
ILLINOIS COMMISSION ON EQUITABLE PUBLIC UNIVERSITY FUNDING

Meeting #5

Welcome to the March 16, 2023 meeting of the Technical Modeling Workgroup. The meeting will begin at 9:00 a.m. This meeting will be recorded.

Members of the general public will remain muted throughout the meeting and will have the opportunity to comment during the public comment period. To make a comment, please leave your name and the organization you represent in the Q&A section by 10:15 a.m. We will call on you during the public comment period and ask that you keep your remarks to under three minutes.

If you have technical difficulties during the meeting, please contact David Antonacci at antonacci@ibhe.org or via text to 217-720-5269.

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Welcome & Agenda Overview

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9:00 am	Welcome & Agenda Overview
9:05 am	Action: Approval of Minutes from February 16, 2023 Workgroup Meeting
9:10 am	Overview of Workgroup/Review of Work Plan
9:20 am	Funding Framework Overview
9:35 am	Adjusting for Adequacy: Benchmarking and Other

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10:00 am	Equity-Based and other Adjustments
10:25 am	Equitable Student Share Topic Team Report
10:45 am	Public Comment
10:55 am	Plan for Subsequent Meetings
11:00 am	Next Steps & Adjournment

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Action: Approval of minutes from
February 16, 2023 Workgroup
Meeting

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Introductions

Technical Modeling Workgroup Membership

Name	Title	Organization
Corey Bradford	VP for Admin & Finance	Governors State University
Dan Mahony	President	Southern Illinois University
Michael Moss	Associate Vice Chancellor	University of Illinois Chicago
Mike Abrahamson	Senior Manager of Research and Policy	Partnership for College Completion
Beth Ingram	Executive Vice President and Provost	Northern Illinois University
Ralph Martire	Executive Director	Center for Tax and Budget Accountability
Robin Steans	President	Advance Illinois
Simón Weffer	Associate Professor	Northern Illinois University
Sandy Cavi	Associate Vice President for Budgeting and Planning	Illinois State University
Kim Tran	Chief of Staff	Chicago State University
Andrew Rogers	Director, Financial Analysis and State Budget Reporting	Northern Illinois University
Jeanette Malafa	Director, Government Relations	Western Illinois University

Conceptual Model: Similar to K-12 EBF

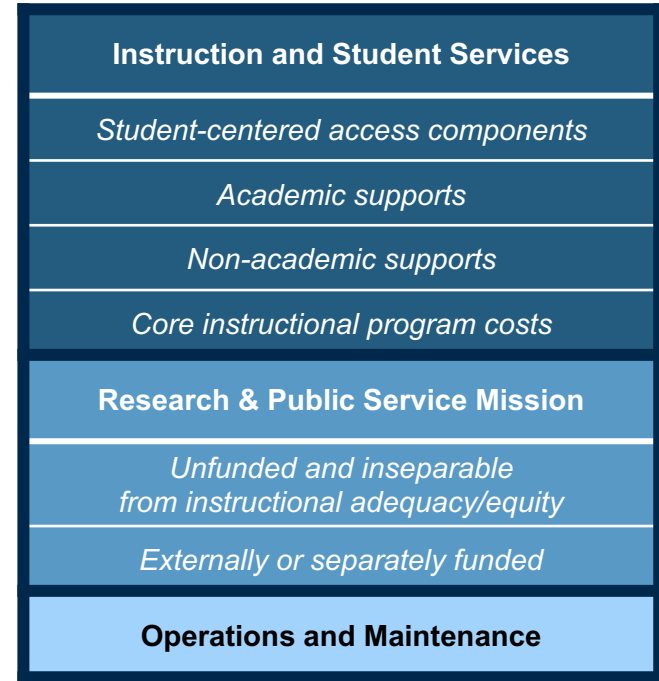
Start with an Equity-Centered Adequacy Target

Each institution will have an Adequacy Target, primarily built from student-centered components of what it costs for students to succeed.

Equity adjustments will be made based on variable student need to reflect the priority of increasing more equitable access and success for historically underserved student populations.

Adequacy will also consider research, service, and artistry missions. Cost for facilities operations and maintenance included, as well.

“University A” Adequacy Target



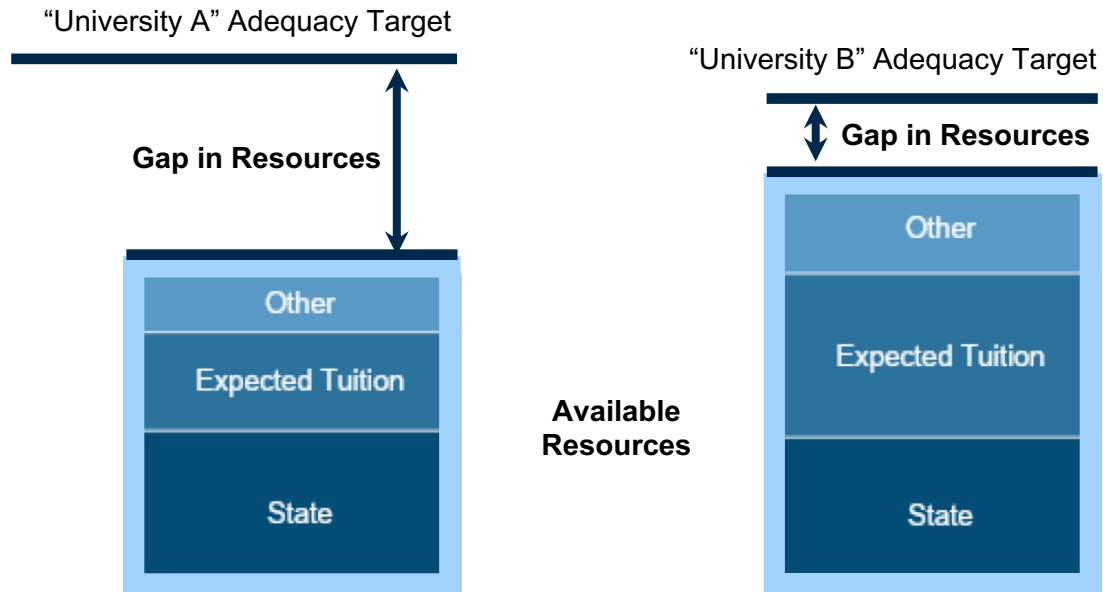
Conceptual Model

Identify Available Resources

Include existing state funding as base, account for “expected tuition,” and other resources, like endowment. “Expected tuition” rather than actual tuition helps address more equitable affordability.

State Funds Fill in Gap in Resources

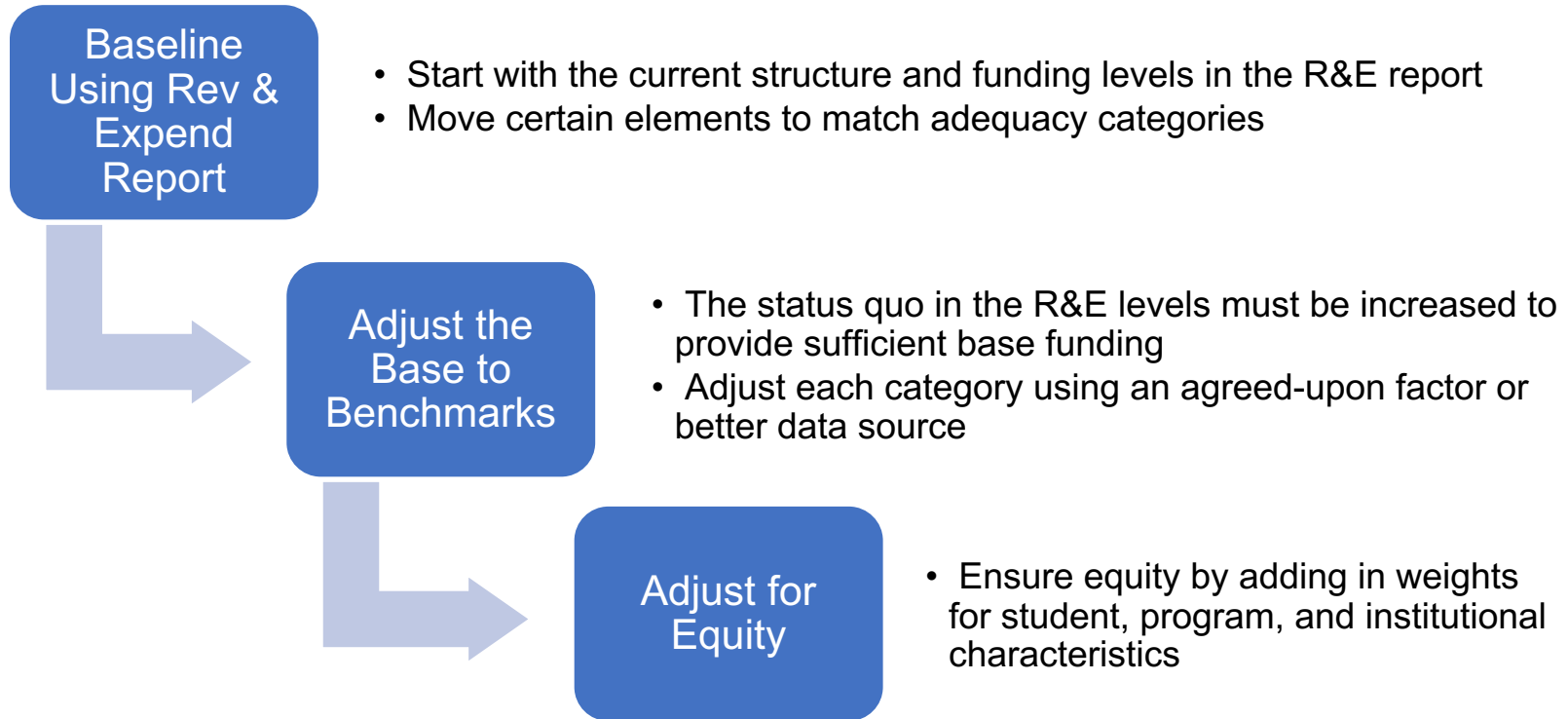
Model to be developed, but goal to prioritize distribution of **new** state investments to institutions with the greatest gap between equity-centered adequacy target and current available resources (state, expected tuition and other)



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Proposed Model for Instruction and
Student Services

"Top-Down" Approach to Calculating Adequacy Targets



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Developing Baseline Cost Using Current
IL Expenditures

Choices in Calculating the Base

Current vs Historical

- Current spending per student is high relative to past years, partly due to declining enrollment at many schools (-5% from 2015) and increasing expenditures (+3%).
- The average of 2022, 2015, and 2010 is about 10% less than 2022 levels.

Headcount vs FTE

- Headcount is 6% higher than FTE.
- Headcount may make sense for student services, while FTE may make sense for instructional costs.

***We will revisit these choices after discussing the full model framework.
It is possible the base could not impact the final cost and allocation of the model,
depending on how the base adjustment and equity adjustments are made.***

Choices in Calculating the Base

Expenditures from All Revenues or Only State Approps & UIF

- Nearly 75% of all expenditures from other revenue goes towards Mission and O&M costs.

- Expenditures from other revenue for Mission and O&M vary more widely across institutions than those for Instruction and Student Services.

Adequacy Component	FY2022 - All Rev Sources	FY2022 - State & UIF Revenue
Student Centered Access	\$1,073	\$827
Academic Supports	\$1,073	\$827
Non-Academic Supports	\$1,003	\$317
Core Instruction Costs	\$10,714	\$8,269
Mission (Research, Public Service, Artistry)	\$8,281	\$1,227
O&M	\$6,828	\$3,757
Total	\$28,973	\$15,225

Choices in Calculating the Base

Expenditures from All Revenues or Only State Approps & UIF

- Main drivers of the difference between All and State/UIF:
 - Non-Academic Supports: Student health and medical services, Social and Cultural Development
 - Mission: Community Services, Cooperative Extension Services, Research Centers, Individual/Project Research
 - O&M: Permanent Improvement, Repairs/Maintenance

Recommendation: Use “All Revenue Sources” for expenditures that go towards Instruction and Student Services, as those are likely to impact adequacy and equity. Use “State & UIF Revenue” for expenditures that go towards Mission and O&M.

Baseline Cost per student

Adequacy Component	Base IL Expenditures (per Headcount) - Options		
	FY2022 - All Rev Sources	FY2022 - State & UIF Revenue	Recommendation (Mix)
Student Centered Access	\$1,073	\$827	\$1,073
Academic Supports	\$1,073	\$827	\$1,073
Non-Academic Supports	\$1,003	\$317	\$1,003
Core Instruction Costs	\$10,714	\$8,269	\$10,714
Mission (Research, Public Service, Artistry)	\$8,281	\$1,227	\$1,227
O&M	\$6,828	\$3,757	\$3,757
Total	\$28,973	\$15,225	\$18,848

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Adjusting the Baseline to Benchmarks

Ways to Adjust to Benchmarks

1) Increase Funding to Reach an Outcome Target

- Calculate an adjustment necessary to move from current levels to a target level (e.g., graduation rate) based on research and data analysis linking spending to outcomes.

2) Identify Funding Levels of High-Performing Institutions

- Use different sources (IL historic highs in spending per FTE, 75th percentile IL or national spending, peer institutions with diverse student bodies and strong, equitable outcomes) to make informed decision about adequacy adjustment to current levels.

Graduation Rates as an Outcome Target

Research on Effect of Funding on Graduation Rates

Chakrabarti et al 2020 – “Experiencing a \$1,000 per-FTE increase in state appropriations while enrolled in college increases the likelihood of earning a bachelor’s degree by age 25 by 1.5pp for students first enrolled at a four-year institution.”

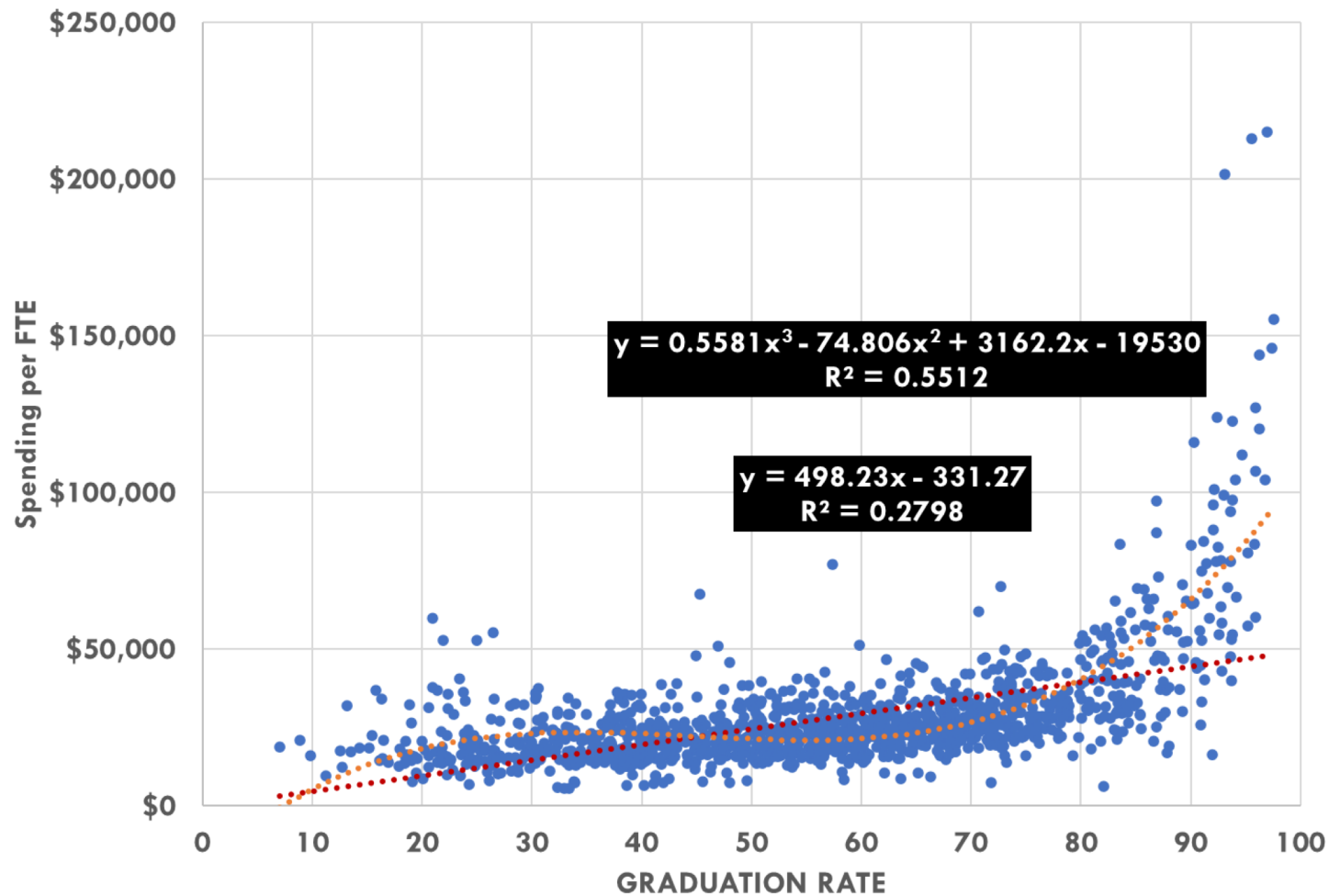
Demings and Walters 2018 – “A 10% increase in institutional spending increases credentials awarded at community colleges by 14.5% and BA attainment at four-year institutions by 4.5%.”

Bound et al 2019 - “A 10% decrease in state appropriations at public four-year research institutions results in a 3.6% decrease in bachelor’s degree completion, a 7.2% decrease in Ph.D. completion, and has no statistically significant effect on master’s degree completion.”

Average Spending at Different Graduation Rates

Grad Rate	Average of Est. 2024 E&R per FTE	# of Public 4-year Institutions
0-9	\$25,735	5
10-19	\$18,399	36
20-29	\$20,534	104
30-39	\$20,872	168
40-49	\$22,092	210
50-59	\$23,884	272
60-69	\$26,452	267
70-79	\$30,403	191
80-89	\$45,348	112
90-99	\$85,408	61
Grand Total	\$28,566	1426

GRAD RATE AND EST FY 2024 E&R per FTE



Interpretation

An increase of one percentage point in the graduation rate is associated with a \$498.23 increase in spending per FTE.

Identifying a Benchmark

PREDICTED E&R SPENDING LEVELS (IN EST. FY 2024 DOLLARS) FOR INSTITUTIONS WITH DIFFERENT GRADUATION RATES

		GRADUATION RATE									
		40		50		60		70		80	
TOTAL	Polynomial	\$	22,987	\$	21,328	\$	21,450	\$	26,703	\$	40,435
	Linear	\$	19,598	\$	24,580	\$	29,563	\$	34,545	\$	39,527

- Schools with graduation rates of 80% have approximately \$40,000 in education and related expenditures.
- We can calculate the compare IL figure and adjust the baseline by the percent difference (data forthcoming).
- Note: the baseline data on slide 8 is not comparable.

Benchmarking Adjustment Options

Outcome Target

- Goal: Increase grad rate from 63.3% to 70% (6.7 pp)
- An additional \$600/FTE increases completion by 1 pp
- Needed investment: **\$4,276 per headcount**

High-Performing Institution Comparison

- Goal: Fund IL schools at a level comparable to those that achieve >80% graduation rates
- Current IL E&R expenditures: \$27,000
- E&R expenditures for high grad-rate schools: \$40,000
- Needed investment: (48% increase over current spending) or **\$9,653 per headcount**

Per Student Adjusted Base

Adequacy Component	Base IL Expenditures (per Headcount)	Benchmark Adjustment - Options		Per Student Adjusted Base
		70% Grad Rate	High-Performing Benchmark (80% grad)	
Student Centered Access	\$1,073			\$1,404
Academic Supports	\$1,073			\$1,404
Non-Academic Supports	\$1,003	\$4,276	\$9,653	\$1,313
Core Instruction Costs	\$10,714			\$14,019
Mission (Research, Public Service, Artistry)	\$1,227	TBD	TBD	\$1,227
O&M	\$3,757	TBD	TBD	\$3,757
Total	\$18,848	\$4,276	\$9,653	\$23,124

Notes:

- We made the adjustment to Instruction and Student Service categories, not Mission and O&M. The rationale is that the Education & Related Expenditures used in the analysis of relationship between spending and graduation rates is most closely aligned with the costs in those categories. Adjustments to Mission and O&M are TBD.
- We plan to break out Core Instruction Costs by level and discipline. Each would get its proportional share of the benchmarking adjustment. The greater level of granularity will allow for program differentiation in building the Adequacy Targets.
- The Per Student Adjusted Base uses the 70% Grad Rate adjustment.

Benchmarking Adjustment Options

For Discussion

- Which adjustment option do you prefer – outcome target or high-performing comparison?
- If we use an outcome target, is a 70% grad rate the right target?
- If we use a high-performing comparison, what graduation rate should it benchmark against?
- Might this approach to a base adjustment , or a similar one, work for Mission or O&M as well?

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Adjusting for Equity

Ways to Adjust for Equity

- 1) Increase funding to reach an outcome target (e.g. eliminate gaps)**
- 2) Translate best-practice interventions (cost and impact) into a weight or add-on**

Analysis of Spending to Achieve Similar Grad Rates for Pell and BIPOC Students

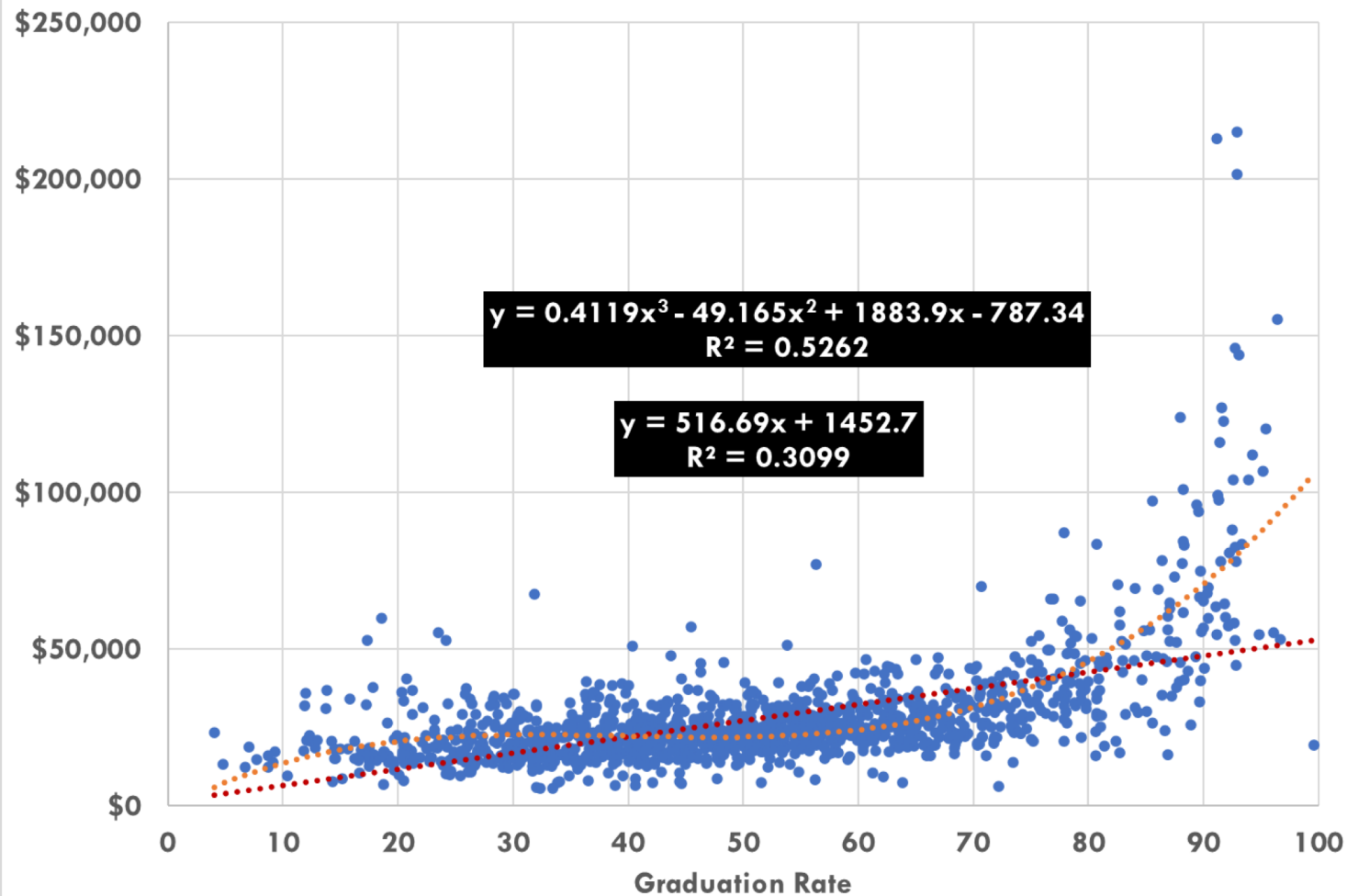
PREDICTED E&R SPENDING LEVELS (IN EST. FY 2024 DOLLARS) FOR INSTITUTIONS WITH DIFFERENT GRADUATION RATES

		GRADUATION RATE					
		40	50	60	70	80	
BIPOC	Polynomial	\$ 22,347	\$ 22,409	\$ 25,103	\$ 32,633	\$ 47,208	
	Linear	\$ 23,629	\$ 28,581	\$ 33,532	\$ 38,484	\$ 43,436	
PELL	Polynomial	\$ 22,266	\$ 21,983	\$ 24,223	\$ 31,459	\$ 46,161	
	Linear	\$ 22,120	\$ 27,287	\$ 32,454	\$ 37,621	\$ 42,788	
TOTAL	Polynomial	\$ 22,987	\$ 21,328	\$ 21,450	\$ 26,703	\$ 40,435	
	Linear	\$ 19,598	\$ 24,580	\$ 29,563	\$ 34,545	\$ 39,527	
BIPOC DIFFERENCE	Polynomial	\$ (640)	\$ 1,082	\$ 3,652	\$ 5,930	\$ 6,773	
	Linear	\$ 4,031	\$ 4,000	\$ 3,970	\$ 3,939	\$ 3,909	
PELL DIFFERENCE	Polynomial	\$ (721)	\$ 655	\$ 2,773	\$ 4,756	\$ 5,727	
	Linear	\$ 2,522	\$ 2,707	\$ 2,892	\$ 3,076	\$ 3,261	

Implications of Analysis

- Outcome gaps for low-income and students of color correlate with different levels of spending
- Institutions with **60%** graduation rates for **students of color** spend about **\$4,000** (13-17%) more per student than institutions with 60% overall graduation rates.
- Institutions with **70%** graduation rates for **students of color** spend about **\$4,000-6,000** (11-22%) more per student than institutions with 70% overall graduation rates
- Institutions with **60%** graduation rates for **Pell students** spend about **\$3,000** (10-13%) more per student than institution with 60% overall graduation rates.
- Institutions with **70%** graduation rates for **Pell students** spend about **\$3,000-\$5,000** (9-18%) more per student than institutions with 70% overall graduation rates.
- Data suggest a correlation not causation, relationship between spending and outcomes that is necessary but not sufficient
- Research and practice data from Illinois and elsewhere illustrate the mechanism for spending to improve outcomes

PELL GRAD RATE AND EST FY 2024 E&R per FTE



Interpretation

An increase of one percentage point in the Pell graduation rate is associated with a \$516.69 increase in spending per FTE.

Funding to an Outcome Target – Equity

- Example: Eliminate grad rate gap between Pell and non-Pell students (13 pp)
- An additional \$600/FTE increases completion by 1 pp
- Needed investment: **\$8,299 per Pell recipient** (44% above the adjusted per student base)

- This approach is difficult to implement in a formula, as it would require estimates for gaps for students with multiple characteristics. But it helps provide a benchmark of the total cost of adjustments using other approaches.

Best Practice Interventions

- In this approach, we identify research-based interventions specific to each adequacy component that improve outcomes and equity for target populations
 - Student Centered Access
 - Academic & Non-Academic Supports
 - Core Instruction Costs

Best practices: Student-Centered Access

- The equity adjustment could match funding to programs that increase the enrollment of traditionally underrepresented students
- Bottom Line has the most rigorous evaluation and impact among those listed here, but there may be others

Best Practices in Enrolling
Historically Marginalized Students

Upward Bound	\$4,900 per student
Bottom Line	\$1,000 per student
Talent Search	\$540 per student
College Advising Corps	\$170 per student

Discussion Questions:

- Are there other practices that should be part of the add-on to the access component?
- Which students should get this add-on in the formula?
- How can we apply the add-on to ensure schools enrolling lots of first-gen, low-income students are adequately funded for their work AND schools with low enrollment are incentivized to increase their outreach and recruitment?

Best practices: Academic & Non-Academic Supports

- For academic and non-academic supports, we recommend a set of combined “packages” of different service levels (high, medium, low).
- The cost of each package can be based on comprehensive interventions (e.g., ASAP, Opening Doors, One Million Degrees, etc.) that use a suite of services which overlap with key elements the topic teams identified such as high levels of advising, financial assistance, tutoring, career services.
- It is easier to build a cost range based on a suite of services than building one from individual interventions.
- We can add interventions to the package if they address some aspect of academic/non-academic supports not typically covered by the comprehensive interventions.

PROGRAM	COST	SERVICE	IMPACT	CONTEXT
CUNY ASAP	\$4,676 (\$5,428 counting costs of retention)	Advisors, full-time enrollment, financial assistance incl for basic needs, tutoring, career services. <i>Advisor ratio of 1:120-150 students</i>	17 pp increase in grad rates	NY and OH CCs, dev ed students
CUNY ACE		Monthly seminar, monthly advisor meeting, four-year academic plan for on-time graduation, career services, required internship	17 pp increase in BA completion	NY public 4yr colleges, first year students, 80% low-income
Project Quest	\$12,464 (22% of cost is financial aid)	Advising, financial aid, academic supports, counseling, referrals to outside agencies, meetings on life skills (overall more workforce training focused)	13 pp increase in postsec attainment	Adults earning AA and 1-year certificates at CCs in health, business, IT, manufacturing
Opening Doors	\$2,461	Learning Communities – linked courses, counseling, tutoring, and textbook voucher	4.6 pp increase in completers	CC students in NY
One Million Degrees		Program coordinators, tutors, professional development coaches, and financial stipends <i>Coordinator ratio of 1:65</i>	11-16 percent increase in retention	Students at City Colleges of Chicago
TRIO Student Support Services	\$1,752	Academic advising, may also include tutoring, labs, workshops, special courses.		Low-income, first-gen students (all types of colleges)
Bottom Line	“increases BA attainment by over 2 pp per	Access advising (pre-college) and Success advising (in college support)	7.6 pp (16%) increase in BA completion, but only 1.6 pp due to in-	IL, OH, NY, MA Low-income, first-gen students

Other Academic & Non-Academic Support Comparisons

- UI-Chicago example
 - ~\$6,900 per student cost for student services not including financial assistance; includes some of what is counted in the base amount.
 - Includes: Health & Wellness programs, pilot programs like Summer College and Accelerate Your Success, Cultural Centers, Academic Success programs and centers, and the Dean of Students.
- Other organizations using holistic services we spoke to:
 - HOPE Chicago, National Louis University, One Million Degrees, CUNY
 - Range of program costs: \$2,500-\$5,000

“Package” of Academic & Non-Academic Supports and Cost Per Student for Equity Adjustment		
High	Medium	Low
\$6,000	\$4,000	\$2,000

Package costs based on the range of services listed in prior slides – the most effective had higher costs around \$5,000 per student.

Consider these costs in the context of the \$8,300 per Pell student to eliminate grad rate gaps.

Recommended approach to identifying which students would be eligible for the equity add-on associated with each “package” :

- Base the level of service needed on the current outcomes gap in IL, creating tiers based on natural breaks in the data
- Students with multiple characteristics would be placed into the highest of their tiers +1 (e.g. a Pell adult learner’s highest tier is “High” so they would be “Intensive”)

Tier	Student	Grad rate gap
Intensive	EBF Tier 1 school	?%
	High + Other	
High	BIPOC	17%
	Pell	13%
	EBF Tier 2 school	?%
	Medium + Other	
Medium	Student w/ Disability	?%
	Adult learner	?%
	Student parent	?%
Low	Transfer student	?%
	Rural student	?%

Supports Not Included in Most Comprehensive Interventions

Some common student services are not part of many of the comprehensive evidence-based practices we reviewed. Therefore, we could add in additional equity adjustments for these components based on estimates of costs for these services

Non-academic:

- Health services
- Counseling (incl mental health)
- Basic needs supports

Academic:

- First-Year Seminars and Bridge programs (TRIO?)
- Career Connections, Work-Based Learning

Academic & Non-Academic Support Adjustments

Discussion Questions:

- Does a tiered set of services approach make sense?
- Are the number of tiers (3) and costs right?
- Is the approach to identifying which students get which tier of service right?
- What other services or interventions should be included in the equity add-on for these components?

Best practices: Core Instructional Costs

- Most of the adjustments to close equity gaps would be through Academic & Non-Academic Supports
- The Adequacy Work Group included a recommendation to include the costs of recruiting and retaining a more diverse faculty.
- UI-Chicago Underrepresented Faculty Recruitment Programs: **\$667 per student**
- **Discussion Questions:**
 - Are there other programs to use as benchmarks for this adjustment?
 - Are there other equity adjustments to instruction costs that should be made?

Equity Adjustments

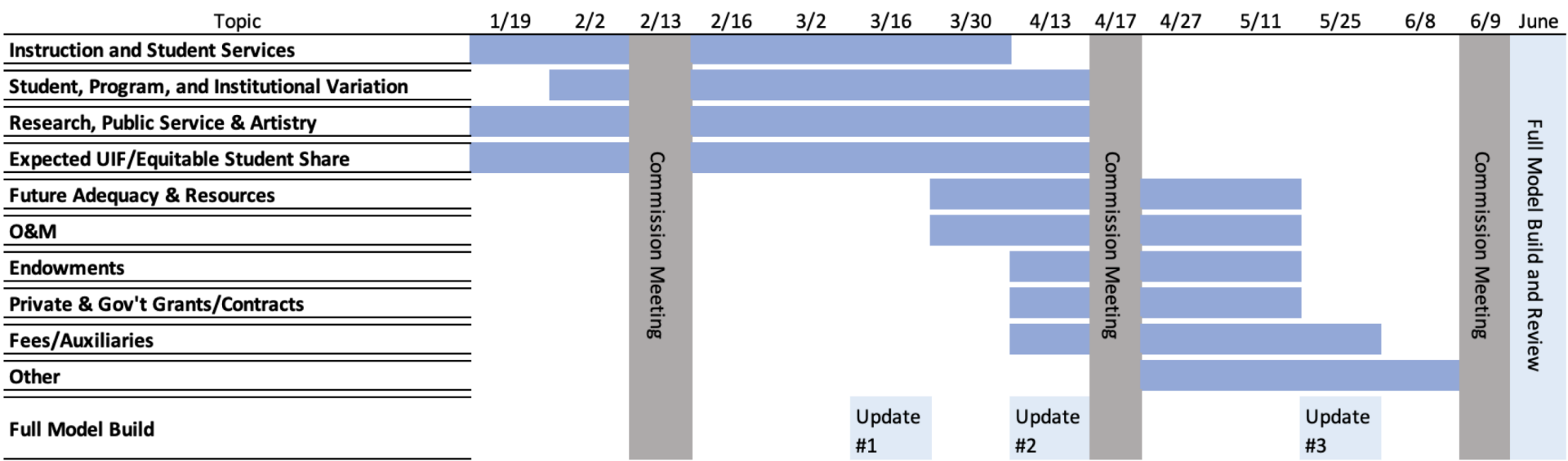
Adequacy Component	Per Student Adjusted Base	Equity Adjustments
Student Centered Access	\$1,404	\$1,000
Academic Supports	\$1,404	\$2,000-\$6,000
Non-Academic Supports	\$1,313	
Core Instruction Costs	\$14,019	\$667
Mission (Research, Public Service, Artistry)	\$1,227	TBD
O&M	\$3,757	TBD
Total	\$23,124	\$3,667-\$7,667

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Review of Work Plan

Work Plan



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Public Comment

Instructions for Members of the Public:

Please wait for your name to be called. Public comments will be limited to three (3) minutes per person.

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Next Steps

Next Steps

- Next Meeting: ESS and Mission topic teams will present on their work
- Workgroup members assigned to answer some of the outstanding questions from the proposed model:
 - Options for calculating the base funding amounts
 - Recommendations for any additional equity add-ons
 - Develop a proposal for assigning students to the tiers of academic and non-academic supports
- HCM will incorporate discipline and level detail to the model based on the IL Cost Study

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Adjournment

Next Workgroup Meeting: March 30, 2023
