

Leading Indicators of Student Success



The Education Trust

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Why Leading Indicators?

- A2S systems have set ambitious goals to cut access and success gaps by 2015
- But, traditional outcome measures lag, making it difficult to track progress toward the goals now
 - Retention
 - Transfer
 - Graduation



Traditional Measures are Insufficient

- Limited to first time students and at the institution where the student first enrolled
- Offer no guidance on where and why students fall off the pathway to degree completion
- Fail to provide guidance for practice and policy to improve degree completion



Correlates of Student Success from Research

Student Demographics

Characteristics of students and their families related to graduation:

- Higher income
- Parent completed college
- Good academic preparation
- Enroll soon after high school

College Experiences

Achievements during college provide momentum toward completion:

- Course participation
- Course performance
- Participation in support programs for new students



Course Participation

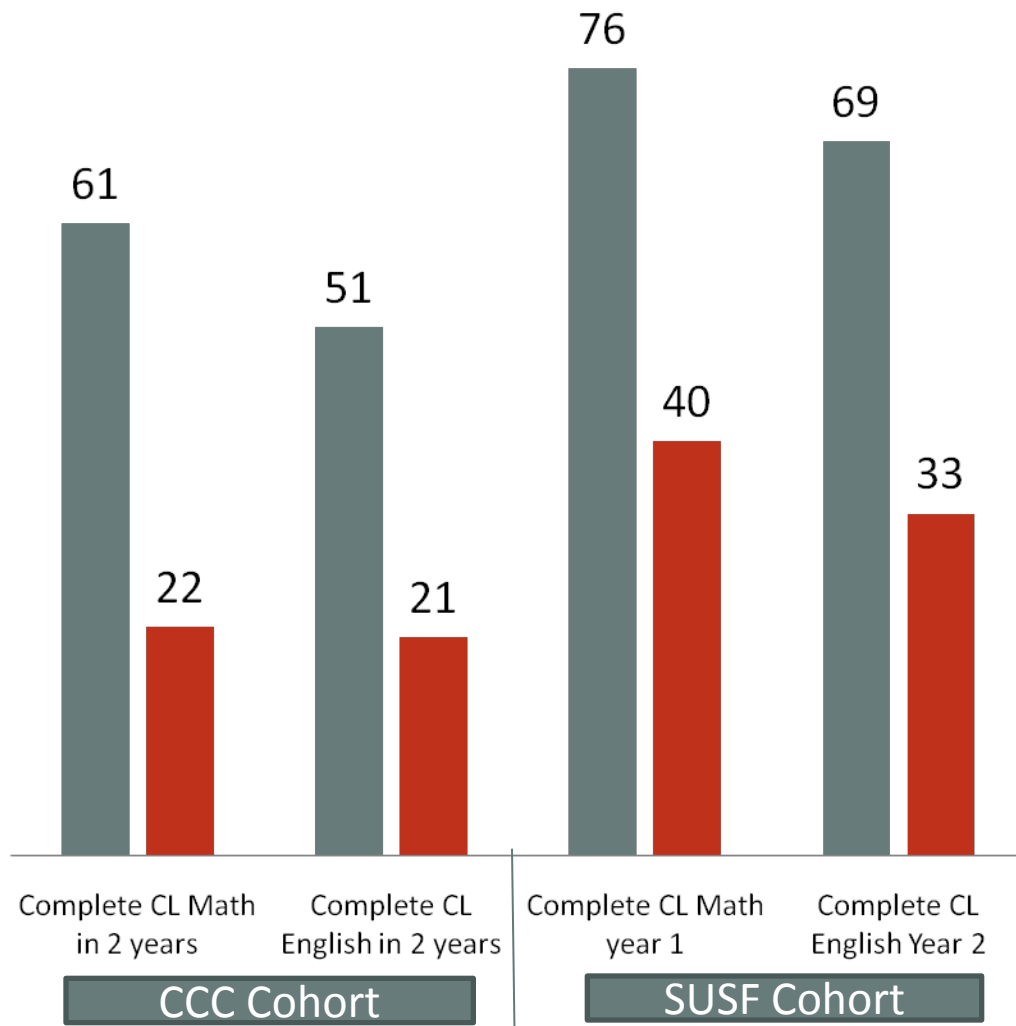
Remedial Coursework

Gateway Courses

General Education

Probability of Completion Based on Completion of Gateway Courses

■ Completed Course ■ Did not Complete Course

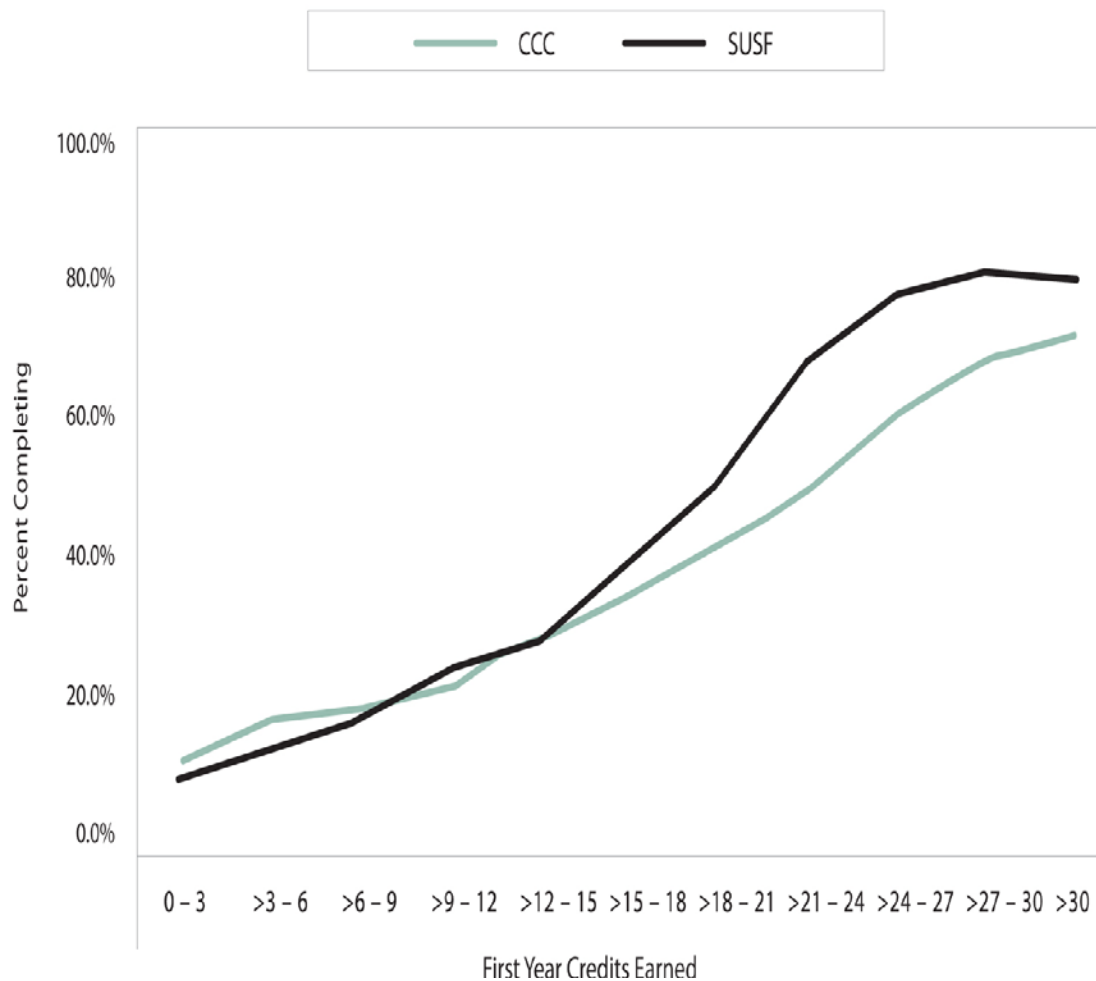




Course Performance

- Excessive withdrawal
- Course completion ratio
- Credit accumulation
- GPA

Probability of Completion by First Year Credits Earned





Probability of Completion Based on Early Credit Accumulation

Course Performance

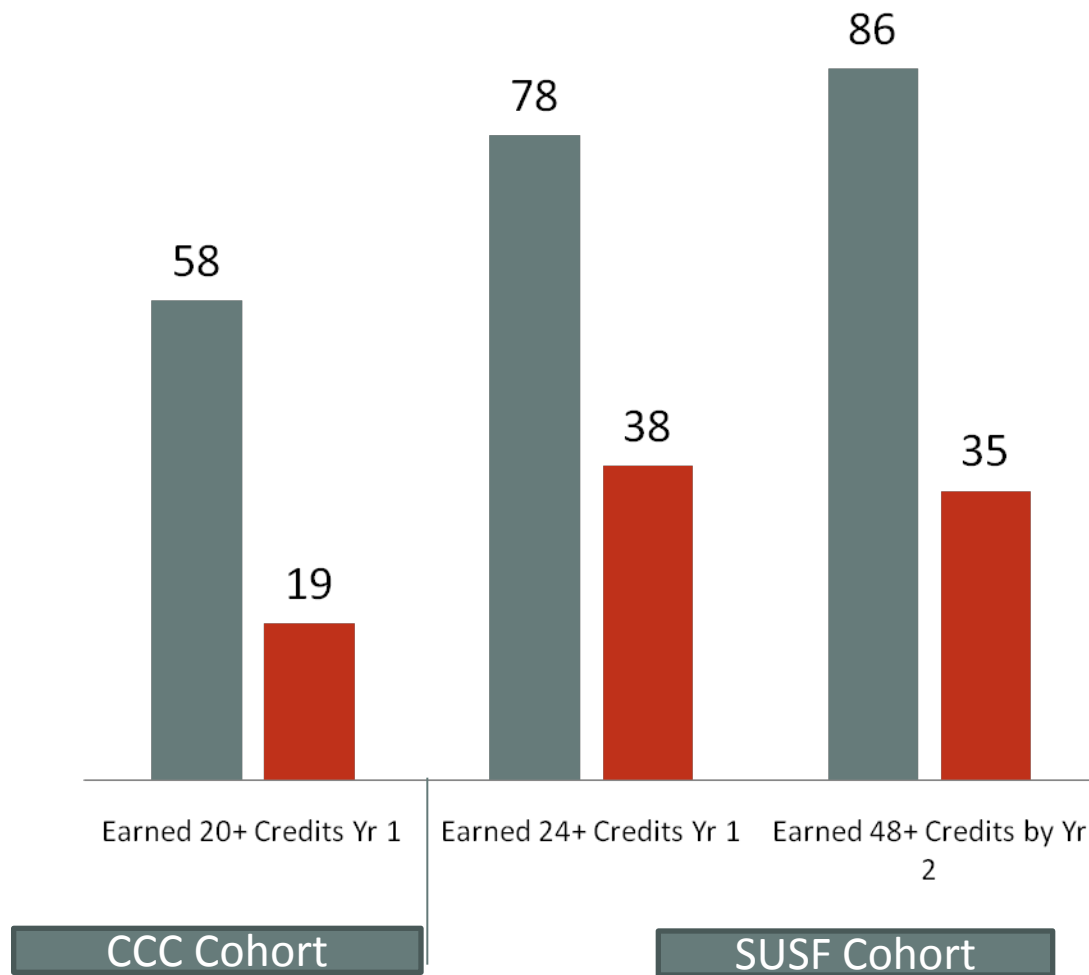
Excessive withdrawal

Course completion ratio

Credit accumulation

GPA

■ Met Threshold ■ Did not Meet Credit Threshold





Support Programs

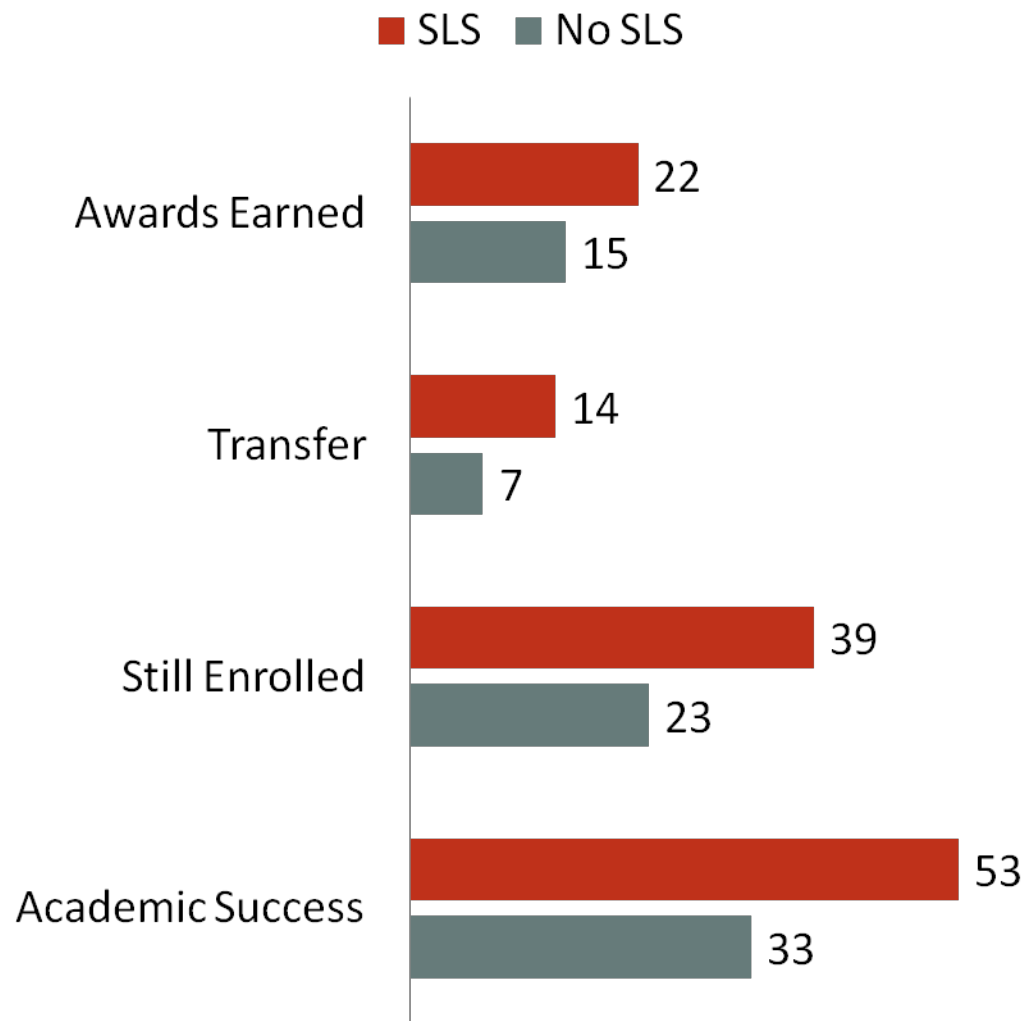
First Year Experience

Programs

Orientation Courses

Learning Communities

Percentage of Remedial Students Who Succeeded After Five Years





A Better Framework for Identifying Reasons for Insufficient Graduation Rates

- *Milestones*: Measurable, intermediate educational achievements students reach along the path to degree completion
- *Indicators* : Measurable academic patterns that students follow that predict the likelihood they will reach milestones and ultimately earn a degree

What are Leading Indicators?

Milestones	Leading Indicators
<ul style="list-style-type: none">▪ Retention▪ Transition to college-level coursework▪ Earn one year of college-level credits▪ Complete general education (GE)▪ Complete a community college transfer curriculum▪ Transfer from community college to university<ul style="list-style-type: none">▪ Without completing curriculum▪ After completing curriculum▪ Complete certificate or degree	<p>Remediation:</p> <ul style="list-style-type: none">▪ Begin coursework in first term▪ Complete needed remediation <p>Gateway Courses:</p> <ul style="list-style-type: none">▪ Complete college-level math/English in the first year or two▪ Complete a college success course <p>Credit Accumulation and Related Behaviors:</p> <ul style="list-style-type: none">▪ High rate of course completion (80%)▪ Complete 20-30 credits in first year▪ Earn summer credits▪ Enroll full-time▪ Enroll continuously, without stopouts▪ On-time registration for courses▪ Maintain adequate academic performance



A2S Leading Indicators Workgroup

Purpose

To test and refine a set of on-track indicators that can be used to monitor system effectiveness with students on the way to degree completion.

Participants

City University of New York • University of Hawaii System • Louisiana Board of Regents • University of Louisiana System • Minnesota State Colleges and Universities • Tennessee Board of Regents • Vermont State Colleges • University of Wisconsin System



Common Indicators Tested by Workgroup

Leading Indicators

Remediation:

- Begin coursework in first term
- Complete remediation year 1

Gateway Courses:

- Complete college-level math/English in the first year or two
- Complete a college success course

Credit Accumulation and Related Behaviors:

- High rate of course completion (80%)
- Complete 20-30 credits in first year
- Earn summer credits
- Enroll full-time
- Enroll continuously, without stopouts
- On-time registration for courses
- Maintain adequate academic performance

What percentage of students reach each of the leading indicators?

What is the impact of reaching each of the leading indicators on success rates?



Key questions to ask about leading indicators

1. What are the most significant drop-off points in the remedial to college-level course pipeline in math?



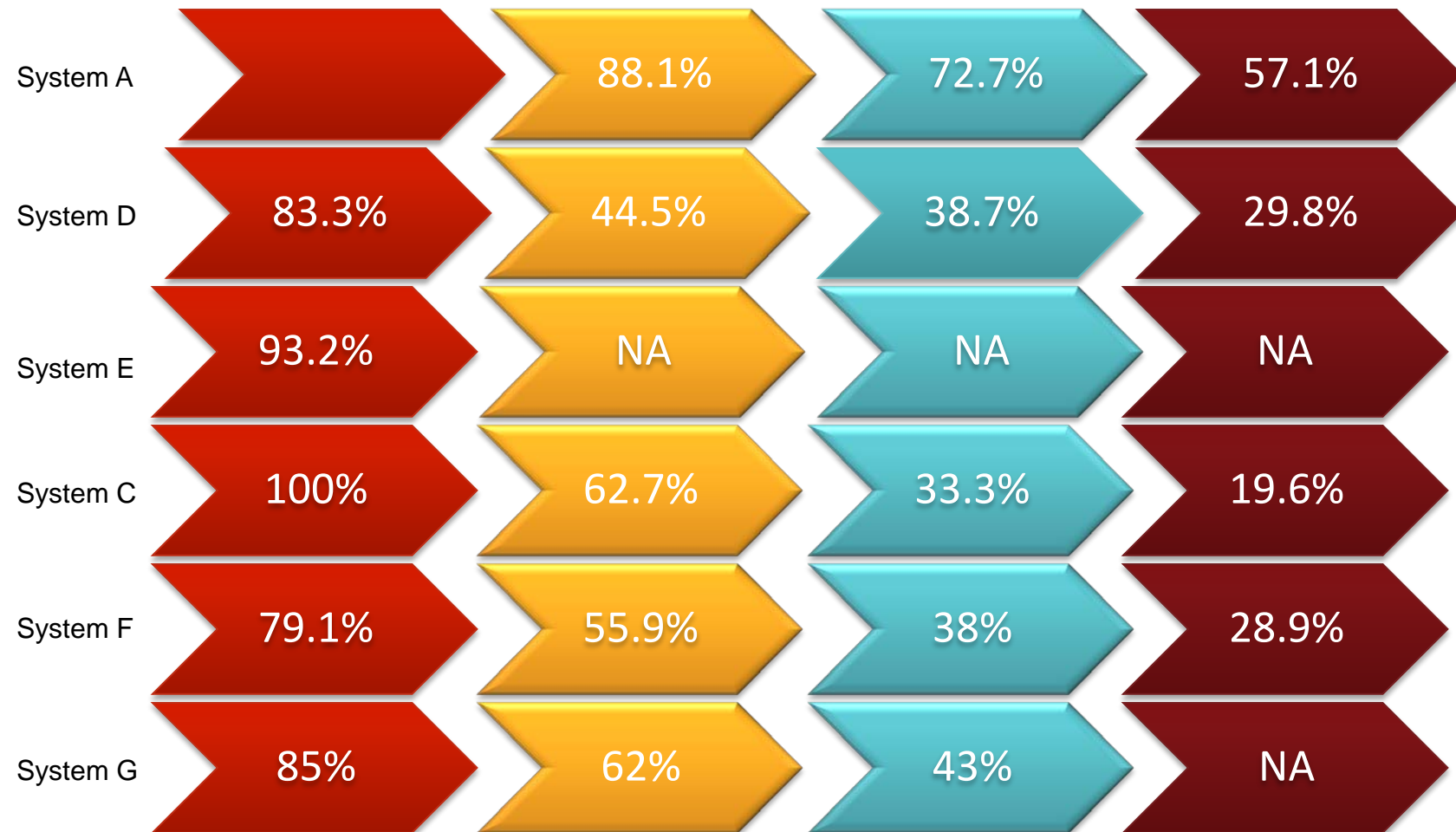
Four-Year Institutions

Begin Remediation
in first year

Complete
Remediation in
first year

Enrolled in College
Level Math within 1
Year

Completed College
Level Math within 1
Year



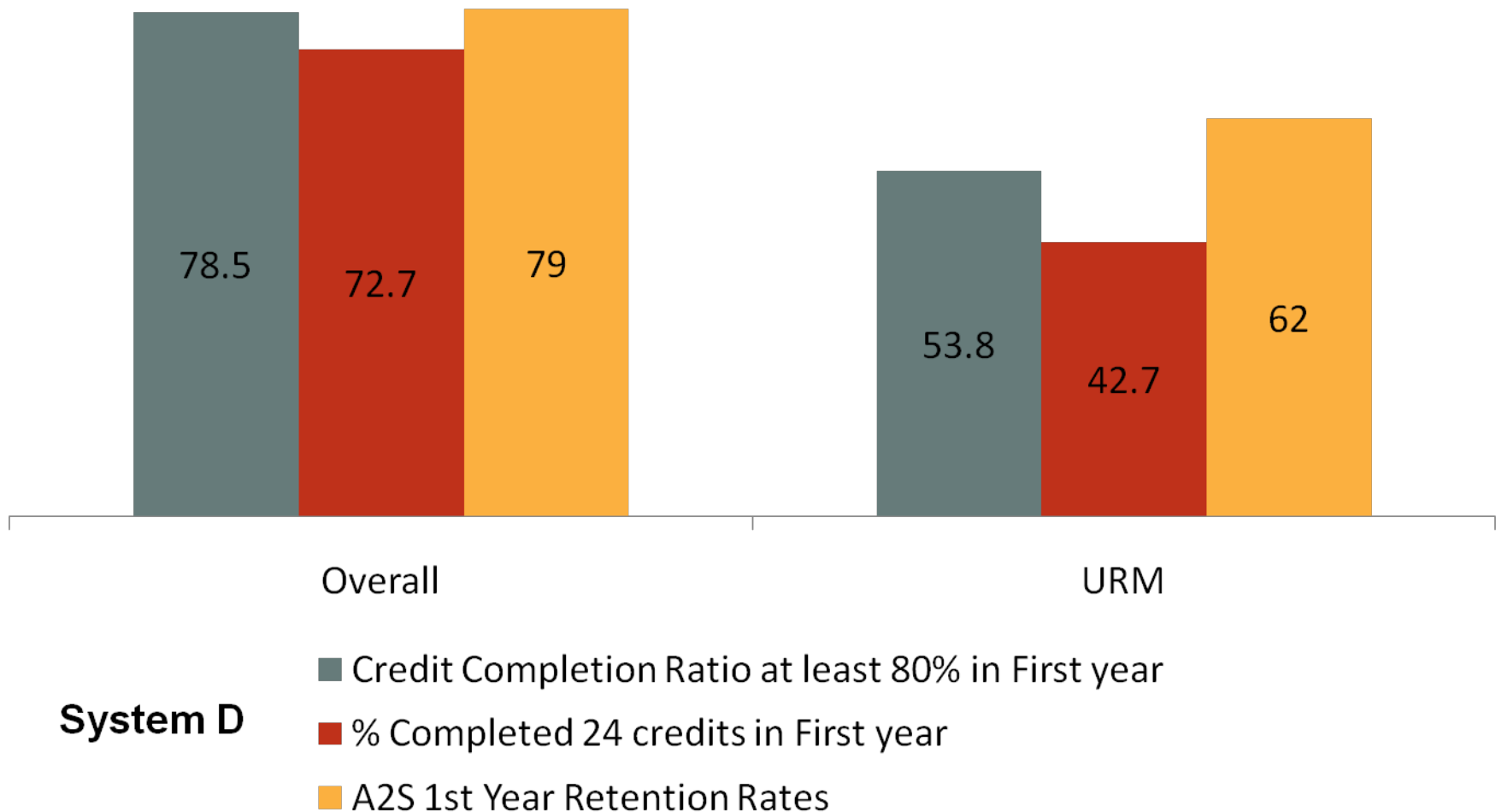


Key questions to ask about leading indicators

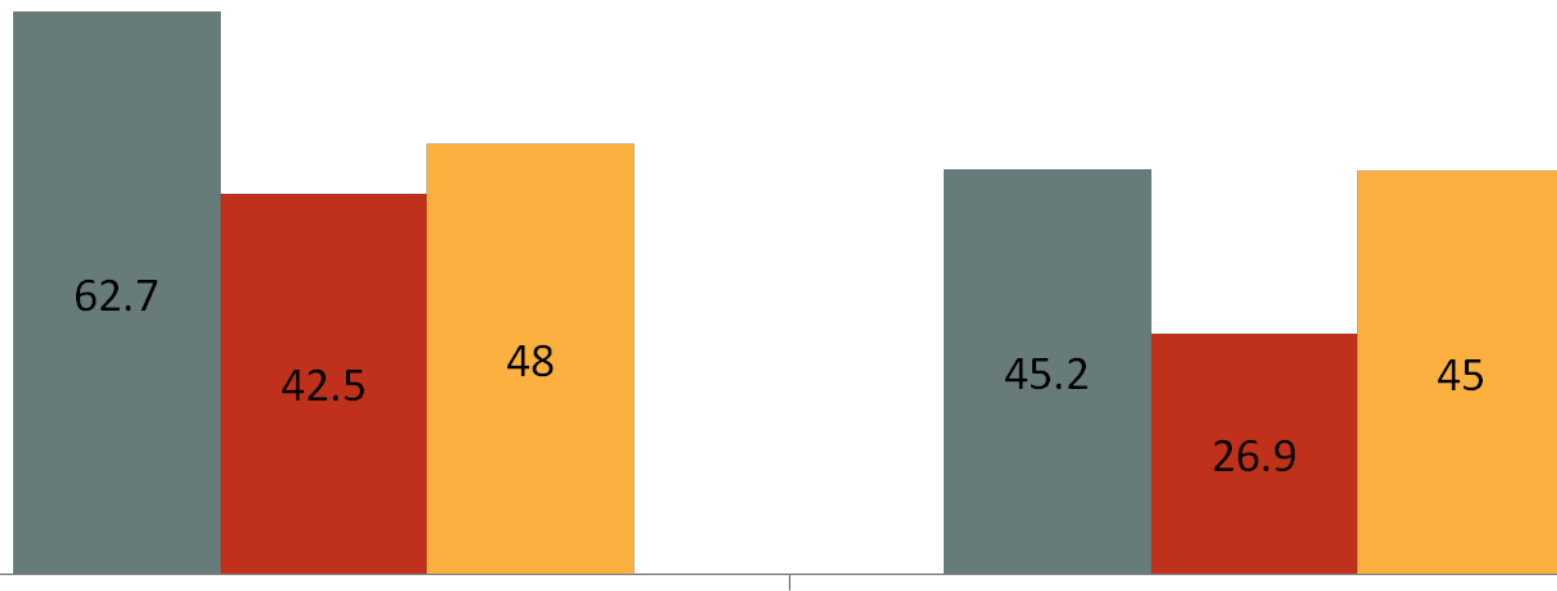
2. How do the credit indicators compare to your first-year retention rates?

The silent retention problem.

Credit completion rates are lower than first-year retention rates for minority students in some four-year institutions



Credit completion rates are lower than first-year retention rates for minority students in some two-year institutions



Overall

URM

System D

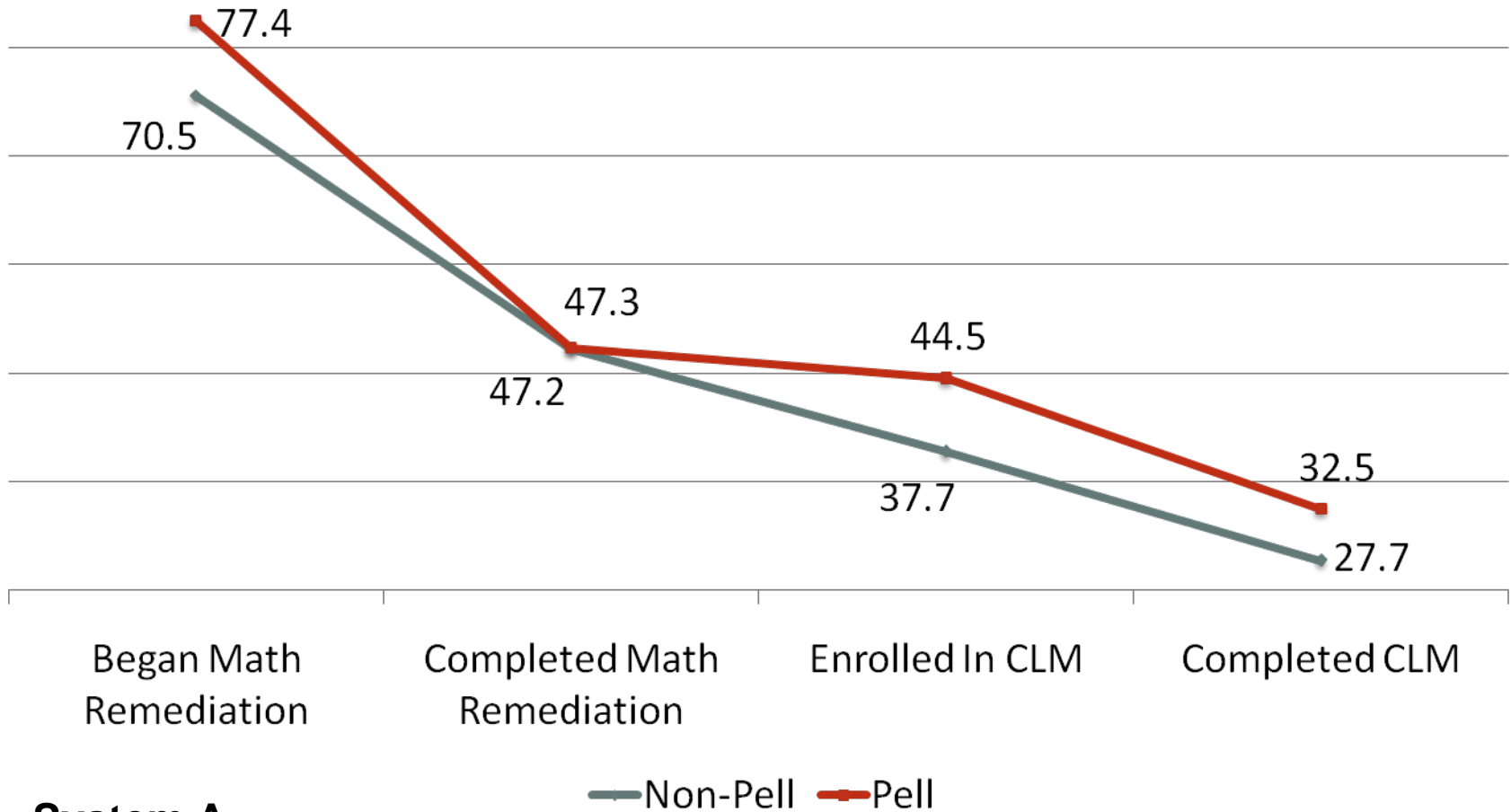
- Credit Completion Ratio at least 80% in First year
- % Completed 20 credits in First year
- A2S 1st Year Retention Rates



Key questions to ask about leading indicators

3. On meeting any indicator, are there differences between student groups by race, income, remediation, and enrollment status?
 - Are there counter-intuitive differences?
 - Are there no differences where you'd expect differences?

Pell Students progress through the remedial pipeline at higher rates in two-year colleges



System A

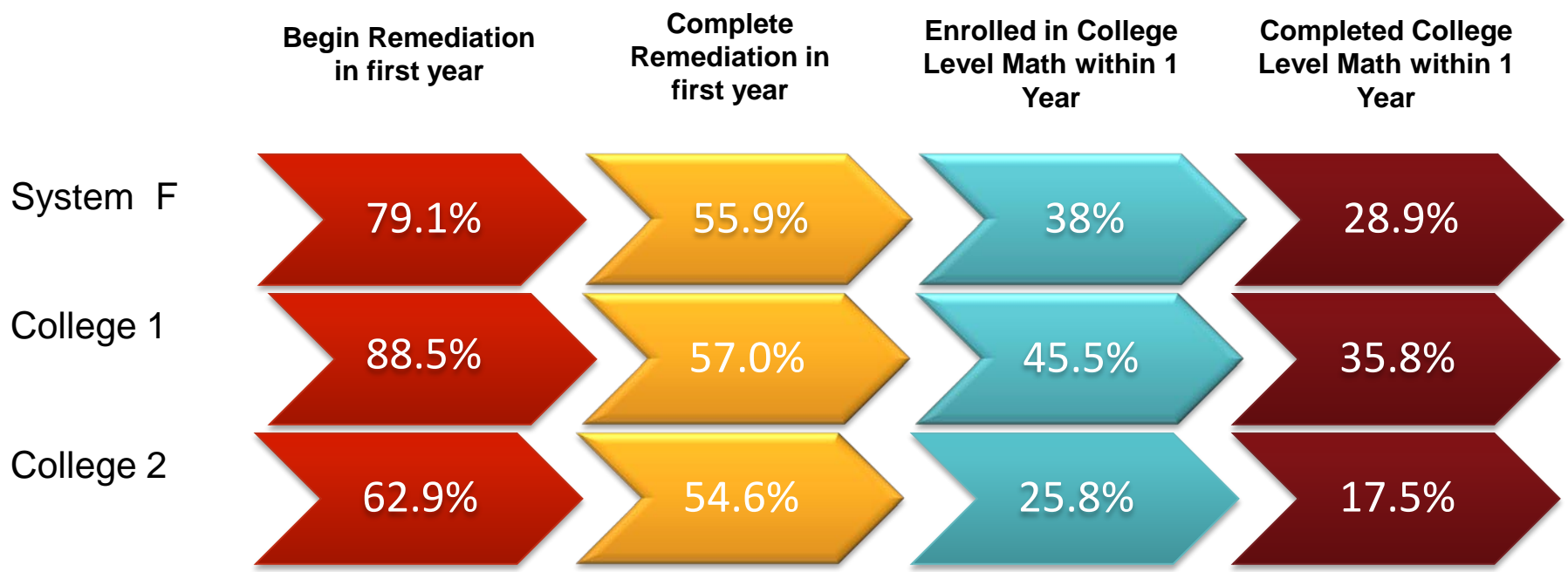


Key questions to ask about leading indicators

3a. On meeting any indicator, are there differences between institutions?



Students progress through the remedial pipeline at different rates in different institutions in this system





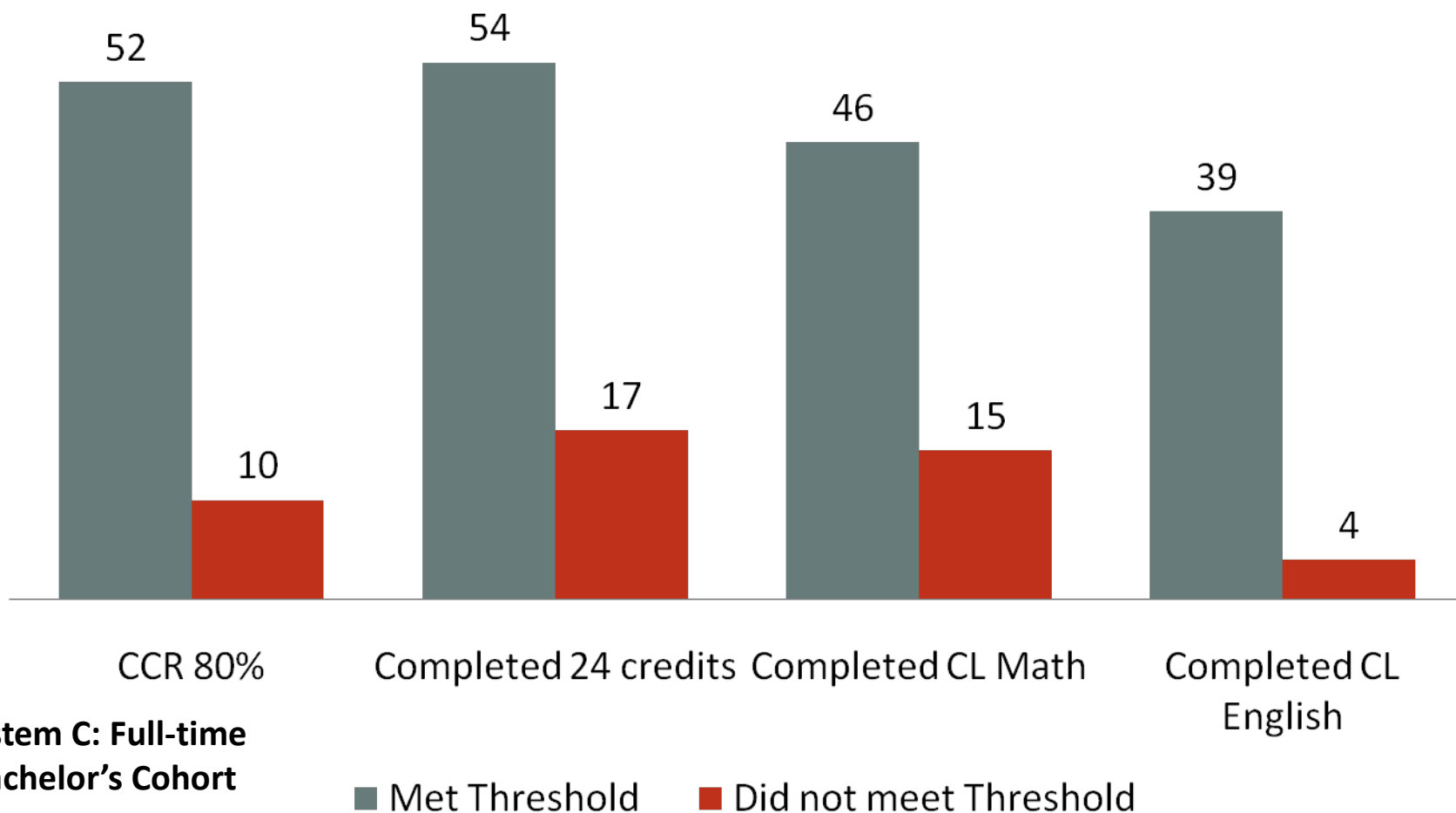
Key Questions to Ask About Impact of Leading Indicators on Success

1. What impact do the meeting the indicators have on student success and for which students?
2. Are students meeting the indicators, especially those that have the greatest impact on success?
3. Does meeting any of the indicators reduce or eliminate gaps between student groups?



Meeting leading indicators has a big impact on student success in four-year institutions

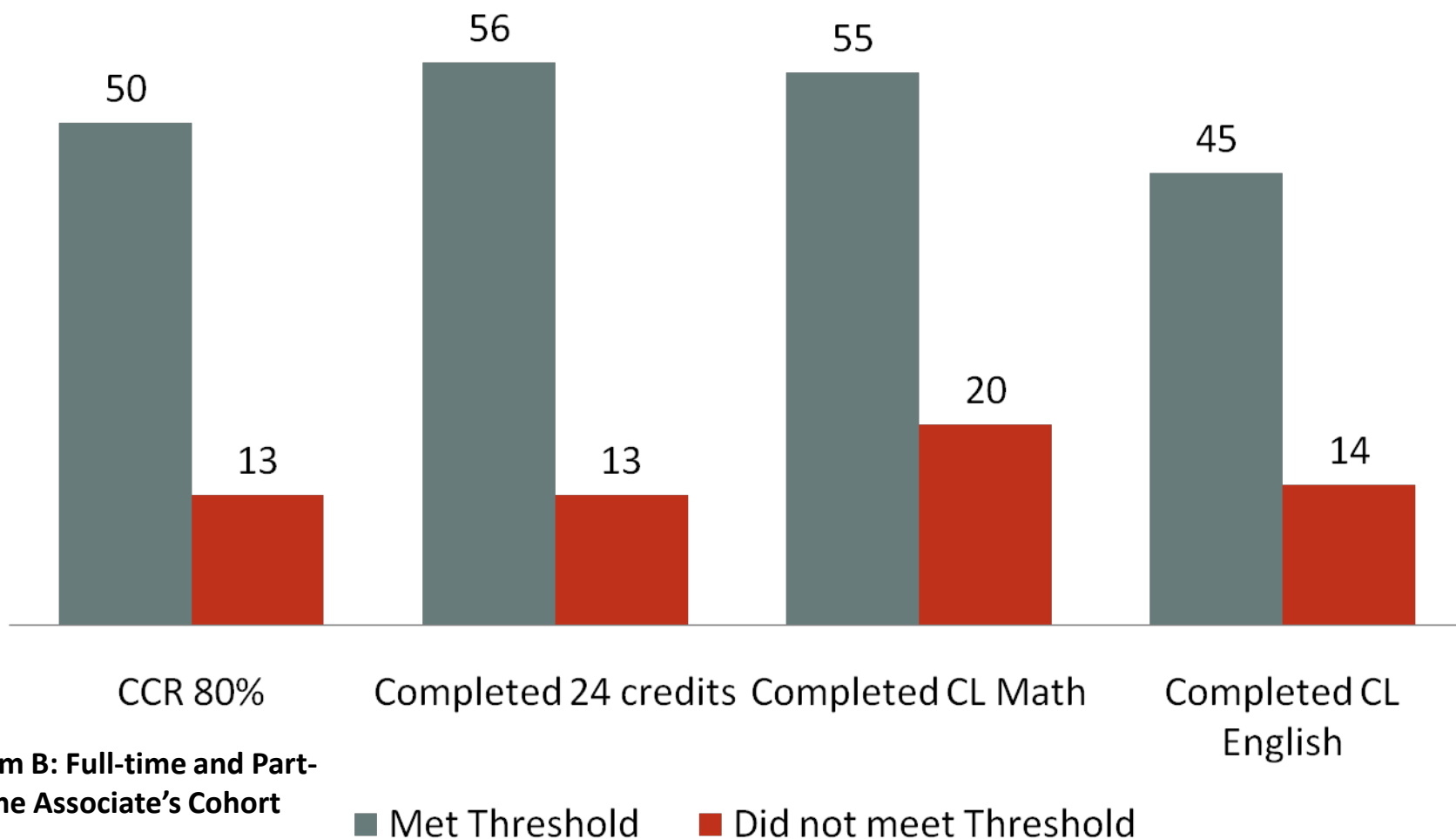
Graduation Rates by Whether Students Met Indicator





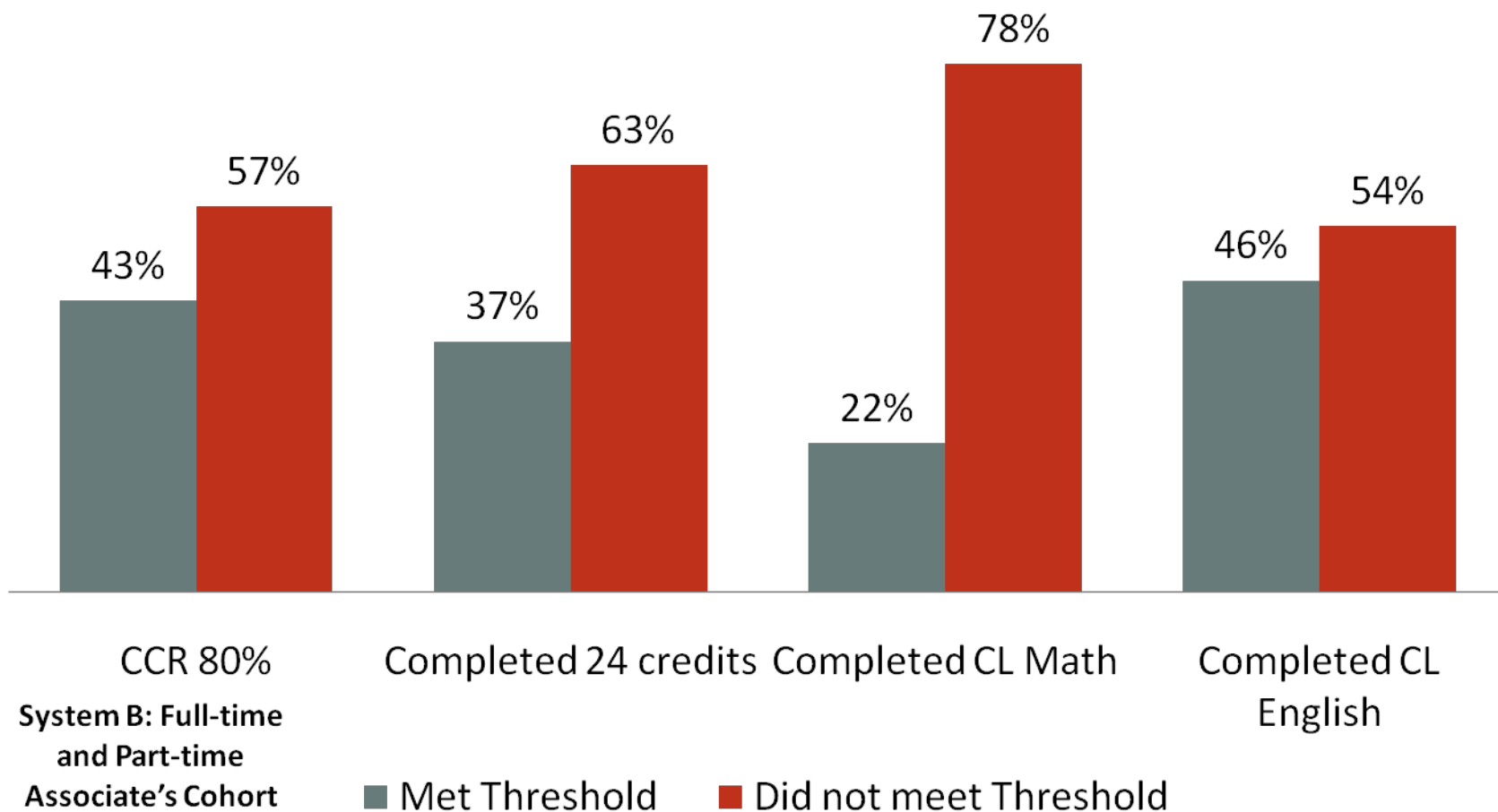
Meeting leading indicators has a big impact on student success in two-year institutions too

Success Rates by Whether Students Met Indicator

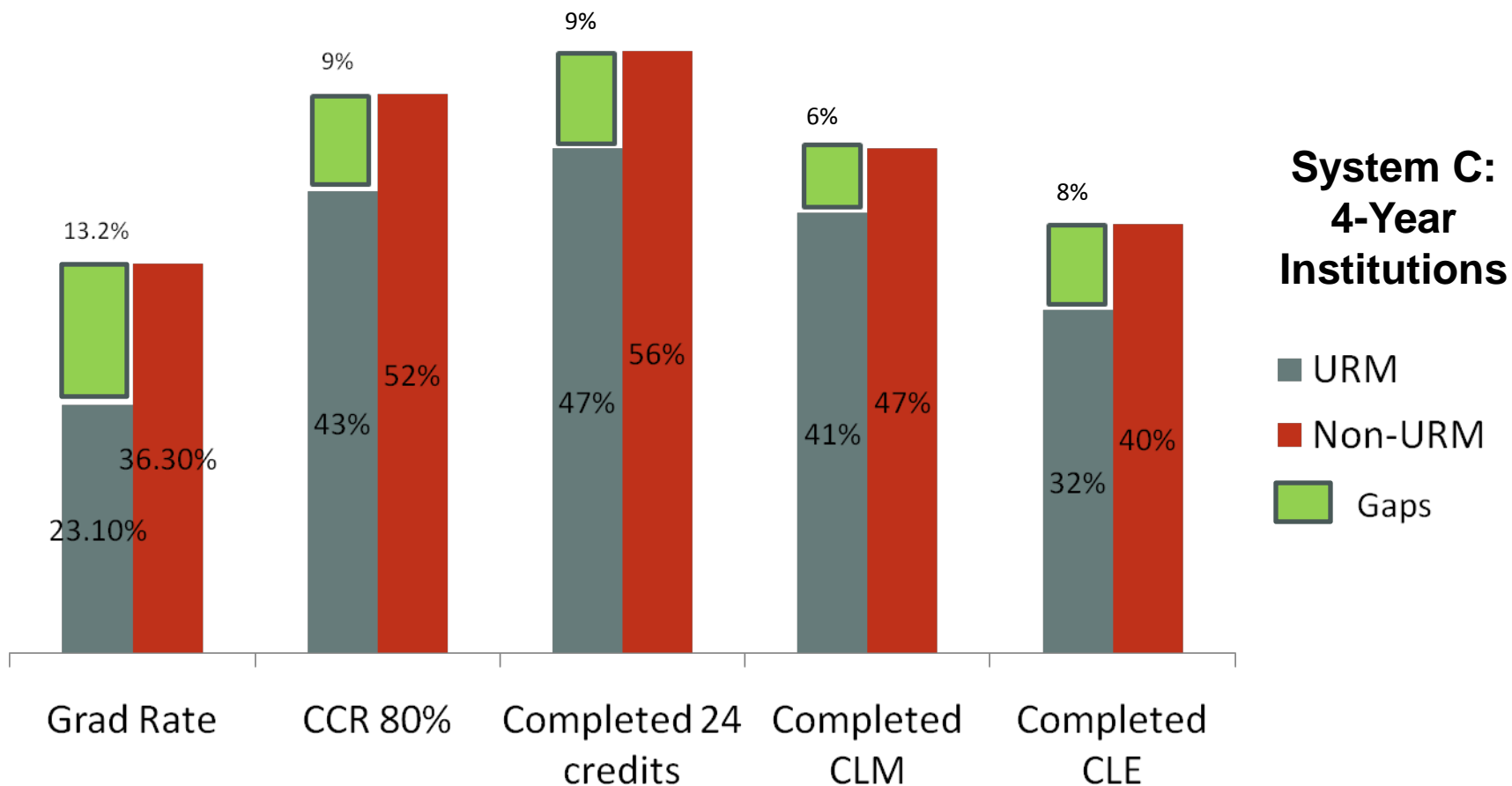


Students are not meeting the indicators despite the big impact on success

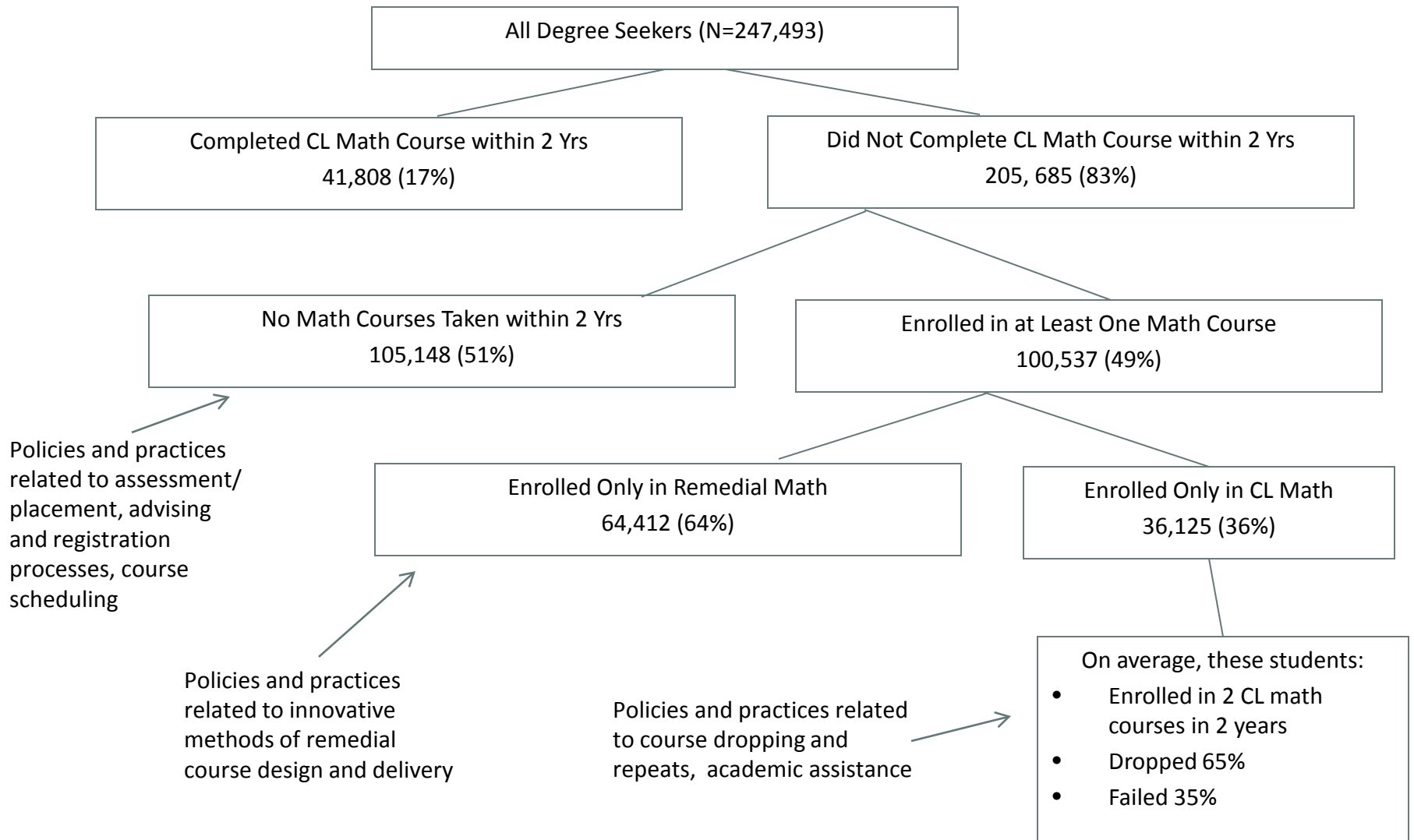
Percent of students meeting indicators



Meeting leading indicators can narrow race graduation gaps



Further Analysis on Problems Can Point to Solutions



Applying Results to Changing Policy and Practice

Problem Identified	Possible Changes
Low percentage of developmental education students completing remediation	<ul style="list-style-type: none">• Require early enrollment and completion of remedial coursework• Redesign developmental courses into modules so students only repeat needed sections, and provide shorter brush-up courses for students who test near proficiency levels• Implement learning communities and more innovative practices like intensive summer programs and contextualized remedial instruction
Low percentage of students completing math early	<ul style="list-style-type: none">• Better align curriculum and assessments with high schools to improve college readiness• Early advising that focuses on importance of taking math early
Low percentage of students reach a threshold of credit accumulation in the first year	<ul style="list-style-type: none">• Increase financial aid to encourage full-time attendance• Increase use of college success courses, early advising, etc.• Improve financial aid counseling to emphasize benefits of full-time• Charge lower per-credit fees for enrolling in a full-time credit load
Relatively low rate of completing courses (i.e., many course drops and failures)	<ul style="list-style-type: none">• Allocate portion of funding on course completion in addition to census enrollment• Use early alert systems and improved tutoring services to provide more academic assistance• Limit course drops and repeats or impose extra fees for course withdrawal past a certain date or for repeating a course



Using the Leading Indicator Data

System Level

- Diagnose systemwide roadblocks to success
- Identify high-performing campuses to share best practices
- Compare institutions for benchmarking and accountability for campus leaders
- Promote at scale interventions across the system
- Develop data systems that support use of leading indicators

Campus Level

- Diagnose course-related roadblocks to success
- Compare course sections, faculty, and departments for improvement and accountability
- Target interventions to remove roadblocks, specifically at course level
- Monitor impact of interventions on student success



Continuing Work with Leading Indicators in A2S

Dissemination

- Disseminate leading indicators research
- Refine common reporting tool as well as recommended additional analyses
- Training for new systems on reporting tool

Continuation

- Support new cohort to undertake leading indicators
- Develop advanced workgroup to further analyses
- Create opportunities for system teams to share how they are using leading indicators
- Work with partner initiatives using leading indicators