



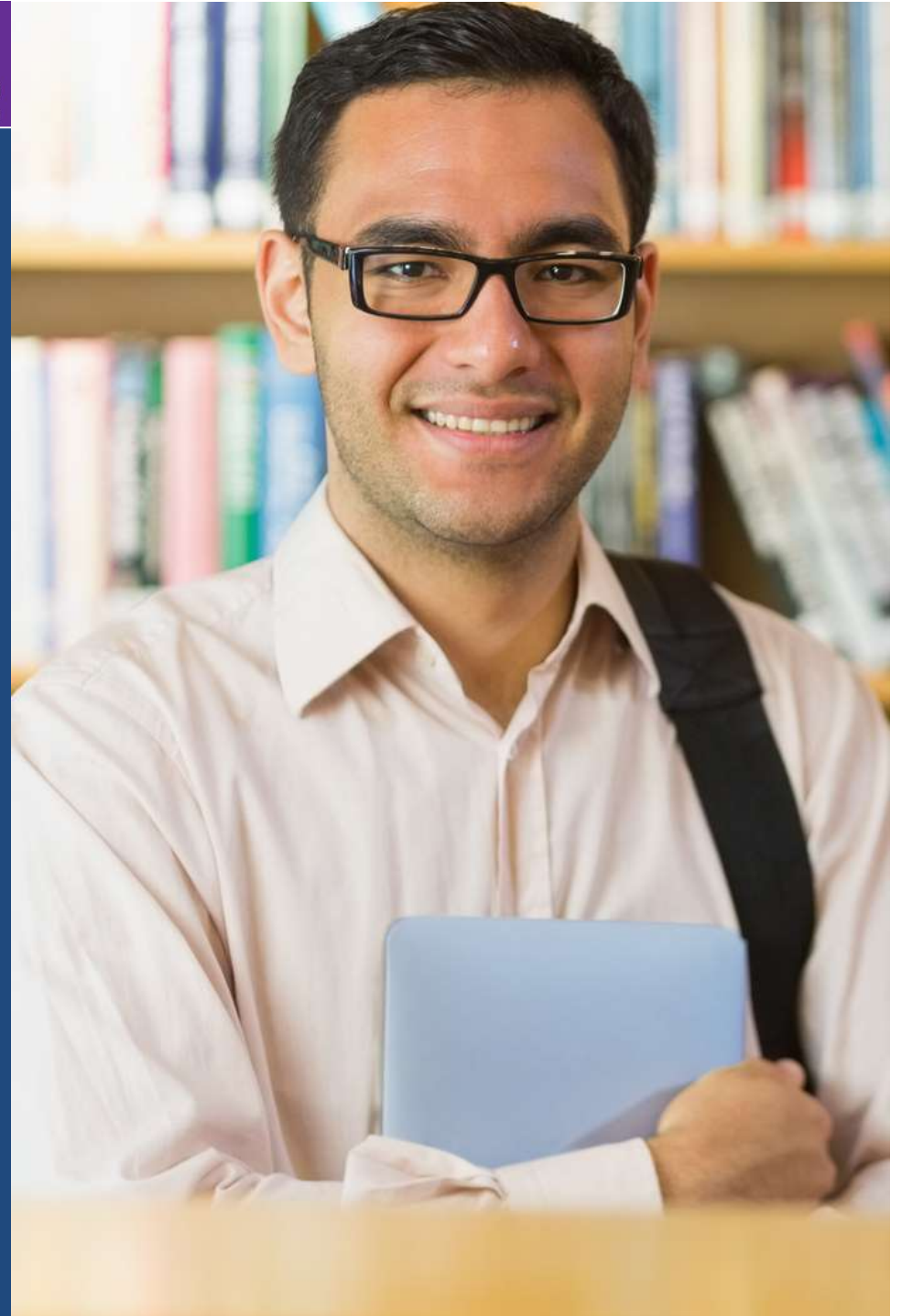
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Early Findings from a Randomized Control Trial of Corequisites in Texas Community Colleges

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Pathways Institute

Lindsay Daugherty (RAND)

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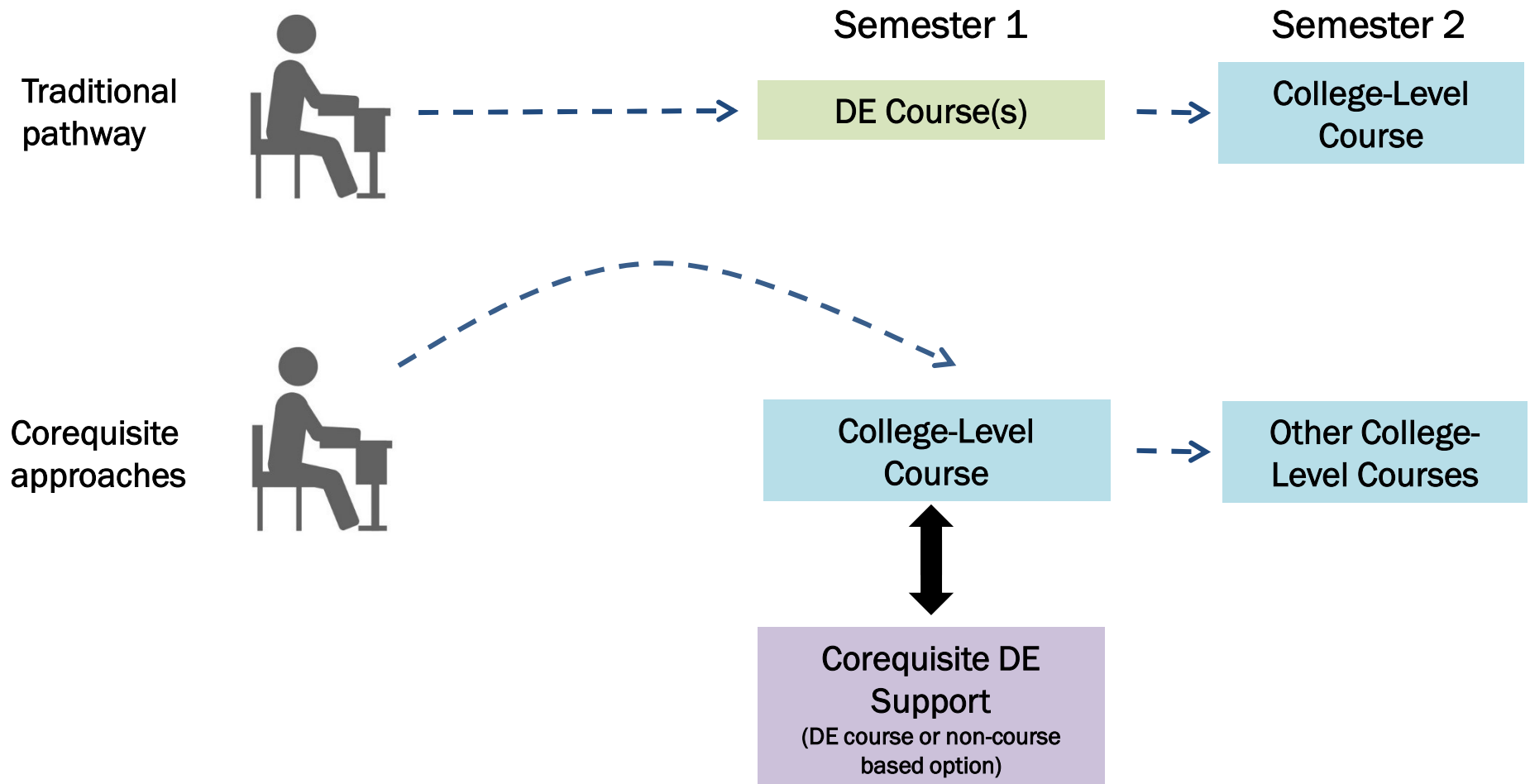
Today's discussion

- Background on the study of Texas writing/reading corequisites
- Early findings on short-term student impacts
- Early findings on implementation
- How you can use these findings to enhance your corequisites

The nation has been moving toward accelerated models of developmental education

- Advocacy organizations and funders encouraging developmental education (DE) reform in states
 - Restructuring how DE is delivered (acceleration, structured pathways)
 - Improving placement accuracy with multiple measures
- Examples of states implementing reforms to accelerate student progression
 - 2011: Texas requires colleges to offer accelerated models
 - 2013: Florida eliminates funding for DE and requirements students participate in DE
 - 2015: Tennessee requires all students to enroll in corequisite DE

Corequisites are one particular model of acceleration



Texas has been a leader in reforming developmental education through corequisites

- In 2011, SB 162 requires institutions to offer accelerated models
- In 2017, HB 2223 calls for scale up of corequisites to a larger number of students
- Colleges across the state are experimenting with a number of different corequisite models
 - Attached to different gateway courses
 - Varying in the hours of developmental ed support
 - Employing varying instructional approaches

Existing research on corequisites is promising but has limitations

Prior research indicates positive outcomes for students placed into corequisites

BUT

Studies are generally descriptive and do not support causal conclusions

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Prominent study on the Accelerated Learning Program (ALP) used more rigorous approach (Cho et al., 2012)

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Study only looked at one corequisite model, and focused largely on short-term impacts

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Studies are generally descriptive and do not support causal conclusions

Prominent study on the Accelerated Learning Program (ALP) used more rigorous approach (Cho et al., 2012)

BUT

Study was not randomized, looked at one corequisite model, and focused largely on short-term impacts

Growing descriptive evidence on student outcomes associated with statewide reforms

BUT

Little evidence on implementation and costs of different corequisite approaches

Our study addresses many limitations of existing studies

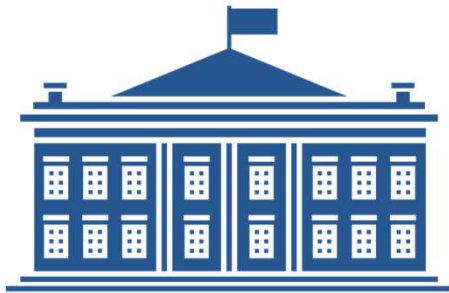
- First large multi-site randomized control trial (RCT) evaluation of corequisites
- Examines long-term outcomes including performance in follow-on courses, persistence, transfer, and degree completion
- Assesses impact, implementation, and costs of three corequisite models

We address the following research questions

- 1) What types of corequisites are being implemented in Texas?
- 2) Do corequisites at 5 community colleges in Texas lead to improved college success outcomes for students?
- 3) How do the impacts of corequisites at 5 colleges vary by model, student characteristics, and implementation?
- 4) To what degree do the experiences of students in corequisites differ from those in traditional DE?
- 5) To what degree are corequisites being implemented in ways that align with developmental education practices found to be promising?
- 6) What are the barriers and facilitators to corequisite implementation?

The study has two different components

RCT impact and implementation analysis



To evaluate the causal impact of a set of corequisites and develop a detailed understanding of implementation

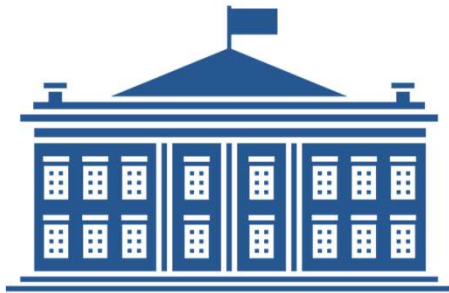
Statewide implementation analysis



To understand how experiences at the 5 RCT colleges are similar/different from community colleges across TX, and broaden evidence on implementation

The study has two different components

RCT impact and implementation analysis



El Paso Community College

Houston Community College

Lone Star College - Tomball

Lone Star College - University Park

Mountain View College (Dallas CCCD)

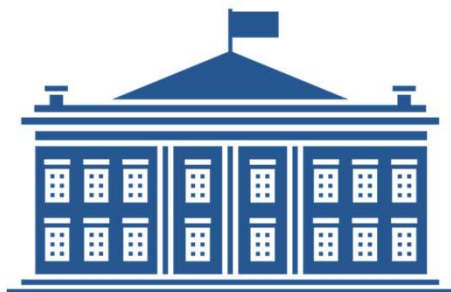
Statewide implementation analysis



All
community colleges
in Texas

We conducted a randomized experiment to assess impacts on student outcomes

RCT impact analysis



Study activities

- Recruited students within a specific score range near college-ready
- Collected detailed baseline survey data on student characteristics
- Within each college, students randomly advised into either:
 - Traditional DE (integrated reading and writing), 3-4 credit hours
 - Institution's corequisite model (all paired with English 1301), 4 credit hours
- We will examine course performance, persistence, and degree completion over 3 years
- We will identify impact variation by model, student characteristics, implementation

Today's presentation focuses on 975 students randomized in fall 2016. Between fall 2016 and fall 2017, a total of 1,756 students were randomized.

Colleges used a common writing range, but reading scores varied

	Writing score for 2016-17 study participation	Reading score for 2016-17 study participation
El Paso Community College	350-362, essay score 4	310-390
Houston Community College	350-362, essay score 4	351-390
Lone Star Tomball	350-362, essay score 4	343-390
Lone Star University Park	350-362, essay score 4	343-390
Mountain View College	350-362, essay score 4	310-390; 351-390

We assessed impact and implementation for three types of corequisite models



	Accelerated Learning Program	Extended Instructional Time	Required Support Service Use
Structure of support	Classroom instruction	Classroom instruction	Tutoring, office hours
Coursework in support	Mix of English 1301 coursework and additional work	Mostly English 1301 coursework, some additional work	All English 1301 coursework
Student mix in college course	Mix of college-ready and DE	All DE	Mix of college-ready and DE
Student-to-instructor ratios	Smaller than traditional course	Same as traditional course	Smaller than traditional course

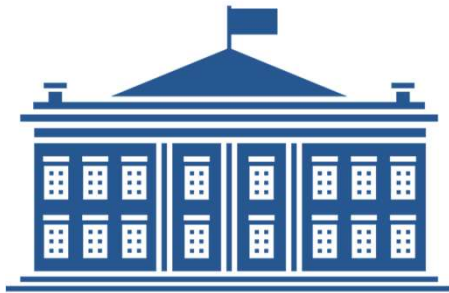
We assessed impact and implementation for three types of corequisite models



	Accelerated Learning Program	Extended Instructional Time	Required Support Service Use
Support credit/contact hours	1 credit hour, 1 and 3 contract hours	1 credit hour, 1 contact hour	1 credit hour, <1-1 contact hour
Instructor	Same instructor for course and support	Same instructor for course and support	Same at EPCC, different at MVC
Weeks of course/support	16/16 for HCC, 16/8 for LSC-T	16/16	8/8 for MVC, 16/16 for EPCC
Course or NCBO	Course for HCC, NCBO for LSC-T	Course	NCBO

We collected a range of implementation data from RCT colleges

RCT implementation analysis



Study activities

Faculty survey (N=212)

Interviews with Administrators (N=19)

Focus groups with faculty and students (Ns=29, 30)

Classroom observations (N=48)

Student surveys (N=462)

Review of documentation (e.g., syllabi, essay prompts)

Collection of cost data

Our statewide implementation data supplements RCT findings

Statewide implementation analysis

(N=31)

Phone interviews with administrators and faculty at other TX community colleges

Analysis of statewide administrative data and annual state Developmental Education Program Survey



Study activities

Two research questions were addressed in an interim report available on the RAND website

- 1) What types of corequisites are being implemented in Texas?
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- 4) To what degree do the experiences of students in corequisites differ from those in traditional DE?
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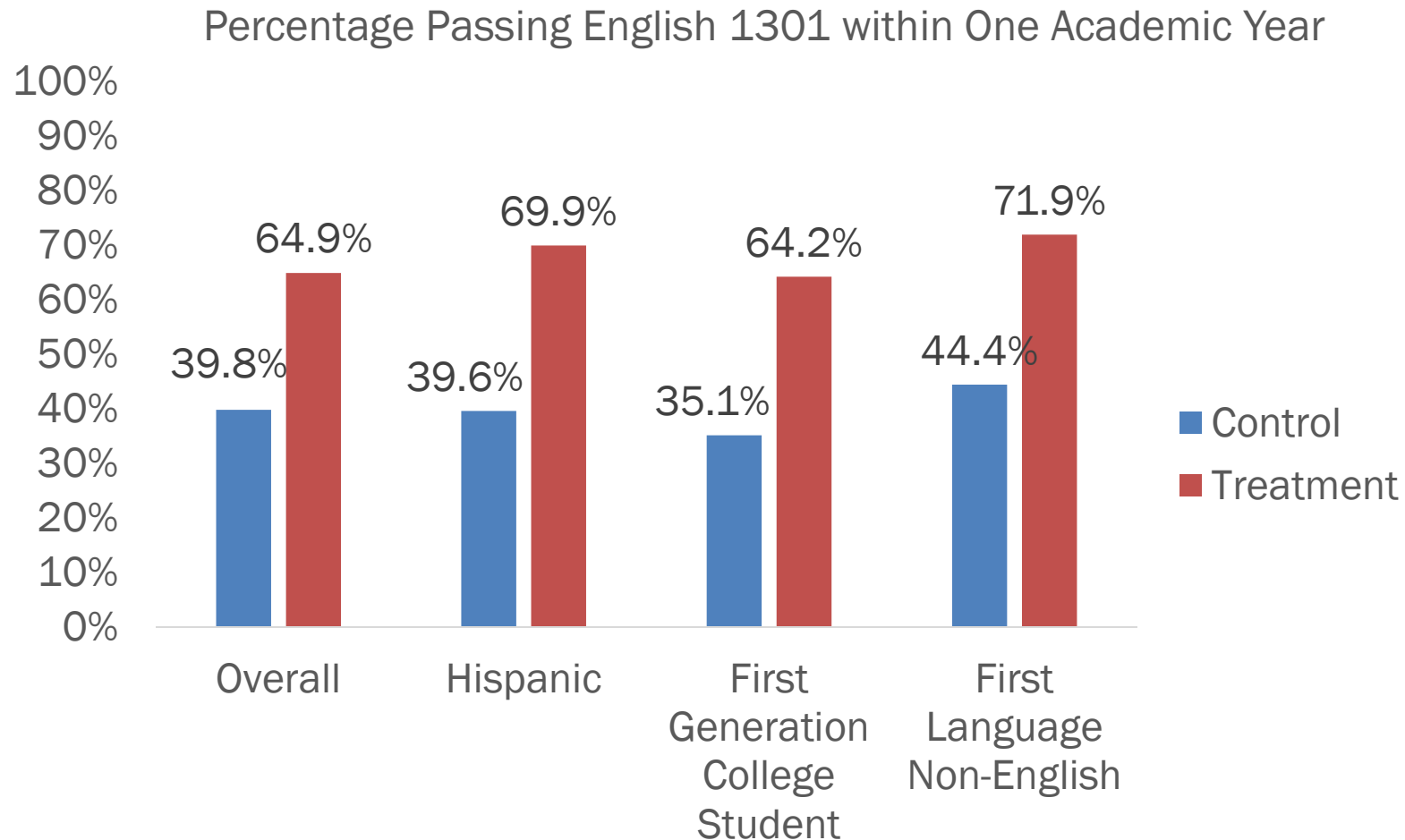
Today's presentation provides early findings on two additional questions

- 1) What types of corequisites are being implemented in Texas?
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Today's discussion

- Background on the study of Texas writing/reading corequisites
- Early findings on short-term student impacts
- Early findings on implementation
- The implications of these findings for your corequisites

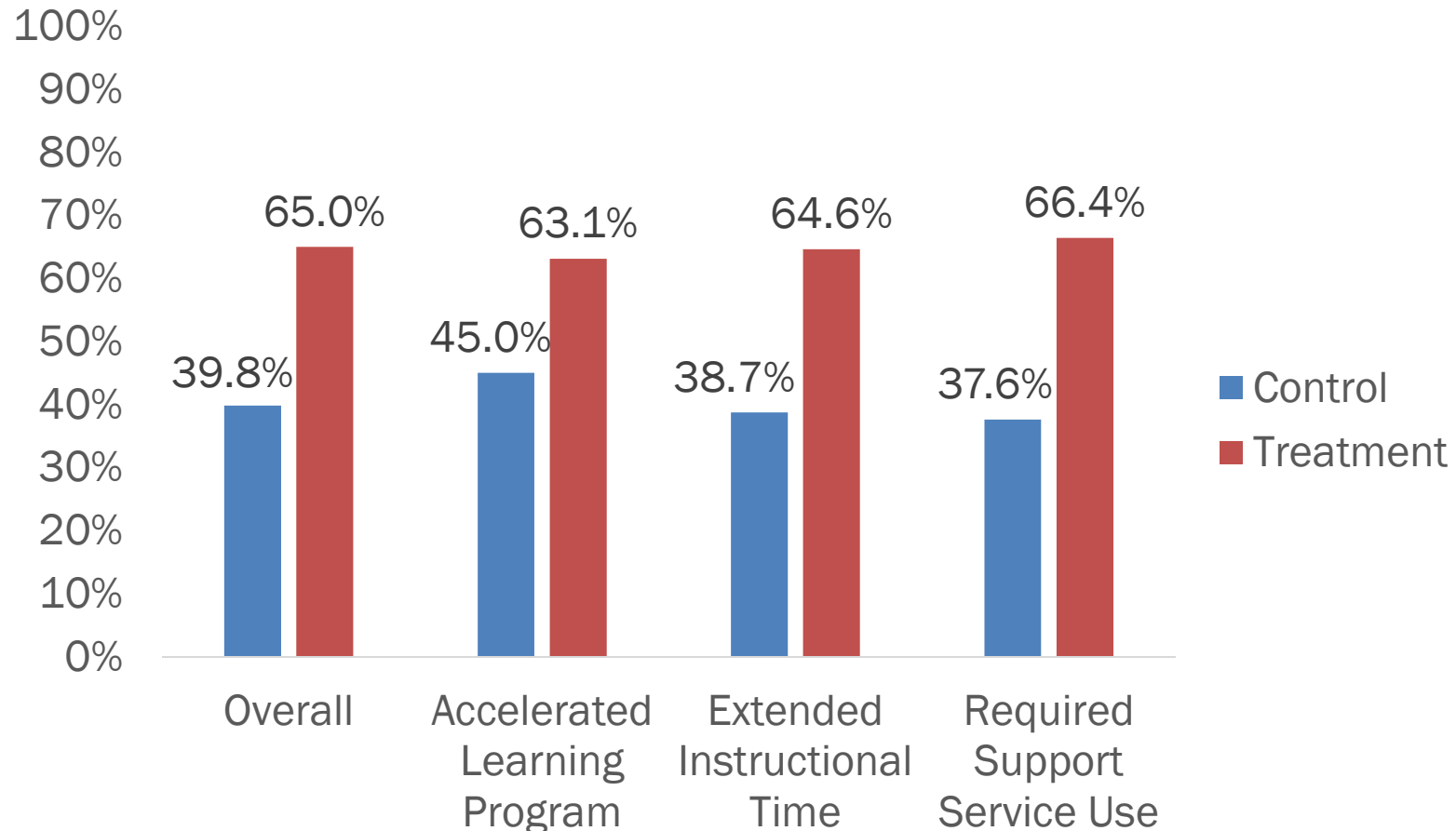
One-year RCT impact results are promising and aligned with previous studies



Note: All differences between control and treatment 1301 passing rates were statistically significant at the $p < 0.01$ level.

All three corequisite models in the RCT showed positive one-year impacts

Percentage Passing English 1301 within One Academic Year



Note: All differences between control and treatment 1301 passing rates were statistically significant at the $p < 0.01$ level.

We will continue to analyze impacts through 2021

- Examining additional cohorts of students
 - Will help us more accurately measure differences in impacts across models, student characteristics, and implementation measures (e.g., exposure of students to promising DE practices, number of contact hours)
 - Will allow us to assess differences in impact as colleges have more time to implement and improve their approaches
- Examining longer-term impacts
 - Giving students assigned to traditional DE time to “catch up”
 - Examining success in English 1302, college-level reading courses
 - Examining persistence and degree completion

Today's discussion

- Background on the study of Texas writing/reading corequisites
- Early findings on short-term student impacts
- **Early findings on implementation**
- The implications of these findings for your corequisites

We needed a common framework for assessing implementation across models

- Allows us to better make cross-model comparisons than would be possible for model-specific fidelity measures
- Provides a consistent evaluation framework for models where optimal implementation and fidelity was sometimes not well-defined
- A broader conception of “high-quality implementation” could benefit the field by:
 - Providing flexible measures for evaluation and continuous improvement for institutions to use across models
 - Ensuring a focus on the key underlying concepts driving success, as opposed to simply design features

We identified key promising practices for supporting developmental education students

Informed by the theory and evidence from the literature on developmental education, with a specific focus on the evidence around accelerated models



Informed by interviews with administrators and faculty across 36 Texas community colleges

Our implementation framework includes nine sets of promising DE practices

- Accelerated opportunities to earn college credit
- Access to rigorous coursework and expectations
- Alignment of developmental education with college-level courses
- Student-centered instruction (e.g., differentiation, active learning)
- Integrated reading and writing instruction
- Intensive practice on key reading and writing skills
- Support for non-cognitive and study skills
- Use of peers to support learning
- Elimination of negative stigma around participation in DE

Early findings suggest RCT corequisites incorporate many of these promising practices

Promising practice	Ways in which corequisites are incorporating practices
Accelerating opportunities to earn credit	<ul style="list-style-type: none"> • Immediate entry into college-level course • Reduction in overall DE credits required for college readiness which makes room on schedule for other courses
Exposure to high level of rigor	<ul style="list-style-type: none"> • Challenging coursework (e.g., limited skill-and-drill, advanced readings, full essays) • High expectations for student work (e.g., mixed with college-level students)
Greater alignment of remediation to college coursework	<ul style="list-style-type: none"> • Shared learning objectives • Common coursework • Instructor alignment (e.g., same instructor teaching DE and college course, co-teaching, shared planning) • Coordinated scheduling
Student-centered learning	<ul style="list-style-type: none"> • A number of opportunities for one-on-one support • Tailoring of instruction to focus on individual areas of weakness • Active learning and contextualization

Early findings suggest RCT corequisites incorporate many of these promising practices

Promising practice	Ways in which corequisites are incorporating practices
Integrated reading and writing instruction	<ul style="list-style-type: none"> • Incorporating integrated reading and writing activities into curriculum • Assessing both reading and writing and providing support in all areas of need
Intensive practice on reading and writing skills	<ul style="list-style-type: none"> • Remediation and college course completed in same term • Shortened term with more contact hours per week for course and/or support • More hours spent on homework
Use of peers to support learning	<ul style="list-style-type: none"> • Mixing accelerated students with college-ready students • Developing learning communities • Incorporating group activities into the classroom
Support for non-cognitive and study skills	<ul style="list-style-type: none"> • Encouragement or requirements to use of existing instructional support (e.g., tutoring, office hours) that is available for all courses • Explicit focus on building these skills in the classroom
Elimination of negative stigma	<ul style="list-style-type: none"> • Designing coreq to be less distinguishable as dev ed • Mixing accelerated students with college-ready students

Some practitioners raised concerns about areas where the RCT corequisites may fall short

Concerns that corequisites attached to English 1301:

- May be less likely focus on reading instruction relative to traditional DE
- May devote less time than traditional DE to building non-cognitive and study skills
- May be less likely to incorporate active learning strategies, contextualization than traditional DE
- May be too rigorous in terms of content and expectations for students who are further from college ready

Corequisite models can be designed and implemented to address these concerns

Our next step is to examine additional data on these nine areas of implementation

- Are RCT corequisite students more likely to be exposed to promising practices than students in a standalone integrated reading and writing DE course?
- Is there variation in the implementation of promising practices across RCT models and colleges?
- Which of the promising practices are associated with positive impacts on student outcomes for RCT colleges?

Today's discussion

- Background on the study of Texas writing/reading corequisites
- Early findings on corequisite impact
- Early findings on corequisite implementation
- **The implications of these findings for your corequisites**

Impact findings suggest that a range of corequisite models may be effective

- Positive short-term impacts across each of the three models
- But critical to also examine longer-term impacts
 - Course performance in English 1302 and reading-intensive courses
 - Persistence
 - Degree completion

Our framework for assessing corequisite implementation may be a useful guide

Implementing Corequisites that Incorporate Promising DE Practices

- ✓ Ensure early access to college courses
- ✓ Ensure exposure to high level of rigor
- ✓ Ensure alignment with college-level courses
- ✓ Ensure student-centered learning
- ✓ Ensure integrated reading/writing support
- ✓ Ensure intensive time for skill practice
- ✓ Ensure support for non-cognitive and study skills
- ✓ Ensure use of peers to support learning
- ✓ Eliminate negative stigma associated with participation

Experiences from TX colleges suggest multiple ways to achieve these promising practices

Promising practice	Ways to build into corequisite
Accelerating opportunities to earn credit	<ul style="list-style-type: none">• Allow for immediate entry into college-level course• Reduce the number of DE credits required
Exposure to high level of rigor	<ul style="list-style-type: none">• Limit skill-and-drill activities• Incorporate advanced readings and longer essays• Mix DE students with college-level students• Require corequisite instructors to also teach non-corequisite sections of the college course• Establish common rubrics, grading standards
Greater alignment of remediation to college coursework	<ul style="list-style-type: none">• Ensure shared and/or aligned learning objectives across the course and DE support• Use coursework from college course for support• Use a common instructor for both components, or establish shared planning time for different instructors• Coordinate scheduling

Findings indicate there may be multiple ways to achieve these promising practices

Promising practice	Ways to build into corequisite
Student-centered learning	<ul style="list-style-type: none">• Tailor instruction to focus on individual areas of weakness• Incorporate student-centered instructional approaches like active learning and contextualization into the classroom
Integrated reading and writing instruction	<ul style="list-style-type: none">• Incorporate integrated reading and writing activities into curriculum• Assess students skills in both reading and writing and ensure students have access to support in both areas
Intensive practice on reading and writing skills	<ul style="list-style-type: none">• Increase the number of contact hours by pairing DE support and college course• Shorten term for corequisite to less than a semester• Require additional practice outside of the classroom

Findings indicate there may be multiple ways to achieve these promising practices

Promising practice	Ways to build into corequisite
Use of peers to support learning	<ul style="list-style-type: none">• Mix accelerated students with college-ready students• Develop learning communities• Incorporate group activities into the classroom
Support for non-cognitive and study skills	<ul style="list-style-type: none">• Build in learning outcomes and classroom activities that build these skills• Structure corequisite as required participation in tutoring or office hours• Encourage students to use tutoring and office hours
Elimination of negative stigma	<ul style="list-style-type: none">• Design corequisite to be less distinguishable as DE• Mix accelerated students with college-ready students• Provide positive messaging to students about DE support

Promising practices can be broadly applied to a wide range of models

- Adaptable to models with a range of different design features
 - Same instructor vs different instructor
 - Varying subject areas and college-level courses
 - Varying intensity of support
 - Different instructional approaches
- However, it may be the case that some models do a better job of embracing these promising practices
 - Our study will try to examine this, but hard to separate from our factors (e.g., institutional culture, student populations)

It may be challenging to prioritize all practices, and there may be tradeoffs

Implementing Corequisites that Incorporate Promising DE Practices

- ✓ Ensure early access to college courses → Cut contact hours for DE support
- ✓ Ensure exposure to high level of rigor
- ✓ Ensure alignment with college-level courses
- ✓ Ensure student-centered learning
- ✓ Ensure integrated reading/writing support
- ✓ Ensure intensive time for skill practice → Add contact hours for DE support
- ✓ Ensure support for non-cognitive and study skills
- ✓ Ensure use of peers to support learning
- ✓ Eliminate negative stigma associated with participation



In addition, adopting promising practices may require resources

- Some features cost money (e.g., smaller class sizes)
- Instructors may require professional development
 - Student-centered instruction can be challenging
 - Instructors who have not taught DE may be less experienced with supporting non-cognitive and study skill growth
 - Some instructors may need credentials and training to teach college-level coursework
- Models that are structured around promising practices can be tough to implement
 - Mixing of students and/or linking of courses challenging in student information systems
 - Instructional alignment can be challenging

Thank you!



For any questions, please contact:

Trey Miller (AIR), tmiller@air.org

Lindsay Daugherty (RAND), ldaugh@rand.org