Reverse Transfer Students and Postsecondary Outcomes: A Potential Opportunity

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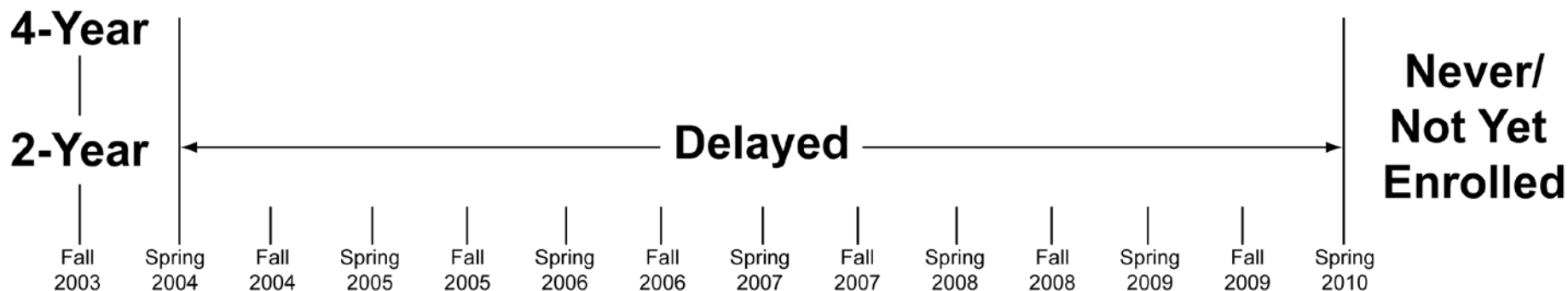
Reverse Transferring vs. Reverse Articulation

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 (Adelman).
- A transfer takes place.

Reverse Articulation

- Pertains to students who start at a community college and later transfer to a four-year prior to earning an associate's degree.
- Current policy initiative that is sometimes called reverse transferring.
- Involves the post-transfer articulation of credit from the four-year college to the original community college.
- The emphasis is on associate degrees.

Basic Types of Postsecondary Enrollment

4-Year

2-Year

Delayed

Never/ Not Yet Enrolled

Fall 2003 · Spring 2004 · Fall 2004 · Spring 2005 · Fall 2005 · Spring 2006 · Fall 2006 · Spring 2007 · Fall 2007 · Spring 2008 · Fall 2008 · Spring 2009 · Fall 2009 · Spring 2010
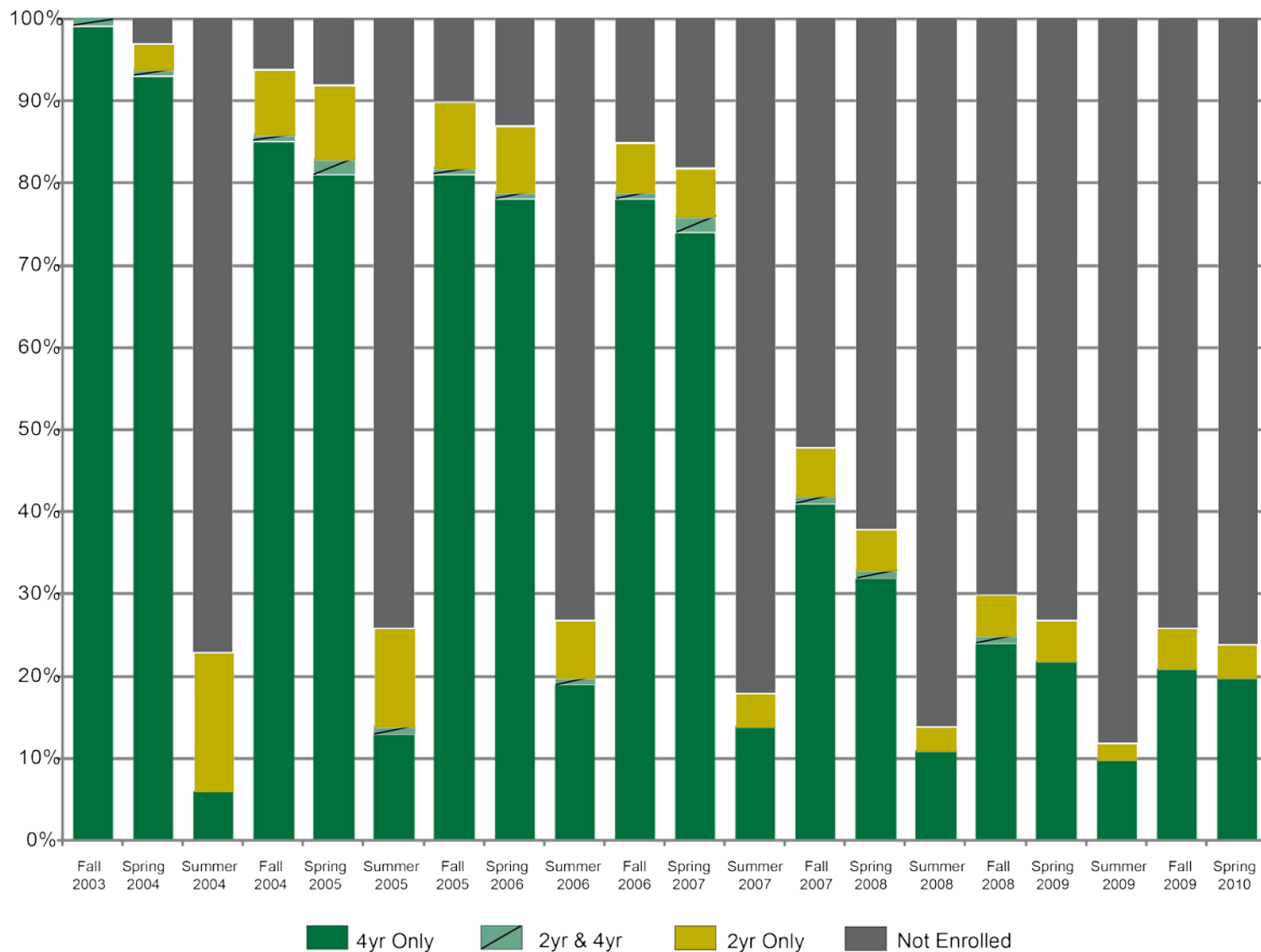
The study starts with the portion of the Illinois High School Class of 2003 (N=115,677) that enrolled at a four-year college during the fall semester of 2003.
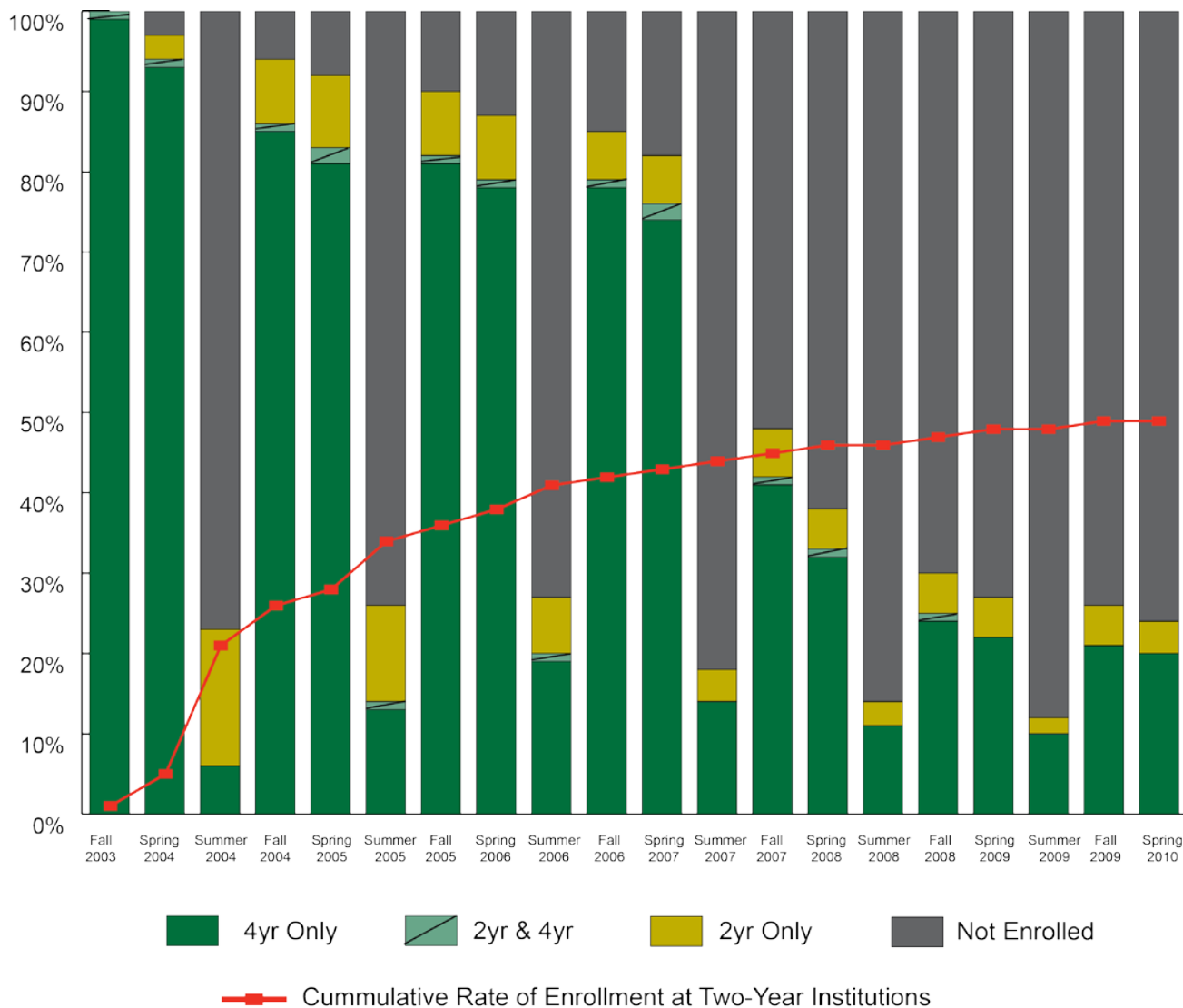
Class of 2003
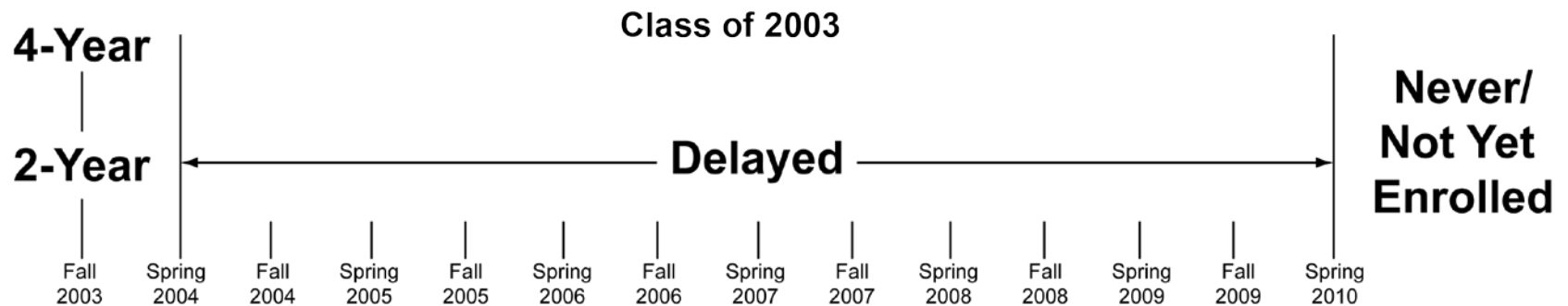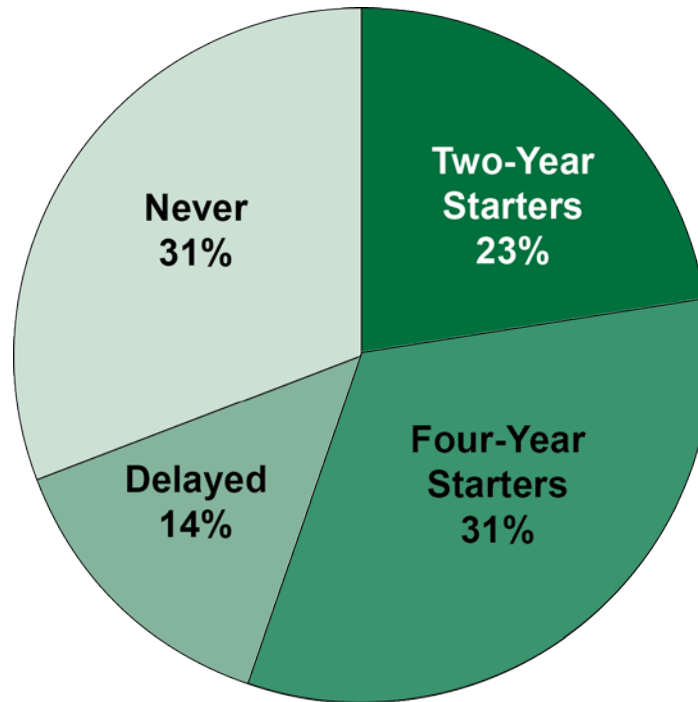
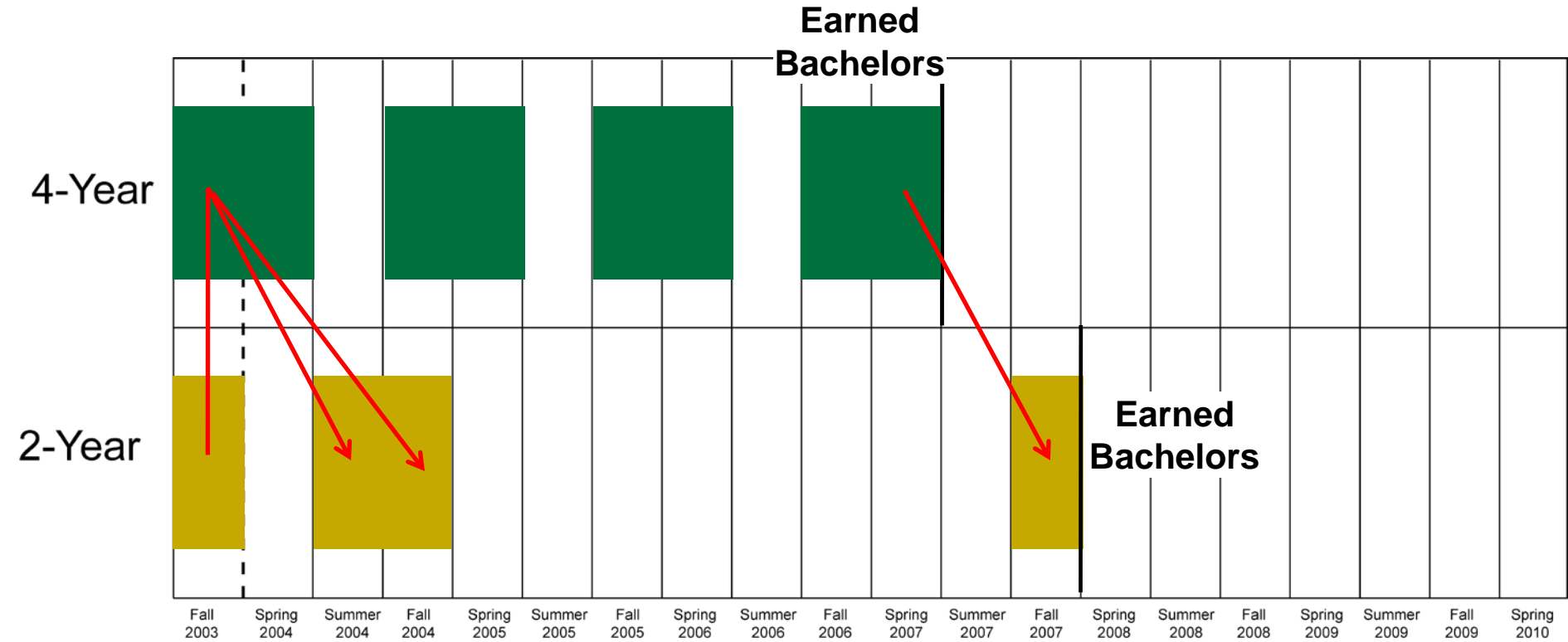**In total, there were 37,165 four-year starters.**

Enrollment at 4yr and 2yr Institutions

5

Enrollment Trends for Four-Year Starters

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

- Co-Enrolled
- Summer
- Reverse Transfer
- Post-Bachelors

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 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 entrants 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 entrants 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 a shorter 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 a shorter time to return to a four-year institution?

4. Among those returning, what factors are related to a shorter time to bachelor's completion?

Factors

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

Outcomes

Outcome	Description
Reverse Transfer	Dichotomous indicator of whether a 4-yr starter ever enrolled at a community college excluding summer enrollment, concurrent enrollment, and post-bachelor's enrollment.
Highest CC Degree	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.
4-yr Return	Dichotomous indicator of whether a reverse transfer student ever returned to a 4-yr institution after their community college enrollment.
Bachelor's Completion	Dichotomous indicator of whether a returner earned a bachelor's degree by the end of the spring semester of 2010.

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.

Outcomes

1) Initial 4-Year

Time to Reverse Transfer for 4-Year Starters (N=37,165)

Fall 2003 | Spring 2004 | Fall 2004 | Spring 2005 | Fall 2005 | Spring 2006 | Fall 2006 | Spring 2007 | Fall 2007 | Spring 2008 | Fall 2008 | Spring 2009 | Fall 2009 | Spring 2010

2) Community College

Time to Return to 4-Year Among Reverse Transfers (N=7,696)

Highest Degree Earned

Spring 2010

3) 4-Year of Return

Time to Bachelor's Completion Among Returners (N=3,954)

Spring 2010

Distance
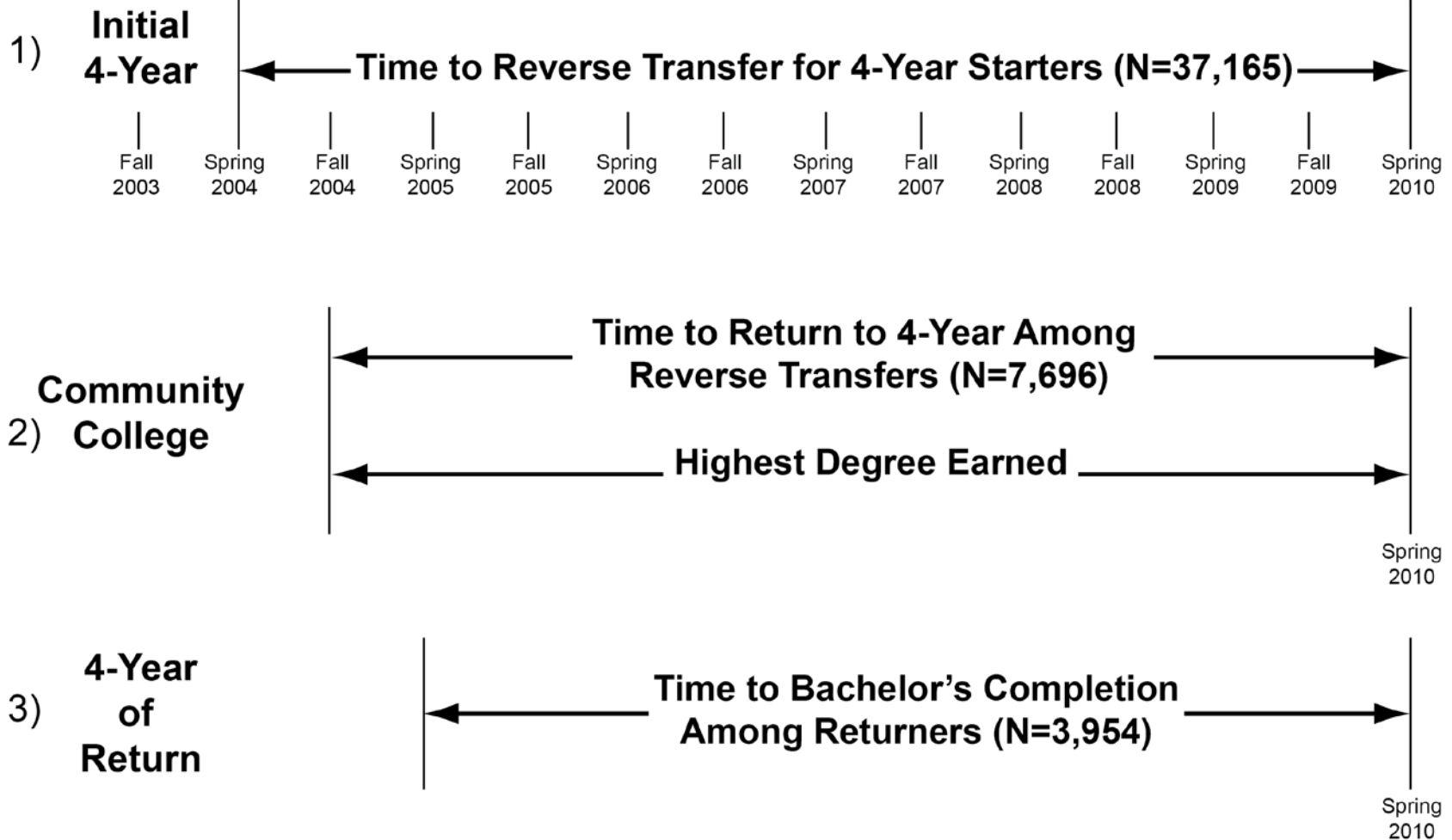
Reverse Transfers

- More than one out of every five four-year college entrants met this distinction (21%)

  – Does not include summer enrollment

  – Does not include co-enrollment

  – Does not include post-bachelor's enrollment

Class of 2003 (N=115,677)

4-Year Starters (N=37,165)

32.1%

20.7%

Reverse Transfer (N=7,696)
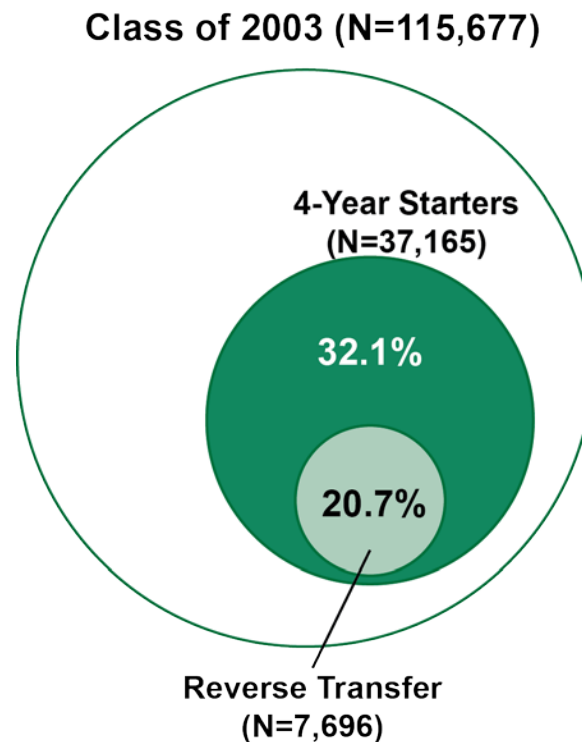
Cumulative Rate of Reverse Transfer

A sizeable proportion of reverse transfers occurred well into the study.

More than 50% of reverse transfers occurred by Spring of 2005.

The greatest number of reverse transfers occurred from Spring of 2004 to Fall of 2004 (25%).
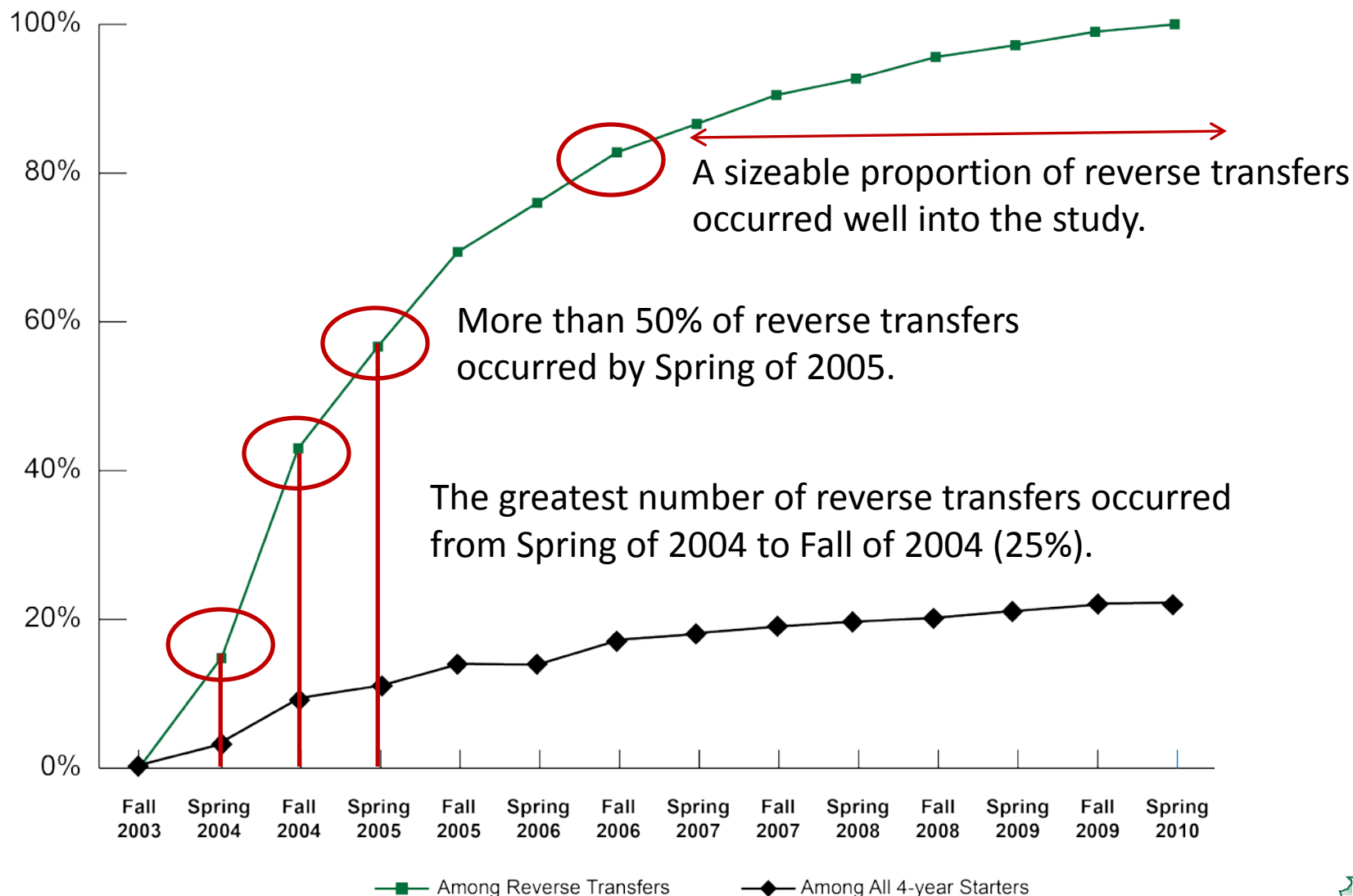
Cumulative Number of Semesters to Reverse Transfer for Initial Stopouts (n=567)

Only half had reverse transferred within one academic year of stopping out.
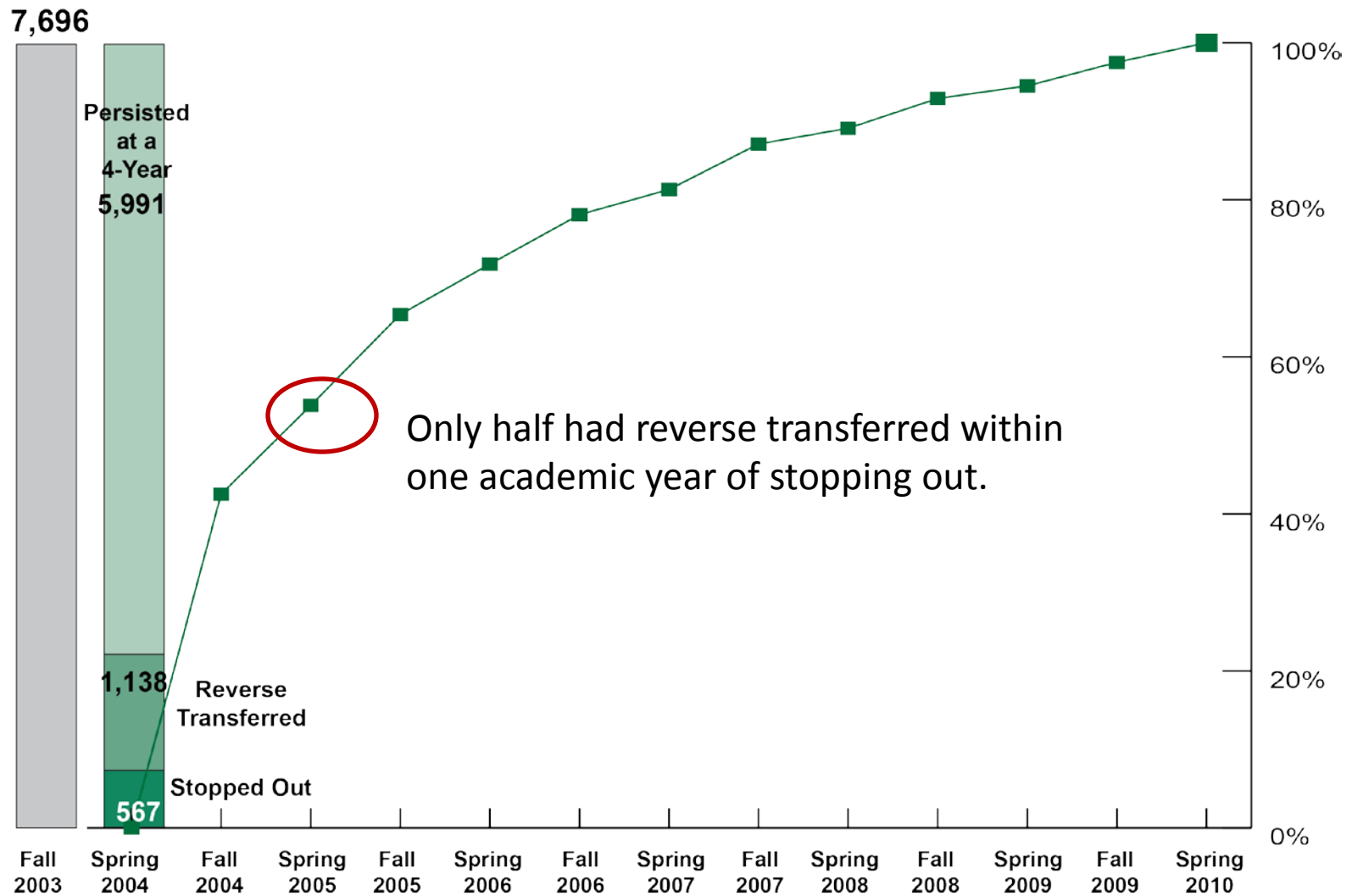
	B	Sig.	Odds Ratio
HS GPA		.000	
2.5-2.9 to ≤2.4	-.125	.022	.882
3.0-3.4 to ≤2.4	-.369	.000	.692
≥3.5 to ≤2.4	-.909	.000	.403
...ber of Siblings	.035	.005	1.035

	B	Sig.	Odds Ratio		B	Sig.	Odds Ratio
		.000		>100 – ≤175 to ≤30	-.135	.005	.874
...to ≤2.4	-.125	.022	.882	>175 to ≤30	-.142	.009	.868
...4 to ≤2.4	-.369	.000	.692	**Public to Private**	.170	.000	1.185
...5 to ≤2.4	-.909	.000	.403	**In-state to Out-of-State**	.126	.005	1.135
...English	.060	.140	1.062	**Highly/Most Competitive to Other**	-.357	.000	.700
AP Social Studies	-.090	.030	.914				
AP Math	-.012	.774	.988				
AP Foreign Language	-.090	.026	.914				
AP Science	.086	.037	1.090				

	B	Sig.	Odds Ratio
Gender: Male to Female	.115	.001	1.122
Race		.044	

	B	Sig.	Odds Ratio
HS Program Type		.391	
CTE to College Prep	.025	.623	1.026

	B	Sig.	Odds Ratio
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

	B	Sig.	Odds Ratio
Top ... ttom	-.424	.002	.655
...d to Bottom	-.194	.135	.824
...to Bottom	-.098	.449	.907
...PA		.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

	B	Sig.	Odds Ratio
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

	≤30	>30 – ≤100	>100 – ≤175	>175
Reverse Transfers	30.9%	23.5%	22.4%	23.2%

	≤30	>30 – ≤100	>100 – ≤175	>175
Other 4-Year Starters	23.9%	20.7%	29.3%	26.1%
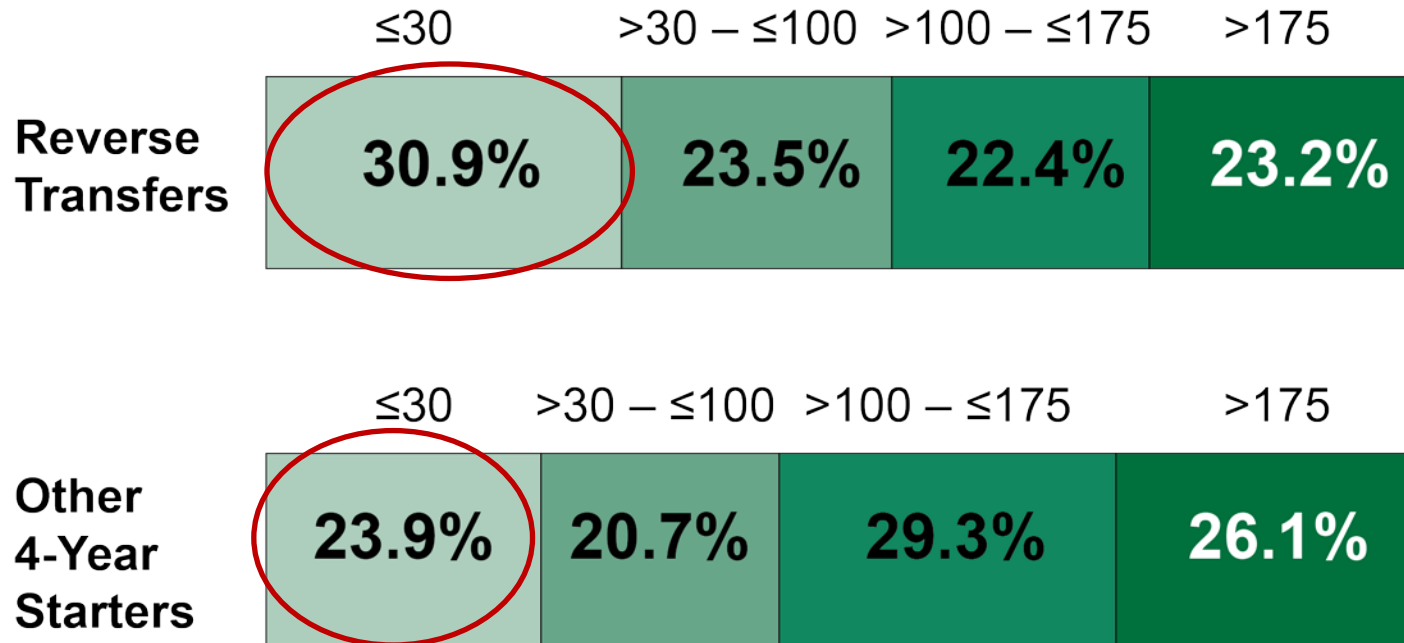
Reverse transfer students tend to initially enroll closer to home.

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

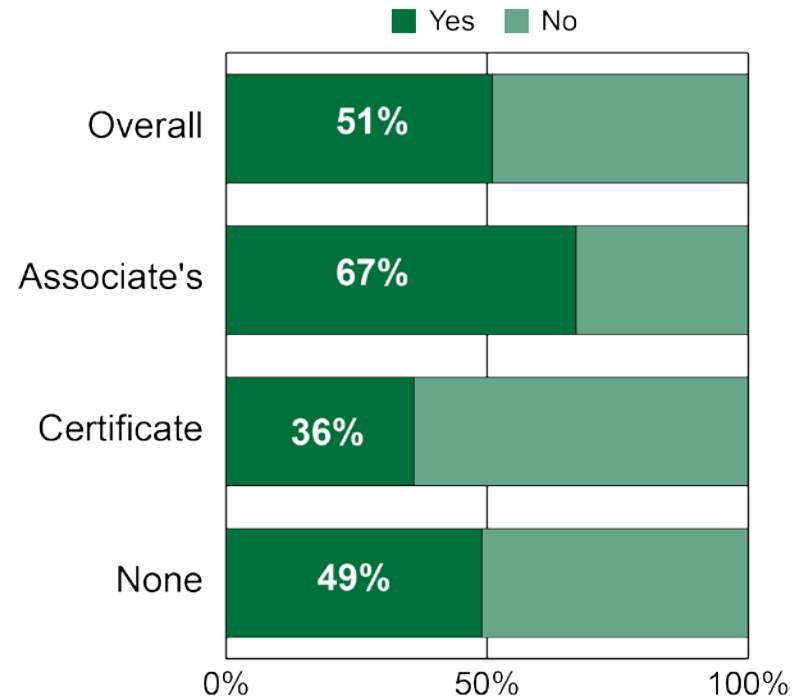|			High School to Community College				
			≤30	>30 to ≤100	>100 to ≤175	>175	Total
High School to Initial Four-Year	≤30	Row %	91.2%	4.5%	1.0%	3.4%	100.0%
	>30 to ≤100	Row %	73.0%	22.0%	1.5%	3.5%	100.0%
	>100 to ≤175	Row %	77.3%	4.0%	15.3%	3.5%	100.0%
	>175	Row %	75.0%	3.1%	2.4%	19.5%	100.0%
Total		Row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

RQ#2-Outcomes for Reverse Transfers at Community Colleges
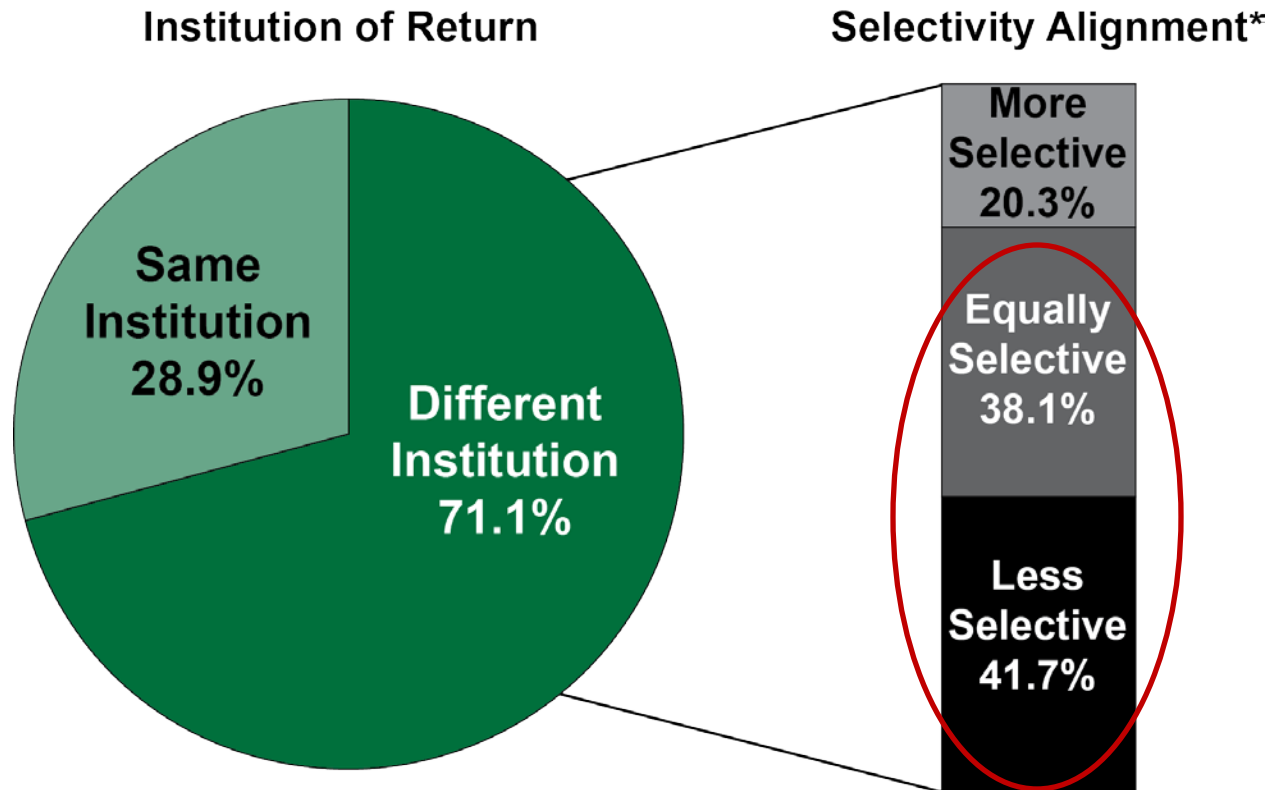
Highest Two Year Degree

Legend: Associate's | Certificate | None

- 16%
- 3%
- 81%
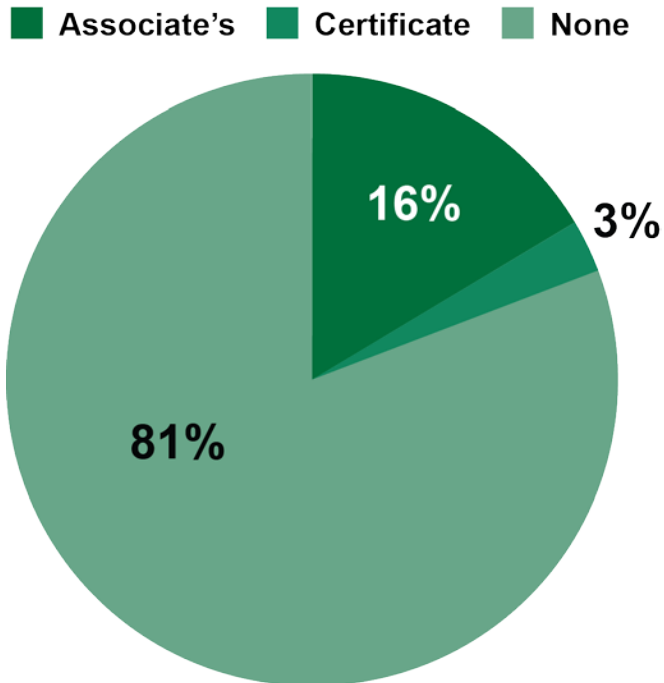
Returned to a Four-Year Institution

Legend: Yes | No

	Yes
Overall	51%
Associate's	67%
Certificate	36%
None	49%

0% 50% 100%

Institution of Return and Selectivity

Institution of Return

Same Institution 28.9%

Different Institution 71.1%

Selectivity Alignment*

More Selective 20.3%

Equally Selective 38.1%

Less Selective 41.7%

* 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.

RQ#3- Time to Return
among Reverse Transfer Students

	B	SE	Wald	Sig.	Odds Ratio
Highest Two-Year Degree			21.496	.000	
Certificate to No Degree	-.452	.146	9.607	.002	.637
Associate's to No Degree	.174	.055	10.073	.002	1.190

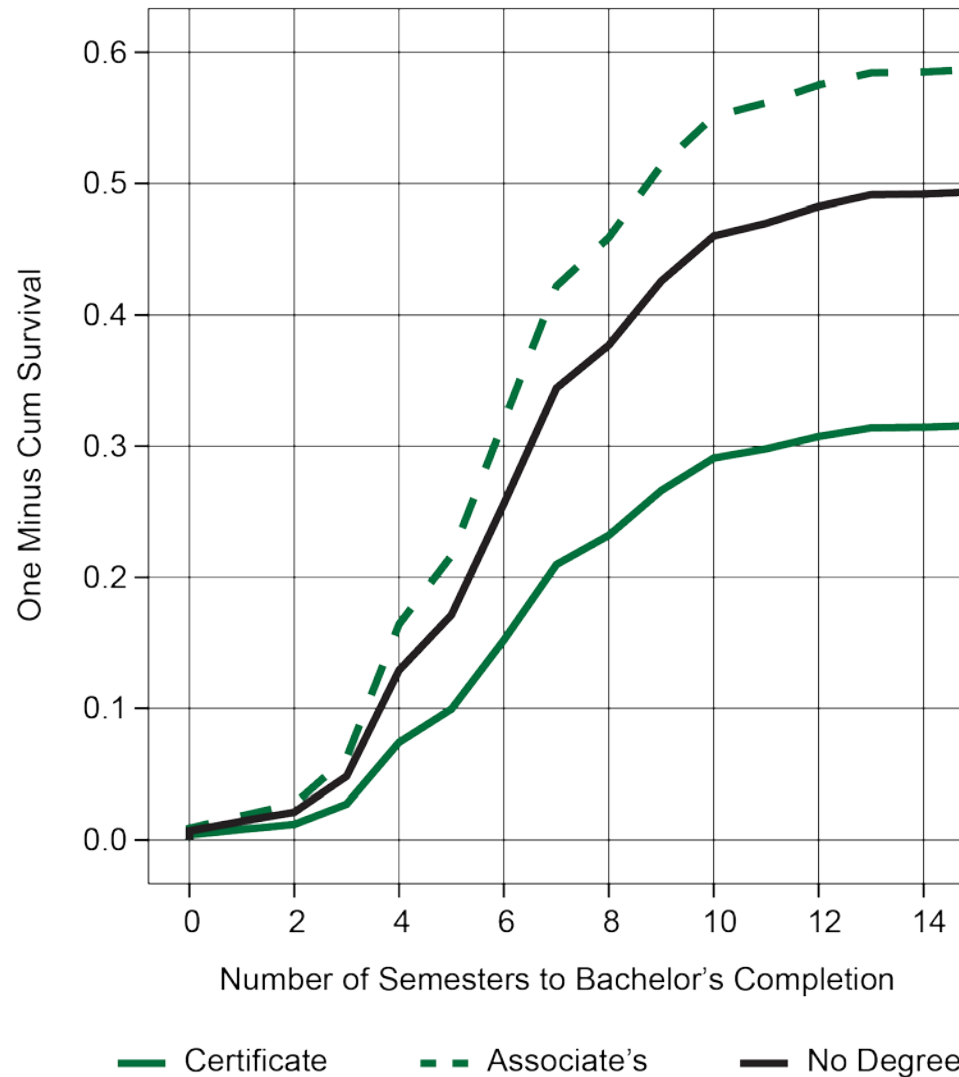# Bachelor's Completion among Reverse Transfer Students
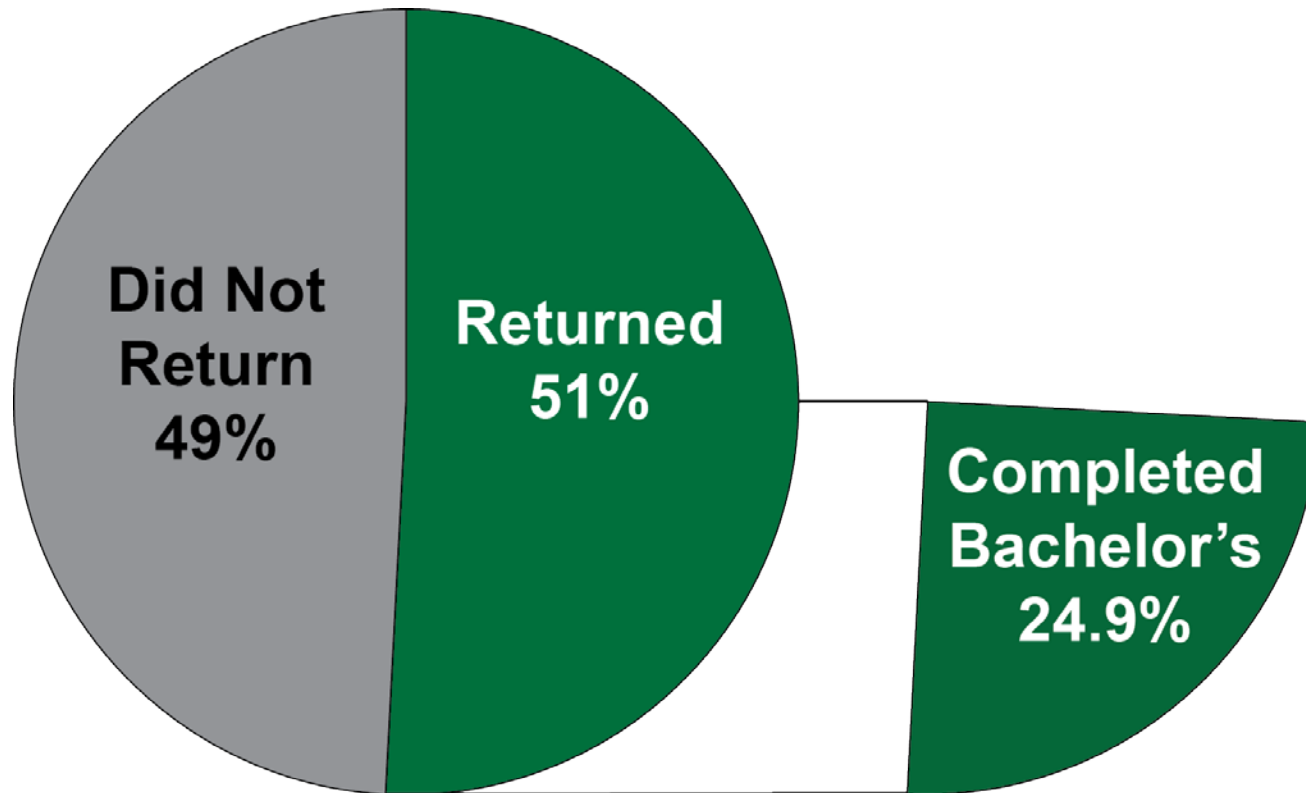
RQ#4-Time to Bachelor's Completion among Reverse Transfer Students who Returned

	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
Returned to the Same 4yr	.232	.006	1.262
Selectivity Alignment		.042	
Equal to Less Competitite	.255	.018	1.291
More to Less Competitive	.162	.063	1.176
Returned to Public	.009	.909	1.009
Returned In-State	.245	.021	1.277

	B	Sig.	Odds Ratio		B	Sig.	Odds Ratio
AP English	.019	.822	1.019	Distance Between HS and 4yr		.662	
AP Soci...	-.057	.479	.945	>30 – ≤100 to ≤30	.032	.707	1.033
AP M...	-.049	.551	.952	>100 – ≤175 to ≤30	.011	.915	1.011
AP...	.152	.050	1.165	>175 to ≤30	-.114	.345	.892
	-.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				
			Non-Completers			
		Bachelor's Degree or Higher	**Still Enrolled at 4-yr**	**Still Enrolled at 2-yr**	**No Longer Enrolled**	**Total**
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

Bachelor's

No Degree

24.9% 10.4% 2.6% 62.1%

Associate's Certificate

9.1% 10.2% 42.9%

Still Enrolled at 4-Year

Still Enrolled at 2-Year

No Longer Enrolled
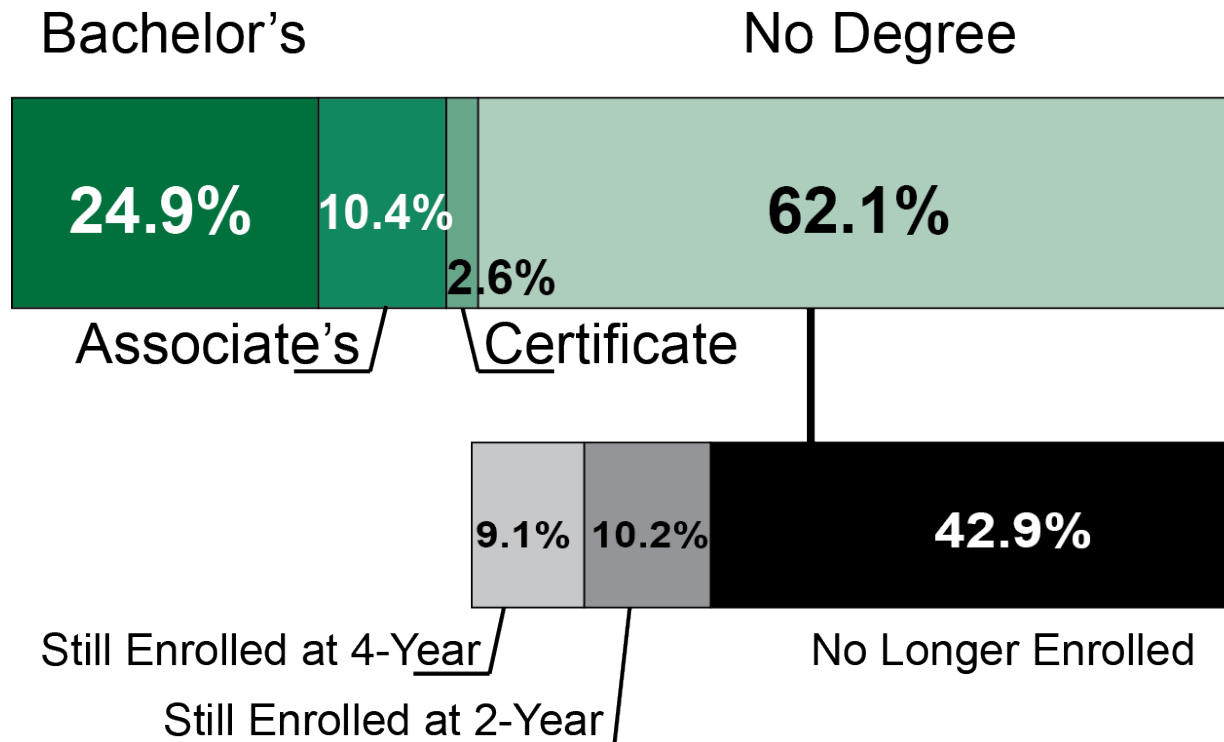
Discussion/Conclusions

- The factors related to academic preparation and financial aid had relatively strong effect sizes in terms of reverse transferring.

- Patterns regarding performance on the ACT and reverse transferring were noteworthy and parallel recent research focusing on similar outcomes.

- 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

Questions

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