

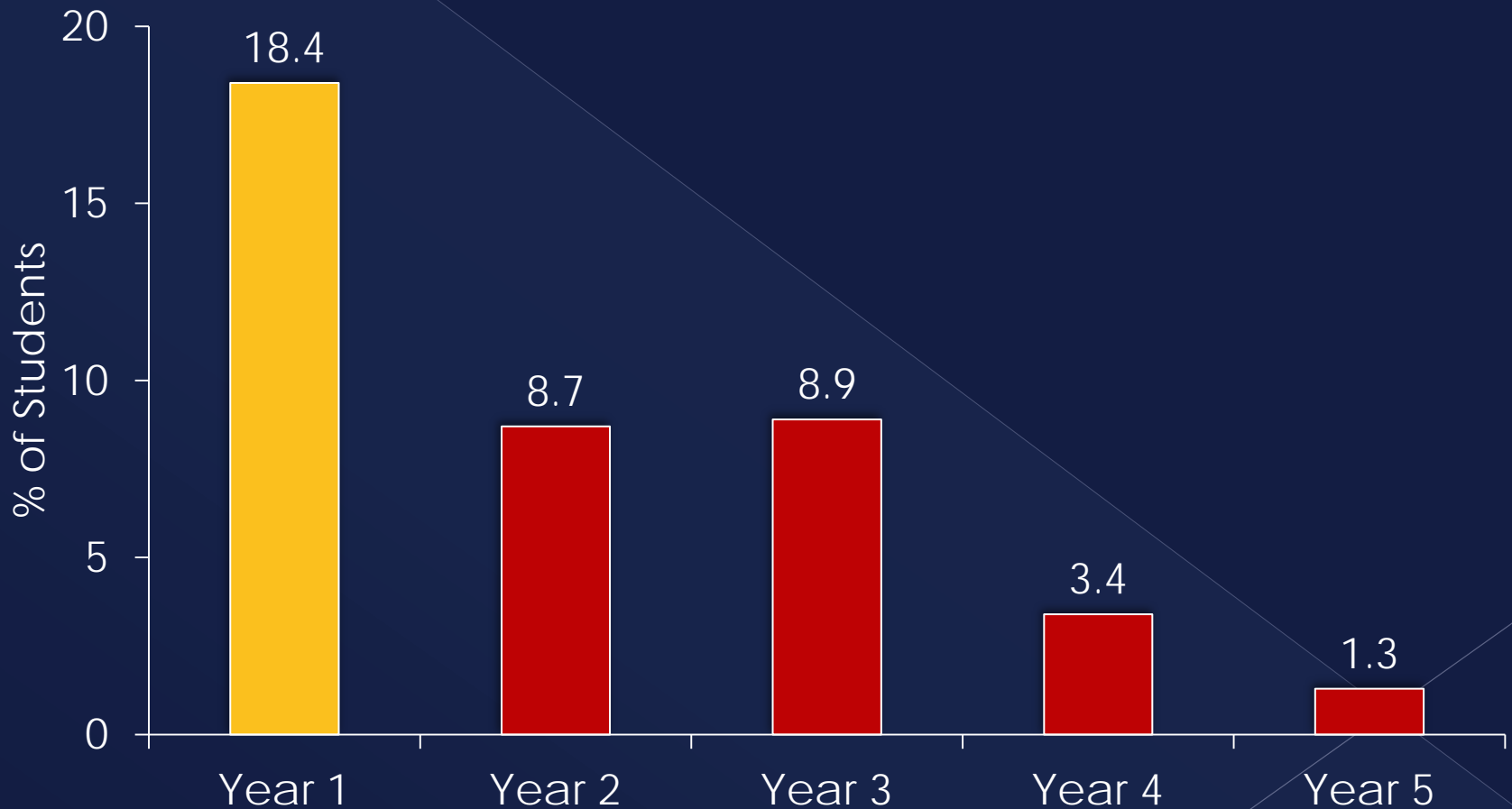
# 'Calculating' Return: Using Student Input Data to Calculate First-Year Retention

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# Introduction

- Increasing degree attainment rates is a national priority
- Living communities, first year seminars, and supplemental instruction are among institutional efforts that have received a lot of attention as best practices

- Despite concerted efforts, attrition remains highest during first-year of college



# Developing strategies

- To best tailor campus-facilitated efforts, it is necessary to better understand inputs of incoming class
  - Who are we serving and what are their chances of being retained?
  - Would increasing certain efforts help the type of students we serve?

# Purpose

- To examine how pre-college student and institutional characteristics are related to first-year retention
- To provide institutions with a first-year retention calculator

# Background: HERI's Graduation Calculator

- Created in 2011
- Allows institutions to compare *expected* rates to *actual* rates
- Basic calculator uses race, sex, high school GPA, and SAT scores
- Larger calculator uses 169 variables
  - › Improved correct classification of cases by about 5%

# Methods

## ◎ Data and Sample

- › 2004 CIRP Freshman Survey
- › 2005 National Student Clearinghouse
- › 210,056 students at 356 four-year colleges and universities
  - Weighted by institution type and sex to represent the 1.4 million first-time, full-time students entering 4-year institutions in 2004

## ◎ Analysis

- › HGLM

# Variables

- ◎ Dependent variable (NSC)
  - › Re-enrollment at same institution in Fall 2005
- ◎ Independent variables (TFS)
  - › Demographic
  - › Pre-college experiences and academic achievement
  - › Financial considerations and college choice
  - › Expectations and intended major
  - › Institutional characteristics



# Results: Demographics

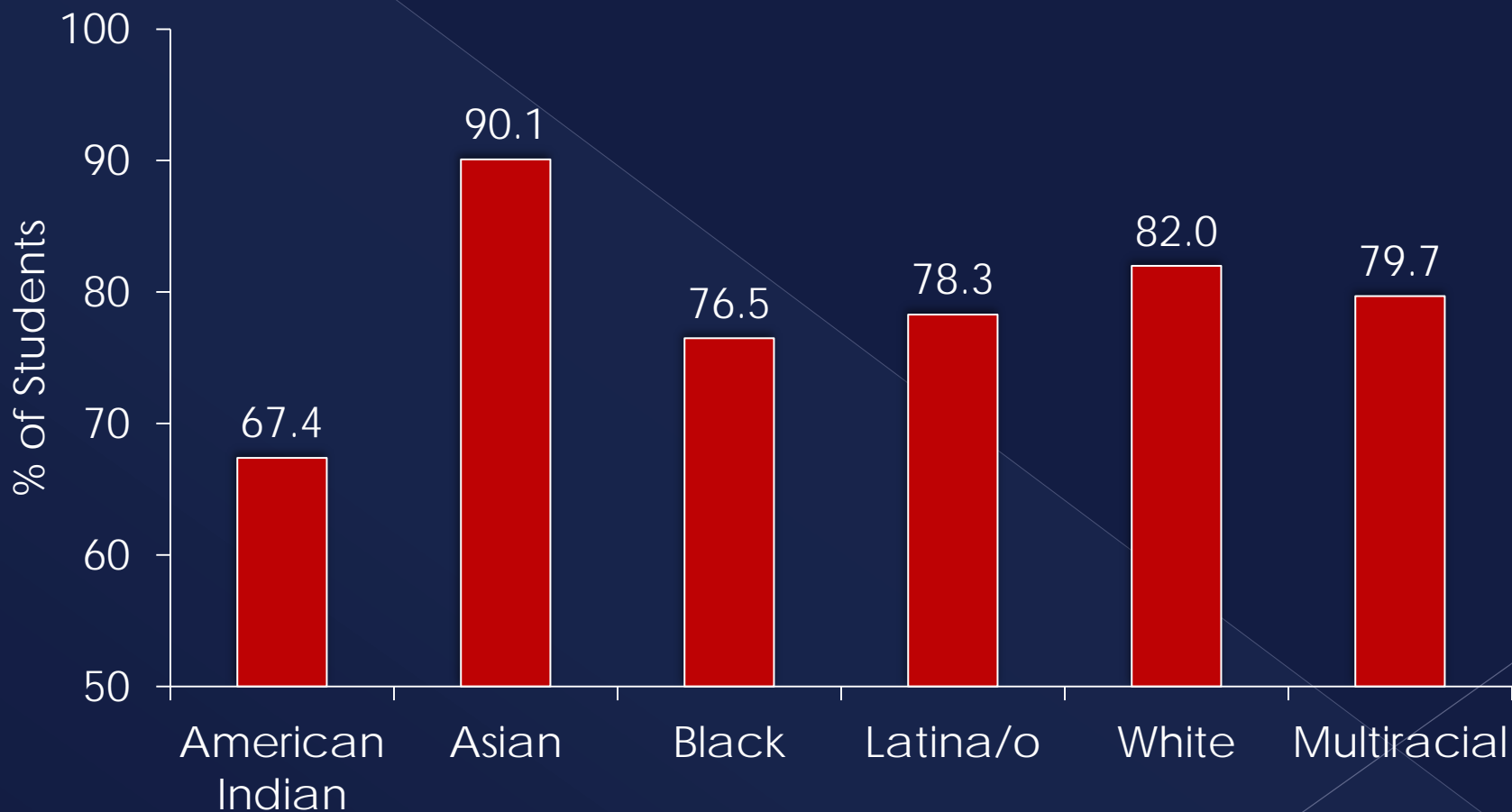
## INCREASED ODDS

- Asian American
- Black
- Higher Income

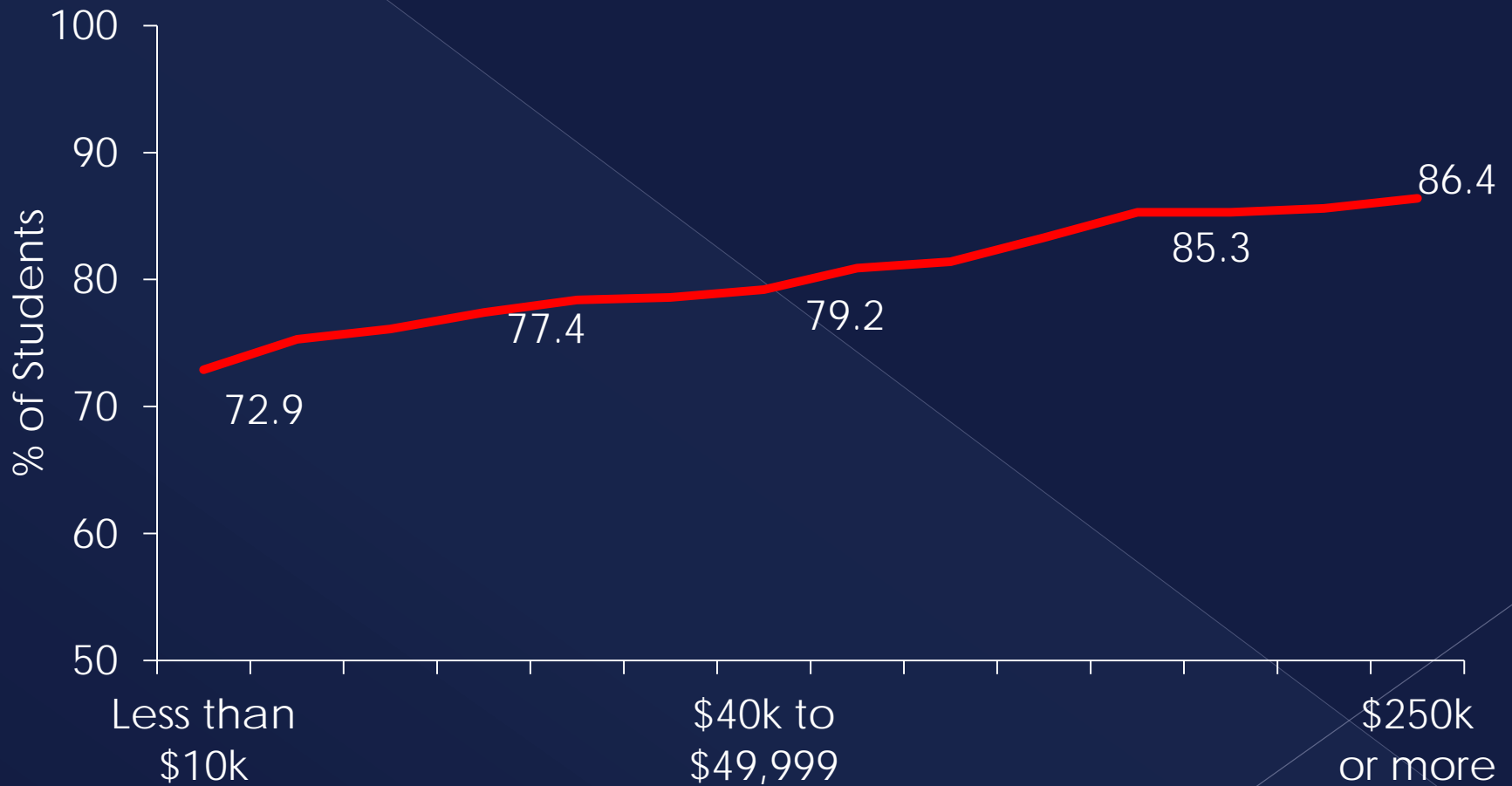
## DECREASED ODDS

- American Indian
- Multiracial
- Native English Speaker
- First Generation

# First-Year Retention Rates, by Race



# First-Year Retention Rates, by Income



# Results: Pre-College Experiences and Academic Achievement

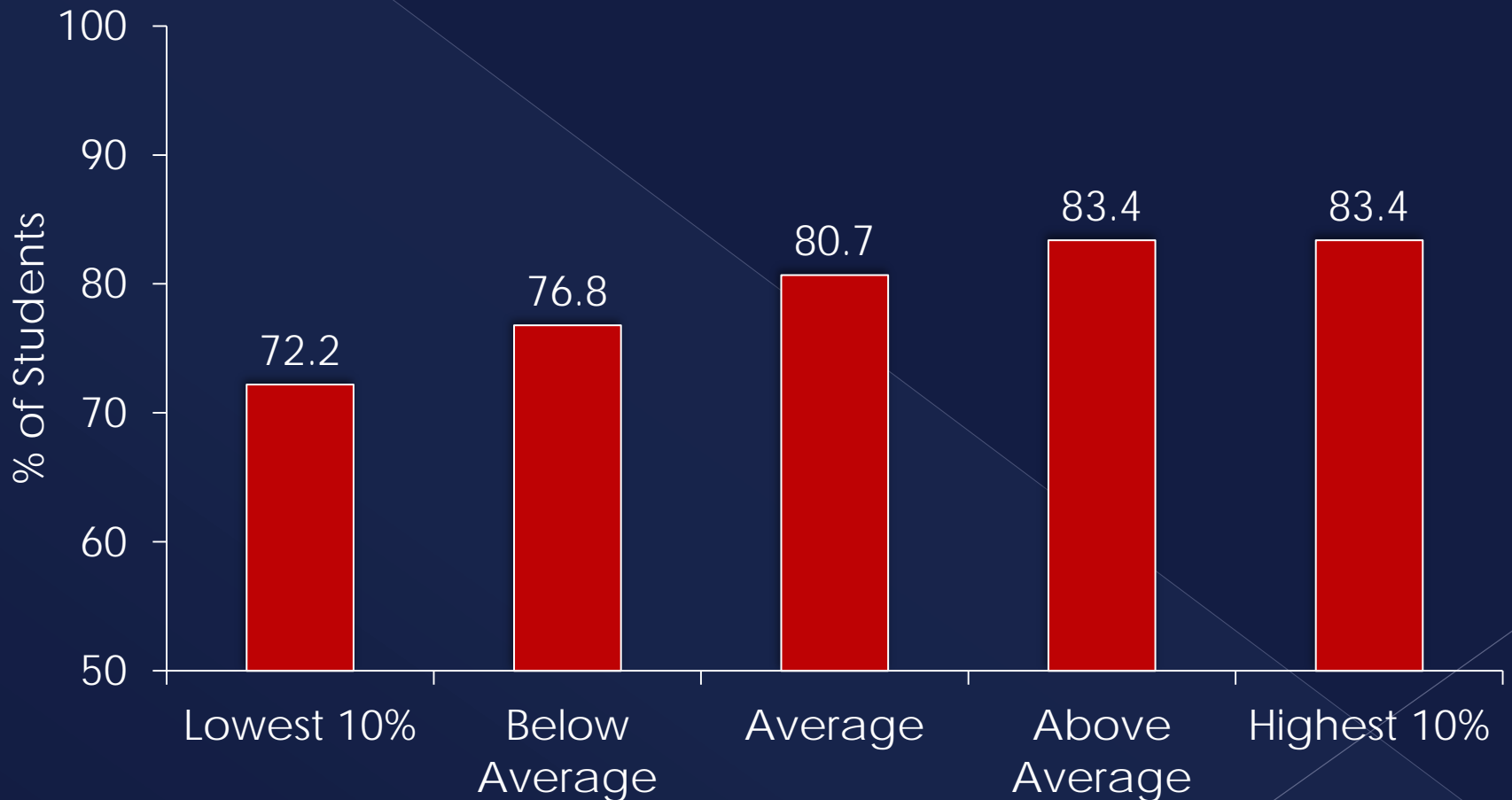
## INCREASED ODDS

- Felt Overwhelmed
- Volunteer work
- Hrs/wk: Student Clubs
- Hrs/wk: Homework
- SAT Score
- Emotional Health

## DECREASED ODDS

- Felt Depressed
- Social Self-Concept

# Retention Rates, by Emotional Health



# Results: Financial Considerations and College Choice

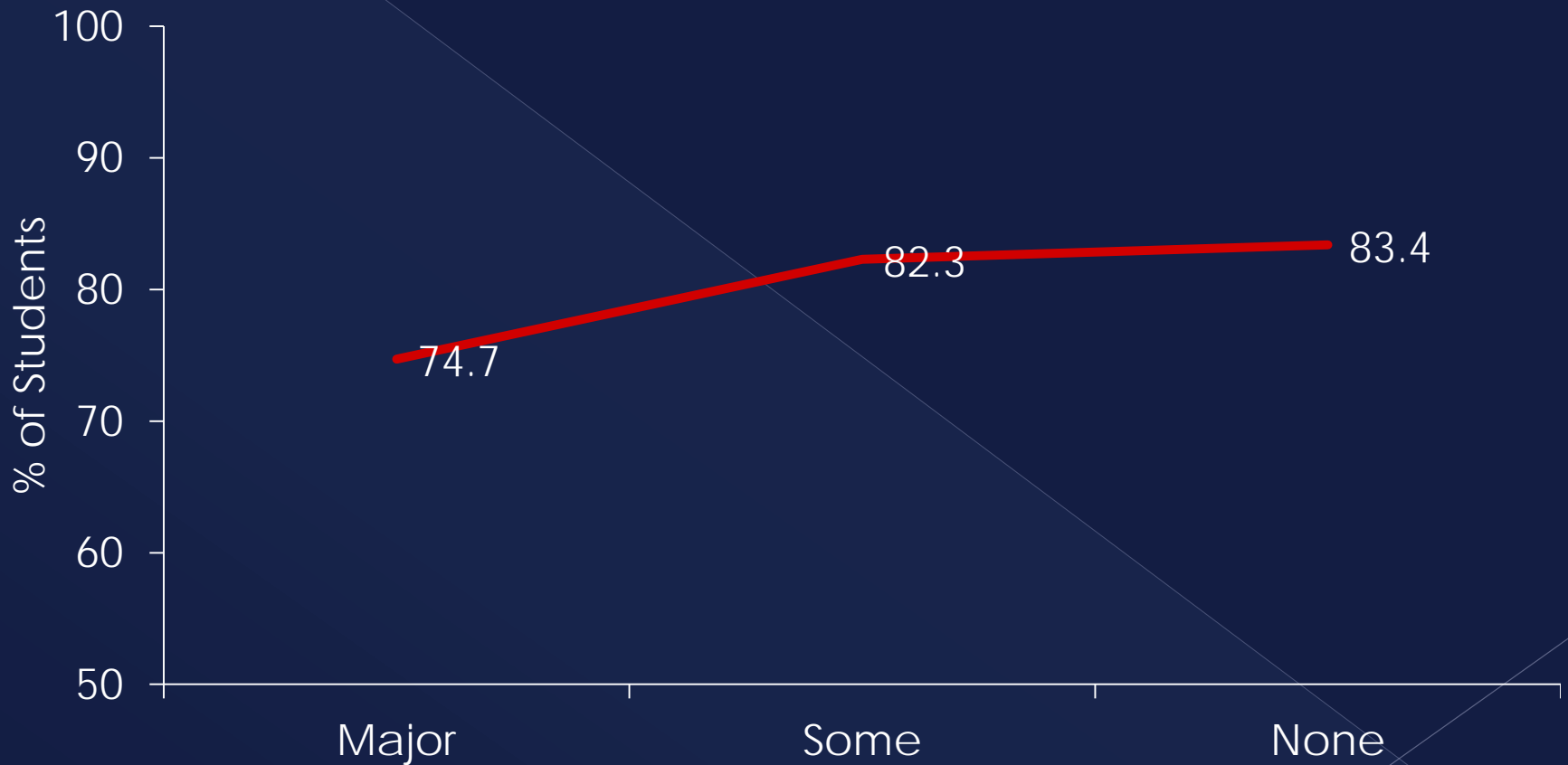
## INCREASED ODDS

- Aid: Family Resources
- Aid: Grants/Scholarships
- First Choice College
- Reason for Choosing: Cost
- College Reputation
- Reason for College: To Gain a General Education

## DECREASED ODDS

- Aid: Loans
- Aid: My Own Resources
- Financial Concerns: Major

# Retention Rates, by Financial Concerns



# Results: Expectations and Intended Major

## INCREASED ODDS

- Expectation: Change Major
- Likelihood of College Involvement
- Major: Education

## DECREASED ODDS

- Expectation: Transfer
- Major: STEM



# Retention Rates, by Likelihood of Involvement

