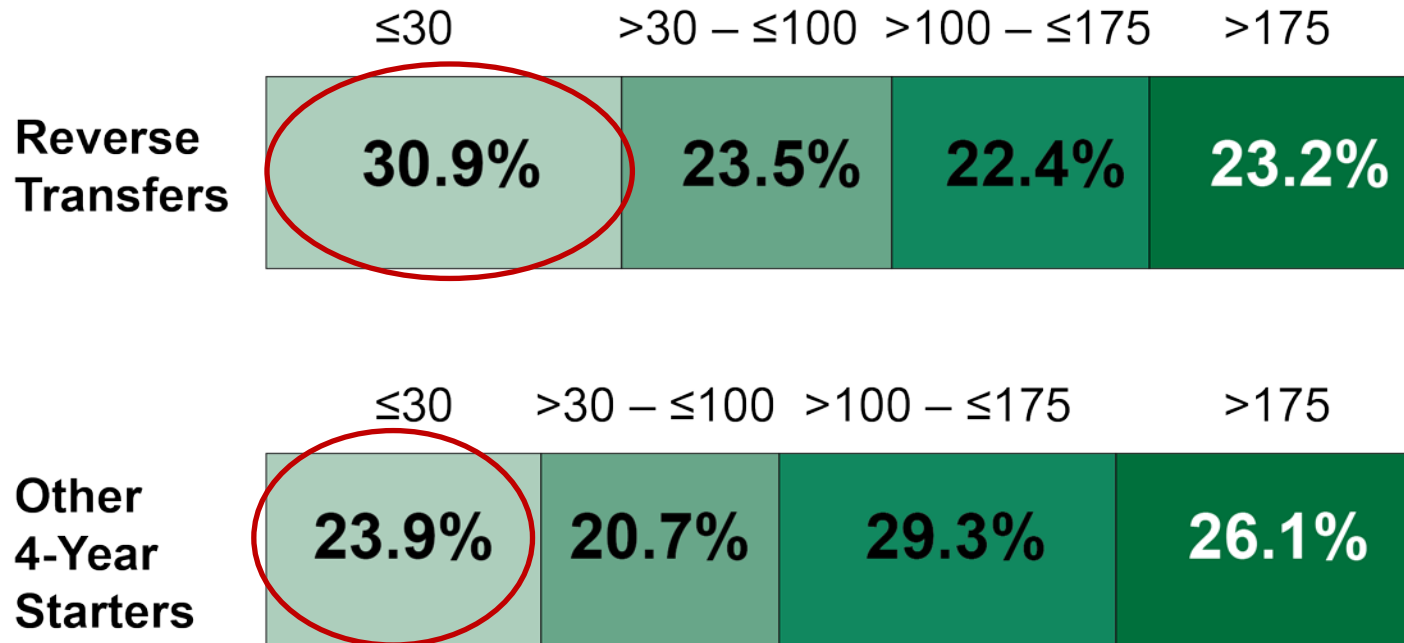
	B	Sig.	Odds Ratio		B	Sig.	Odds Ratio
Gender: Male to Female	.115	.001	1.122	HS Program Type		.391	
Race		.044		CTE to College Prep	.025	.623	1.026

	B	Sig.	Odds Ratio
<b>Public to Private</b>	.170	.000	1.185
<b>In-state to Out-of-State</b>	.126	.005	1.135
<b>Highly/Most Competitive to Other</b>	-.357	.000	.700

Top to Bottom	-.424	.002	.655
2.5-2.9 to Bottom	-.194	.135	.824
3.0-3.4 to Bottom	-.098	.449	.907
AP		.000	
2.5-2.9 to ≤2.4	-.125	.022	.882
3.0-3.4 to ≤2.4	-.369	.000	.692
≥3.5 to ≤2.4	-.909	.000	.403
AP English	.060	.140	1.062
AP Social Studies	-.090	.030	.914
AP Math	-.012	.774	.988
AP Foreign Language	-.090	.026	.914
AP Science	.086	.037	1.090

High School Mean ACT	-.077	.000	.926
Distance from HS to Initial Four-Yr		.014	
>30 – ≤100 to ≤30	-.045	.319	.956
>100 – ≤175 to ≤30	-.135	.005	.874
>175 to ≤30	-.142	.009	.868
Public to Private	.170	.000	1.185
In-state to Out-of-State	.126	.005	1.135
Highly/Most Competitive to Other	-.357	.000	.700

# Distance in Miles Between High School and Initial Four-Year Institution



**A higher proportion of reverse transfer students initially enrolled closer to home.**



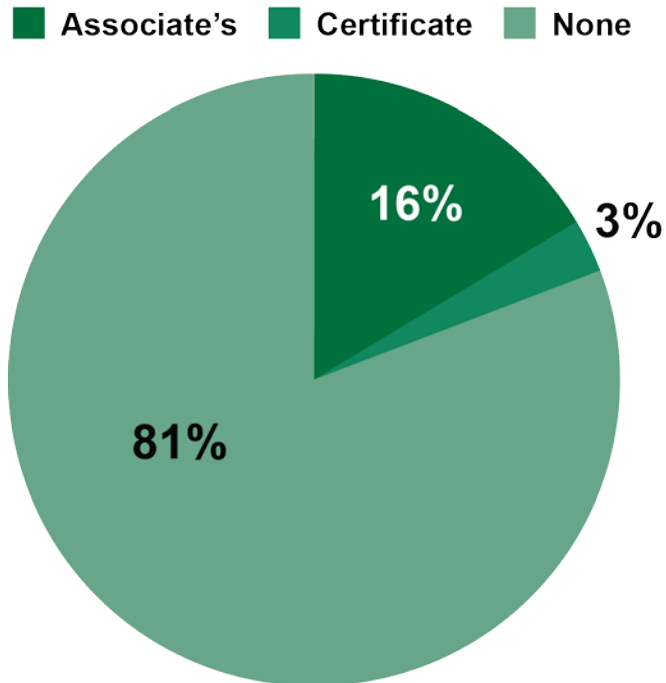
# Distance between HS and Initial 4yr by Distance between HS and CC

			High School to Community College				
			≤30	>30 to ≤100	>100 to ≤175	>175	Total
High School to Initial Four-Year	≤30	Row %	91.2%	4.5%	1.0%	3.4%	100.0%
	>30 to ≤100	Row %	73.0%	22.0%	1.5%	3.5%	100.0%
	>100 to ≤175	Row %	77.3%	4.0%	15.3%	3.5%	100.0%
	>175	Row %	75.0%	3.1%	2.4%	19.5%	100.0%
Total		Row %	80.0%	8.2%	4.6%	7.2%	100.0%

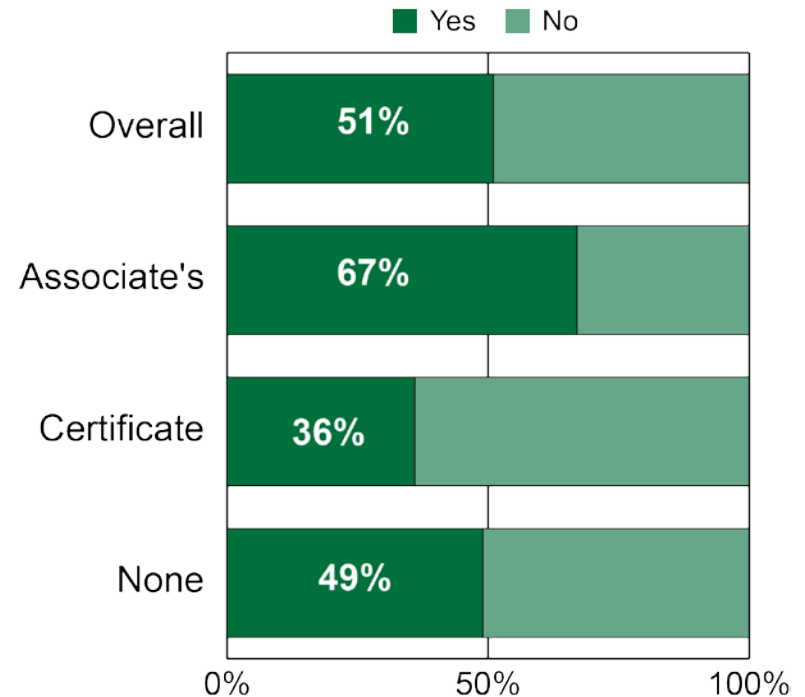
- Most reverse transfer students enrolled at a community college within 30 miles of home.
- Around 20% are opting to utilize the community college in the same area as their initial four-year college.

# Outcomes for Reverse Transfers at Community Colleges: Research Question 2

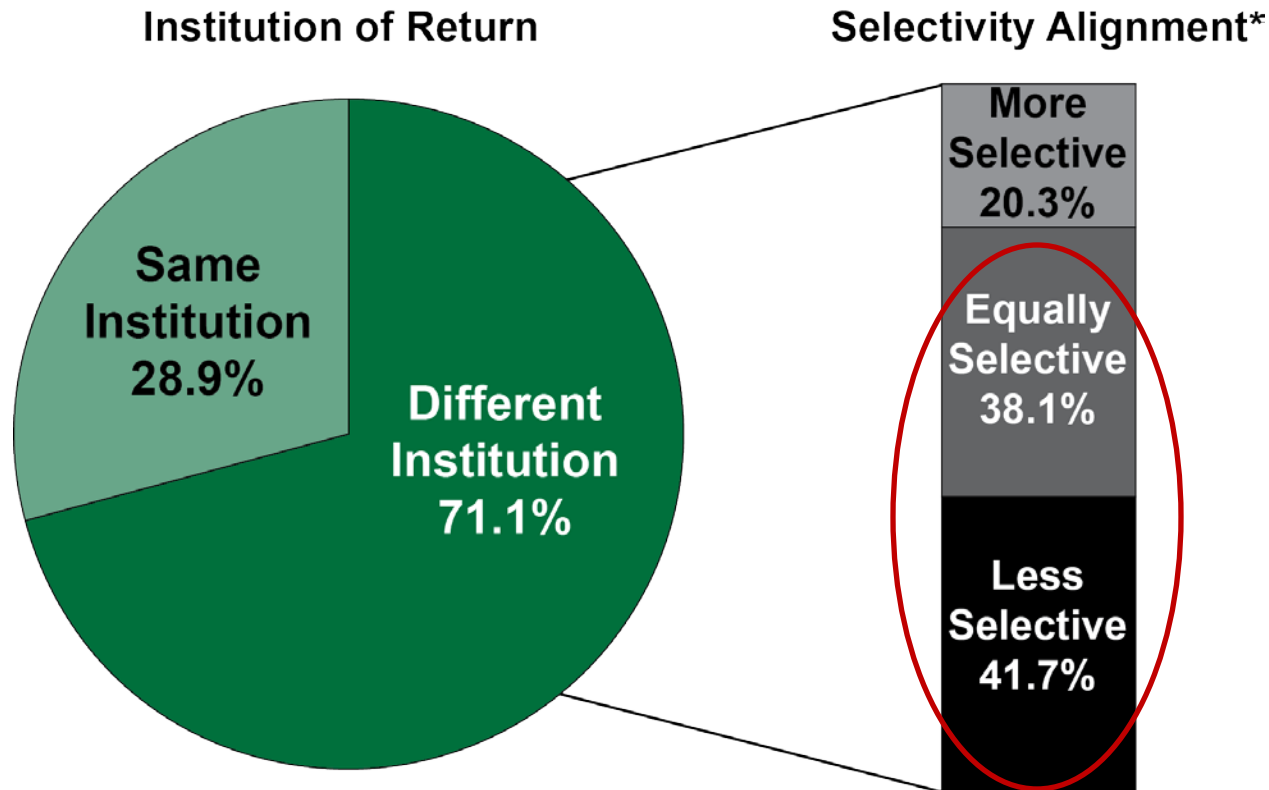
Highest Two Year Degree



Returned to a Four-Year Institution



# Institution of Return and Selectivity Alignment\*



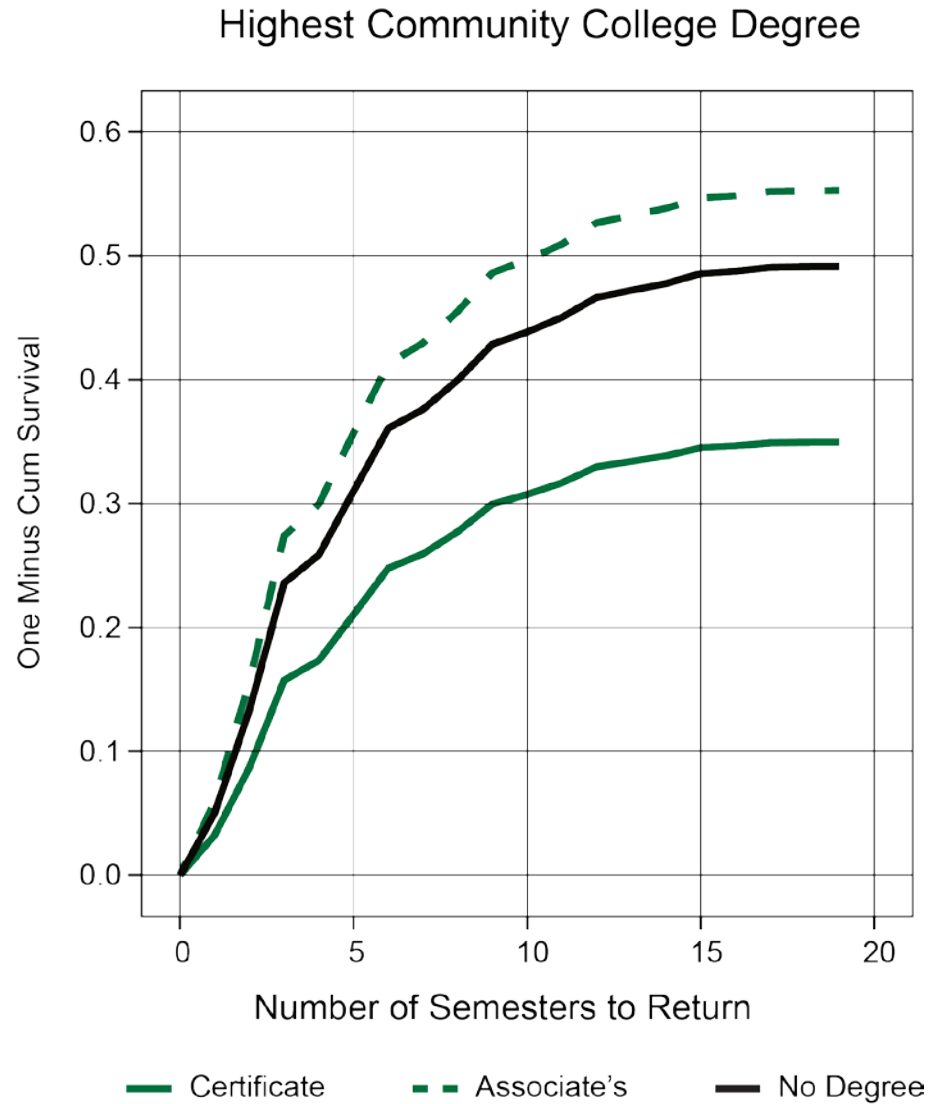
\* 399 individuals enrolled at institutions lacking a Barron's competitiveness rating.

**More than 70% of reverse transfers who return to a four-year do so at a different institution.**

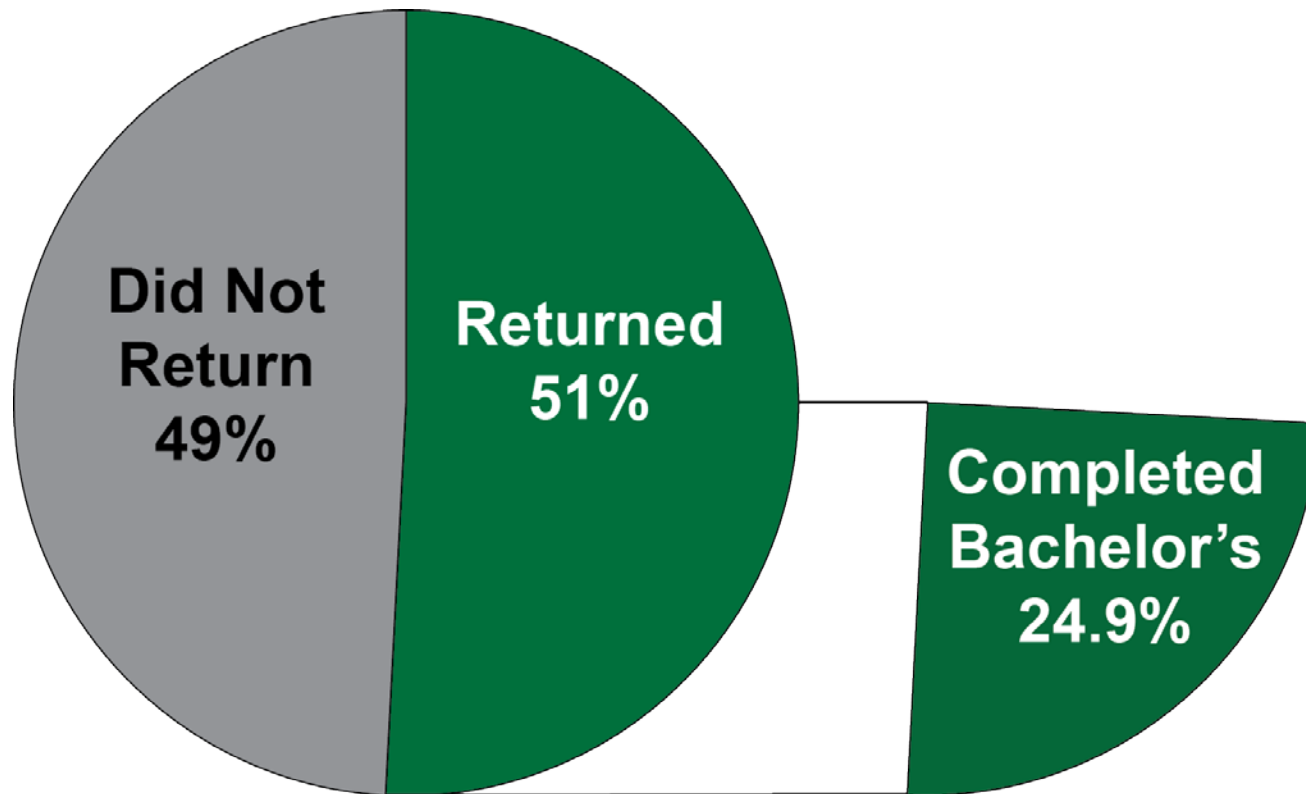
## Research Question #3: Time to Return to a Four-Year College

	B	SE	Wald	Sig.	Odds Ratio
Gender: Male to Female	-.045	.040	.001	.953	.055
MS Program Type					
Certificate to No Degree	-.452	.146	9.607	.002	.637
Associate's to No Degree	.174	.055	10.073	.002	1.190
Semester of Reverse Transfer	-.023	.002	151.887	.000	.978

# Model Adjusted Time to Return



# Bachelor's Completion among Reverse Transfer Students

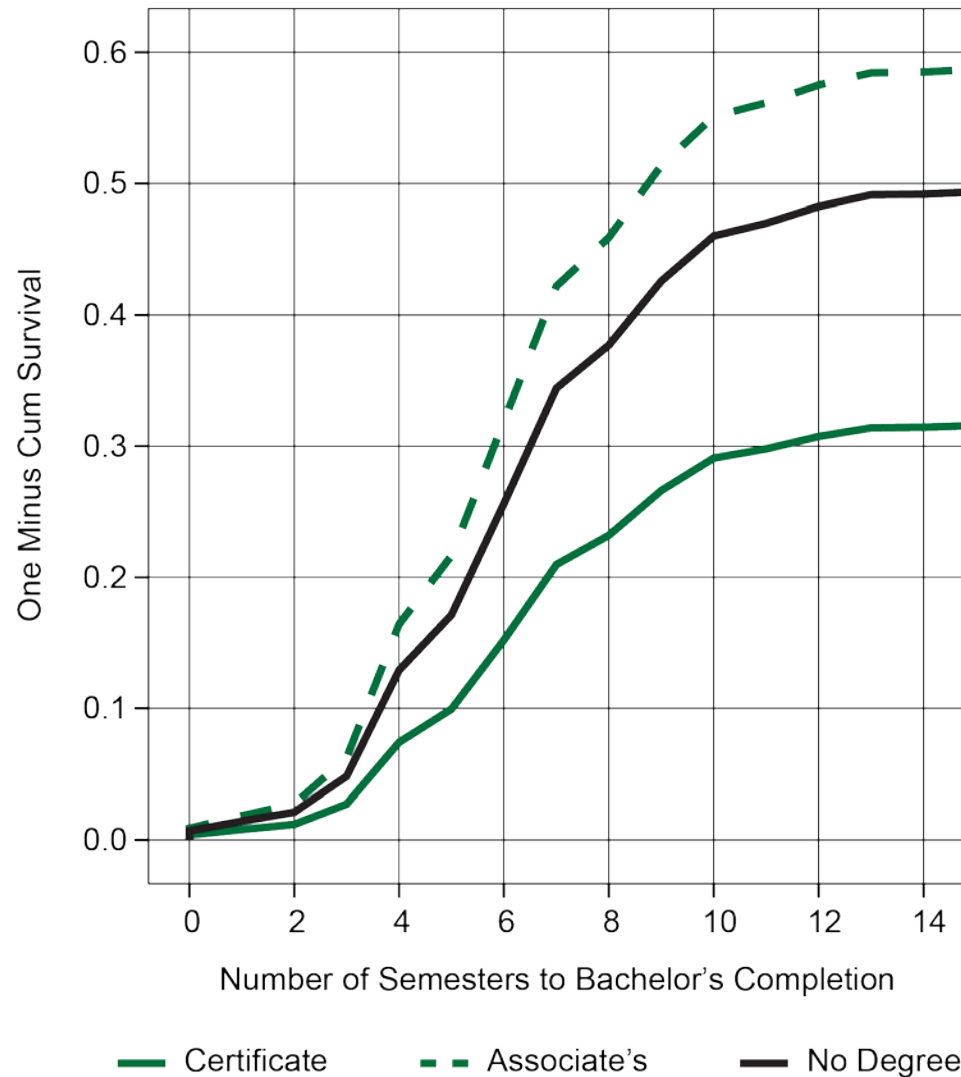


# Research Question #4: Bachelor's Completion

	B	Sig.	Odds Ratio		B	Sig.	Odds Ratio
Gender: Male to Female	-.218	.002	.804	HS Program Type		.950	
	B	Sig.	Odds Ratio				
	B	Sig.	Odds Ratio				
	B	Sig.	Odds Ratio				
<b>Returned to the Same 4yr</b>	.232	.006	1.262				
<b>Selectivity Alignment</b>		.042					
Equal to Less Competitive	.255	.018	1.291				
More to Less Competitive	.162	.063	1.176				
<b>Returned to Public</b>	.009	.909	1.009				
<b>Returned In-State</b>	.245	.021	1.277				
AP English	.019	.822	1.019	Distance Between HS and 4yr		.662	
AP Social Science	-.057	.479	.945	>30 – ≤100 to ≤30	.032	.707	1.033
AP Math	-.049	.551	.952	>100 – ≤175 to ≤30	.011	.915	1.011
AP Science	.152	.050	1.165	>175 to ≤30	-.114	.345	.892
Control	-.052	.524	.949	Semester of Return	-.027	.000	.973

# Model Adjusted Time to Bachelor's Completion

Highest Community College Degree

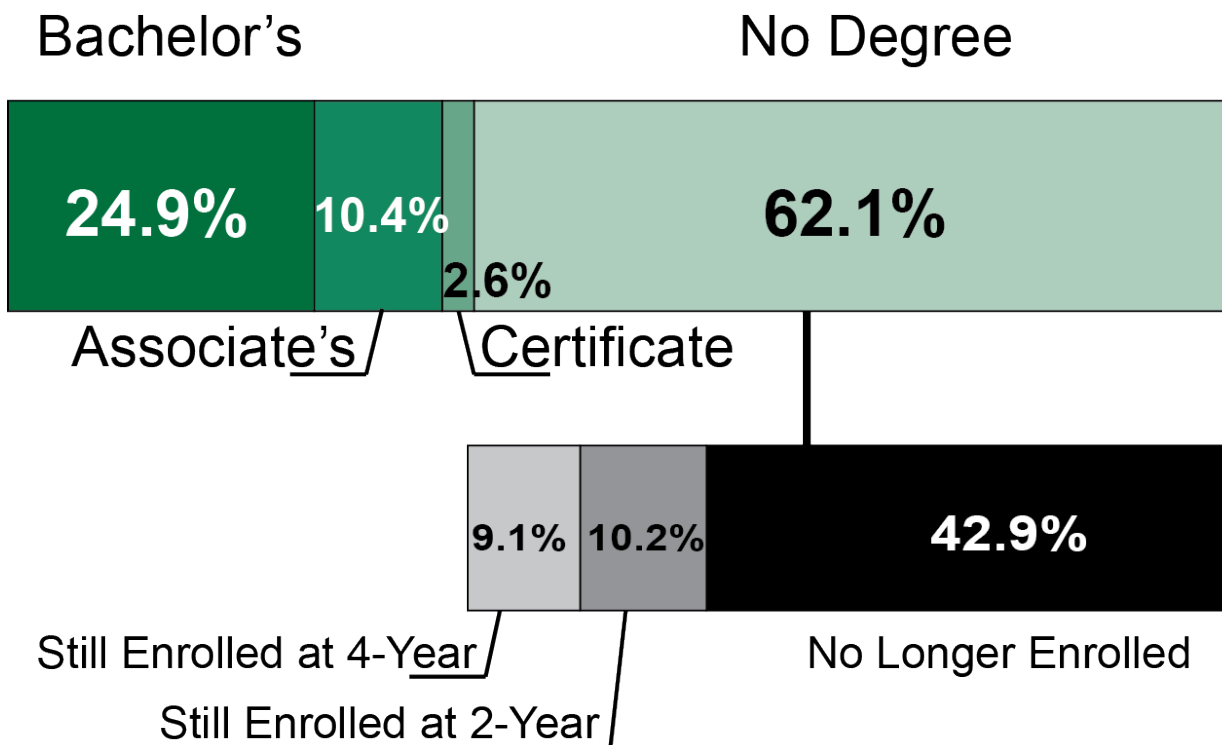




# Reverse Transfer and End of Study Status

End of Study Status						
		Bachelor's Degree or Higher	Non-Completers			Total
			Still Enrolled at 4-yr	Still Enrolled at 2-yr	No Longer Enrolled	
Reverse Transfer Students	Row %	24.9%	12.1%	12.4%	50.6%	100.0%
	Column %	7.2%	54.9%	100.0%	50.2%	20.7%
Other Four-Year Starters	Row %	84.3%	2.6%	0.0%	13.1%	100.0%
	Column %	92.8%	45.1%	0.0%	49.8%	79.3%
Total	Row %	72.0%	4.6%	2.6%	20.9%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%	100.0%

# Highest Degree and End of Study Status for Reverse Transfer Students



# Discussion/Conclusions

- The factors related to academic preparation and financial aid had relatively strong effects in terms of reverse transferring.
- Patterns regarding the ACT and reverse transferring were noteworthy and parallel recent research focusing on similar outcomes.
- The importance of the factors related to financial aid and academic preparation faded as the outcome measures advanced. Institutional characteristics became more important.
- Associate's degree completion was positively and significantly related to both a timely return and a timely completion of a bachelor's degree.

# Policy Implications

- Reverse transferring of credit to the community college along with the student
  - Active reverse articulation of credit from initial four-year institution to community college
- Statewide Longitudinal Data Systems
  - Limitations of the current study (achievement during college and financial aid)
  - Early monitoring systems

# Recommendations for Further Investigation

1. Reverse Transfers who stay versus those who gravitate towards home.
2. Predicting a timely completion of an associate's degree among reverse transfers.
3. Integrating employment information.

# Questions

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