Presentation to the Stakeholder Advisory Group

APA Consulting and Picus Odden & Associates

Annapolis, MD
January 21, 2016

Today's Presentation

- Presentation of *A Comprehensive Analysis of Prekindergarten in Maryland*
- Presentation of findings from case studies of high-performing schools
- Updates on revised reports:
  - *Final Report of the Study of Increasing and Declining Enrollment in Maryland Public Schools*
  - *The Effects of Concentrations of Poverty on School Performance and School Resource Needs*
  - *Analysis of School Finance Equity and Local Wealth Measures in Maryland*
  - *Geographic Cost of Education Adjustment for Maryland*
- Adequacy Study updates

Report

A Comprehensive Analysis of Prekindergarten in Maryland

Report Overview

- Reviews literature on benefits of prekindergarten; assesses current prekindergarten services, quality, funding, and capacity levels across Maryland; compares Maryland to a set of peer states; estimates costs, benefits, and ROI of high-quality prekindergarten at different participation levels; presents two funding models.

- Concludes with five recommendations:
  1. Continue to invest in early childhood data systems
  2. Understand the differences in ROI between a one-year investment and a two-year investment in prekindergarten, and target expenditures appropriately
  3. Provide increased investment to support quality improvement efforts in child care centers and family homes, to help them reach the highest EXCELS Level of 5
  4. Encourage providers to participate in EXCELS; encourage parents to enroll their children in high-quality programs
  5. Provide funding for 80% of Maryland's four-year-olds to attend either a public prekindergarten program or a private program with an EXCELS Level 5 rating

Why is Prekindergarten Important?

- Development that occurs between birth and age five is critical to "establishing the foundations of thinking, behaving and [maintaining] emotional security" (Scrivner & Wolfe, 2002)
- In addition to influencing academic skills like literacy and math, prekindergarten also influences social and emotional competence and overall health (Yoshikawa et al., 2013)
- ROI Benefits:
  - Reduced instances of child abuse and neglect
  - Reduced juvenile crime rates
  - Increased educational attainment and lifetime earnings for attendees
  - Increased ability for parents/caregivers to work/attend school
- Landmark studies: Abecedarian Project, Chicago Child-Parent Center Program, HighScope Perry Preschool Project
- Recent studies: Boston Public Schools K1 Program, Colorado Preschool Program

What About Fadeout?

- Some studies found positive effects may fade over time
  - Head Start Impact Study:
    - Found impacts fading by third grade
    - However, control group was not a “no services” group, and about 60% of the control group children received some preschool education
  - Tennessee Voluntary PreK for All (TN-VPK):
    - Participants were more ready for kindergarten, but by end of kindergarten, control group children caught up with TN-VPK attendees
    - However, quality level of TN-VPK was inconsistent across the state, and quality level of elementary schools was/is inconsistent across the state
- Important variables affecting impact of prekindergarten:
  - Program quality and implementation
  - Financial resources
  - Program duration
  - Populations served
  - Elementary school quality

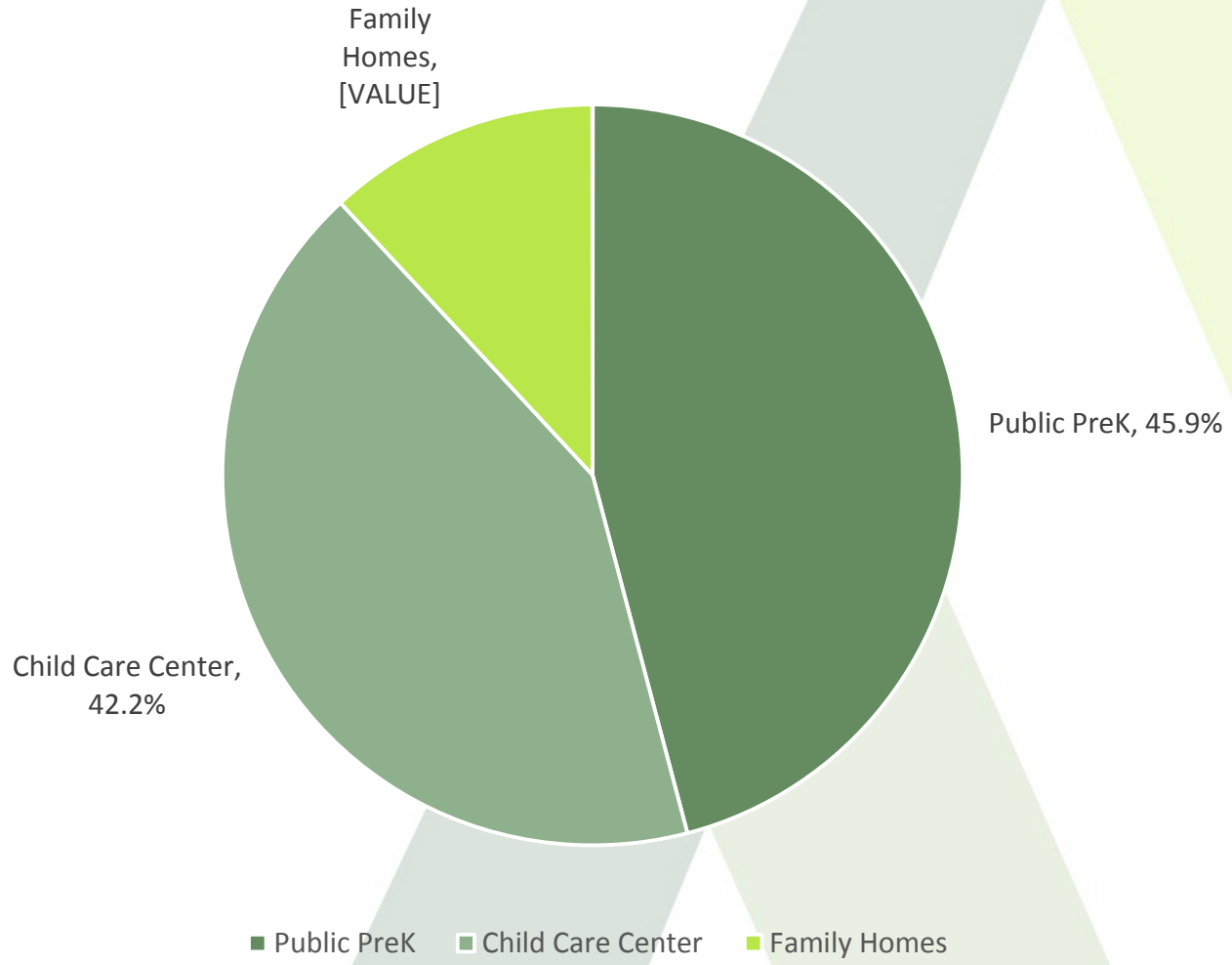
Maryland's ECE Commitment

- 2002 Bridge to Excellence in Public Schools Act mandated prekindergarten services be provided to "all 4-year-old applicants […] from families with economically disadvantaged backgrounds or who are homeless"
- 2014 Prekindergarten Expansion Act provides resources to establish additional slots for four-year-olds whose family household incomes are at or below 300% of the FPL. Programs eligible to apply for funding are:
  - Community-based programs at EXCELS Level 5
  - Local school systems that intend to turn a half-day prekindergarten classroom into a full-day prekindergarten classroom
  - Local school systems that intend to establish a Judith P. Hoyer Early Child Care and Family Educational Center (Judy Center)
- In late 2014, Maryland was awarded a 4-year federal Preschool Expansion Grant to provide additional prekindergarten slots for 4-year-olds and to improve the quality of current slots

Current 4-Year-Old Capacity, by Provider Type, and by District

District	Public PreK	Child Care Center	Family Home	Totals
Allegany	467	276	65	**808**
Anne Arundel	1,928	1809	598	**4334**
Baltimore City	4,597	2409	615	**7621**
Baltimore	3,244	3616	985	**7845**
Calvert	352	363	127	**842**
Caroline	279	122	84	**485**
Carroll	324	793	168	**1285**
Cecil	639	169	102	**909**
Charles	778	589	234	**1601**
Dorchester	210	50	53	**313**
Frederick	975	1038	362	**2375**
Garrett	148	32	13	**193**
Harford	724	1189	345	**2258**
Howard	858	1913	356	**3127**
Kent	136	37	21	**194**
Montgomery	3,311	5342	1017	**9670**
Prince George's	4,841	2611	977	**8429**
Queen Anne's	222	139	88	**449**
Saint Mary's	771	326	193	**1291**
Somerset	193	304	35	**531**
Talbot	230	163	59	**452**
Washington	514	640	235	**1389**
Wicomico	532	416	130	**1078**
Worcester	358	165	46	**570**
Statewide Total	**26,631**	**24,511**	**6,908**	**58,050**

Distribution of 4-year-old Capacity, by Provider Type



Private Programs Serving 4-Year-Olds, by Provider Type and by District

District	Child Care Centers	Family Homes	Total
Allegany	19	51	**70**
Anne Arundel	158	427	**585**
Baltimore City	191	484	**675**
Baltimore	291	735	**1,026**
Calvert	47	114	**161**
Caroline	8	80	**88**
Carroll	63	137	**200**
Cecil	24	85	**109**
Charles	56	199	**255**
Dorchester	10	38	**48**
Frederick	102	292	**394**
Garrett	9	11	**20**
Harford	70	256	**326**
Howard	117	257	**374**
Kent	4	15	**19**
Montgomery	416	715	**1,131**
Prince George's	312	684	**996**
Queen Anne's	12	75	**87**
Saint Mary's	38	178	**216**
Somerset	9	28	**37**
Talbot	16	44	**60**
Washington	46	171	**217**
Wicomico	34	95	**129**
Worcester	12	31	**43**
TOTAL	**2,064**	**5,202**	**7,266**
Percent	***28.4%***	***71.6%***	

Maryland's QRIS

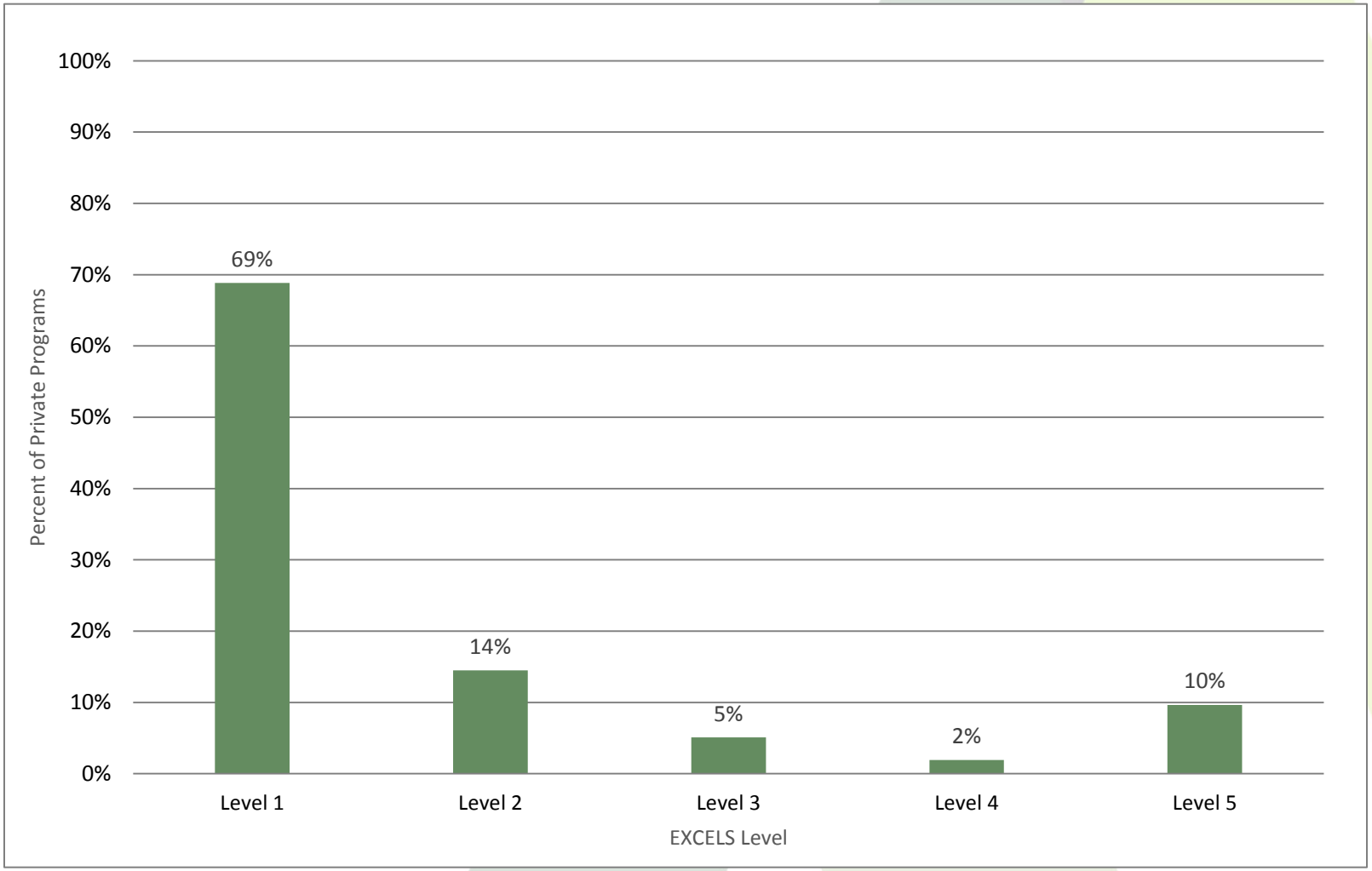
- Maryland's QRIS, EXCELS, rates programs on a 5-point scale. Programs can receive points in 5 categories:
  1. Administrative Policies and Practices
  2. Licensing and Compliance
  3. Developmentally Appropriate Learning Practice
  4. Accreditation and Rating Scale
  5. Staff Qualifications and Professional Development
- There are separate standards for child care centers, family homes, and public prekindergarten programs
- Participation is required for programs receiving child care subsidy funds, but is voluntary for others
- Programs can also obtain a state or national accreditation (e.g. NAEYC, NAFCC)

4-Year-Old Capacity in EXCELS Published Programs or Accredited Programs, by District

District	EXCELS Published	Accredited and Not EXCELS Published	Total Capacity in EXCELS or Accredited*	EXCELS or Accredited Capacity as a % of Total
Allegany	161	27	187	55%
Anne Arundel	519	173	692	29%
Baltimore City	654	342	996	33%
Baltimore	1,197	372	1569	34%
Calvert	97	0	97	20%
Caroline	122	0	122	59%
Carroll	207	21	228	24%
Cecil	101	0	101	37%
Charles	200	3	203	25%
Dorchester	31	0	31	30%
Frederick	370	78	448	32%
Garrett	8	9	17	37%
Harford	417	103	521	34%
Howard	667	289	956	42%
Kent	6	20	25	44%
Montgomery	1,210	848	2,058	32%
Prince George's	451	143	594	17%
Queen Anne's	34	27	62	27%
Saint Mary's	86	47	133	26%
Somerset	72	0	72	21%
Talbot	68	43	110	50%
Washington	288	21	310	35%
Wicomico	133	241	374	68%
Worcester	101	56	157	74%
TOTAL*	**7,200**	**2,862**	**10,061**	**32%**

**Note: Capacity data based on enrollment reports from licensing visits. Excludes 413 programs for which no licensing data was available. Individual district numbers have been rounded to nearest whole numbers. Totals may not add up due to rounding.*

Distribution of Private Prekindergarten Programs, by EXCELS Level



Prekindergarten Capacity at EXCELS Level 5, Accredited, or Public

District	EXCELS Level 5	Accredited (not EXCELS Level 5)	Public Prekindergarten	Total	Total as % of all Capacity
Allegany	0	69	467	536	66%
Anne Arundel	173	288	1,928	2,389	55%
Baltimore City	31	440	4,597	5,068	67%
Baltimore	217	443	3,244	3,904	50%
Calvert	5	60	352	417	50%
Caroline	0	24	279	303	62%
Carroll	86	60	324	470	37%
Cecil	0	0	639	639	70%
Charles	58	46	778	882	55%
Dorchester	0	0	210	210	67%
Frederick	93	170	975	1,237	52%
Garrett	0	10	148	158	82%
Harford	22	191	724	937	41%
Howard	326	425	858	1,608	51%
Kent	0	20	136	156	80%
Montgomery	233	1316	3,311	4,860	50%
Prince George's	33	301	4,841	5,175	61%
Queen Anne's	6	30	222	258	57%
Saint Mary's	0	60	771	831	64%
Somerset	1	65	193	259	49%
Talbot	53	43	230	325	72%
Washington	174	22	514	710	51%
Wicomico	56	253	532	841	78%
Worcester	42	78	358	477	84%
TOTAL	**1,607**	**4,413**	**26,631**	**32,651**	**56%**

Additional Capacity Needed to Serve Different Percentages of 4-Year-Olds in High-Quality Prekindergarten

Setting	Four-Year-Old Capacity		
Public Programs	26,631		
Accredited Private Programs	4,413		
EXCELS Level 5 Private Programs	1,607		
Total 4-year-old Capacity, Public, Accredited or EXCELS Level 5	**32,651**		
Percent of Four-Year-Old Population	**60%**	**70%**	**80%**
Number of 4-Year-Olds	45,273	52,819	60,364
Unmet 4-Year-Old Need	**12,622**	**20,167**	**27,713**

Prekindergarten Expenditure Summary

Program	Estimated State Expenditure (Millions)	Estimated Federal Expenditure (Millions)
Estimated Public Prekindergarten (FY15)	$108.5	-
Preschool Expansion Act (FY15)	$4.3	-
Federal Prekindergarten Expansion Grant (FY15)	*	$15.0
Head Start (FY15)	$1.8	$72.9
Child Care Subsidy (FY14)	$14.9	$17.8
Total	**$129.5 million**	**$105.7 million**

**Maryland committed to make a State match of $11,016,000 in years 3 and 4 of the grant (SFY18 & SFY19)*

- The totals do not include any additional local funding districts may allocate to serve all eligible 4-year-olds in their areas
- Totals also do not include funding related to Judy Centers. Judy Center funding in fiscal year 2015 totaled $10.6 million

Cost-Benefit Analysis of Prekindergarten in Maryland

- The cost-benefit analysis:
  - Describes ROI of prekindergarten in Maryland
  - Describes how ROI varies by quality level, setting, and family income level
  - Incorporates Maryland-specific figures into calculations to create a customized cost-benefit methodology for the State, with two key aspects:
    - Cost of providing high-quality prekindergarten in various settings in Maryland, based on Anne Mitchell's research and the Provider Cost of Quality Calculator
    - Benefits of high-quality prekindergarten, based on nationally recognized and reviewed research, adapted to the Maryland context
  - Analyzes the current system, with current quality distribution
  - Analyzes a high-quality system with 60%, 70%, and 80% of 4-year-olds served in high-quality programs
  - Analyzes a high-quality system with 60%, 70%, and 80% of 3- and 4-year-olds served in high-quality programs

Cost of Prekindergarten Services, by Setting and by EXCELS Quality Level

Benefits: Impact of Program Quality & Family Income Level

- Research suggests that gains in child outcomes in years following prekindergarten are strongest for high-quality programs (Nores et al., 2015; Yoshikawa et al., 2013)
- Research also suggests that the impact of prekindergarten is larger for at-risk children (Karoly & Bigelow, 2005) and for those from lower-income households (Thompson & Haskins, 2014)
- The following multipliers are applied in the ROI analysis:

EXCELS Level	Benefit Multiplier
Level 5	100%
Level 4	85%
Level 3	75%
Level 2	0%
Level 1	0%

Income Level	Benefit Multiplier
Below 100% of FPL	100%
Between 100 and 200% of FPL	75%
Above 200% of FPL	50%

Estimated Capacity, Cost, and Benefit of Current Prekindergarten System

Capacity	No EXCELS/ Level 1&2	Level 3	Level 4	Level 5 or Accredited	Total
Child Care Center	18,028	461	211	5,812	24,511
Family Home	6,653	35	12	209	6,908
Public PreK	0	0	0	26,631	26,631
Total Capacity	**24,681**	**495**	**223**	**32,651**	**58,050**

Cost	No EXCELS/ Level 1&2	Level 3	Level 4	Level 5	Total
Child Care Center	$109,069,665	$3,640,415	$2,028,289	$60,929,062	$175,667,430
Family Home	$33,071,205	$249,300	$110,362	$2,099,275	$35,530,142
Public PreK	$0	$0	$0	$322,525,574	$322,525,574
Total Cost	**$142,140,870**	**$3,889,714**	**$2,138,650**	**$385,553,911**	**$533,723,146**

Benefit	No EXCELS/ Level 1&2	Level 3	Level 4	Level 5	Total
Child Care Center	$0	$17,662,036	$9,156,701	$296,997,788	$323,816,525
Family Home	$0	$1,323,798	$510,104	$10,660,990	$12,494,893
Public PreK	$0		$0	$1,988,335,811	$1,988,335,811
Total Benefit	**$0**	**$18,985,835**	**$9,666,805**	**$2,295,994,589**	**$2,324,647,229**

ROI	**$4.36**

Estimated Capacity, Cost, and Benefit of High-Quality Prekindergarten for 60, 70, and 80 Percent of Maryland Four-Year-Olds

Capacity	60 Percent	70 Percent	80 Percent
Child Care Center	19,116	22,302	25,488
Family Home	5,387	6,285	7,183
Public PreK	20,769	24,231	27,692
Total Capacity	**45,273**	**52,819**	**60,364**

Cost	60 Percent	70 Percent	80 Percent
Child Care Center	$200,415,599	$233,818,199	$267,220,799
Family Home	$54,212,687	$63,248,135	$72,283,583
Public PreK	$251,537,500	$293,460,416	$335,383,333
Total Cost	**$506,165,786**	**$590,526,750**	**$674,887,715**

Benefit	60 Percent	70 Percent	80 Percent
Child Care Center	$976,922,794	$1,139,743,260	$1,302,563,726
Family Home	$275,314,570	$321,200,332	$367,086,093
Public PreK	$1,550,701,892	$1,809,152,207	$2,067,602,523
Total Benefit	**$2,802,939,256**	**$3,270,095,799**	**$3,737,252,342**
ROI	**$5.54**	**$5.54**	**$5.54**

Recommendations

1. Continue to invest in early childhood data systems, and use them to establish targets for the number of high-quality prekindergarten slots available in each district
2. Understand the differences in ROI between a one-year and a two-year investment in prekindergarten, in order to target expenditures appropriately
3. Increase the ROI of prekindergarten by providing increased investment to support child care centers and family homes to reach the highest levels of Maryland EXCELS
4. Increase the ROI of prekindergarten by encouraging providers to participate in Maryland EXCELS and by encouraging parents to enroll their children in quality prekindergarten programs
5. Offer universal prekindergarten in Maryland, providing funding for 80 percent of Maryland's four-year-olds to attend a high-quality prekindergarten program

Phase-In Universal Prekindergarten

1. Prioritize **expanding prekindergarten access** for children living in families with household incomes **at or below 300% of the federal poverty level**, and to 'high-need' communities, as defined by the federal expansion grant
2. Engage in **systematic quality improvement efforts** to increase the quality of programs currently offering prekindergarten in Maryland
   - Target QI supports to sites serving predominantly low-income or high-need communities
3. Increase the number of high-quality prekindergarten slots in order to achieve enough capacity to **serve 80 percent of all four-year-olds** in Maryland

Funding Universal Prekindergarten: Model 1 – State/Local Share

- Costs shared between the state and local school districts
- Total cost is reduced by the current state and federal prekindergarten funding before split is applied
- Local share determined by the same equalized allocation used in Maryland's foundation formula (based on district wealth)
- State contribution flows through school district - provider would receive one payment from the school district

Local Contribution Required Under Model 1

District	60 Percent Coverage (Local Contribution)	70 Percent Coverage (Local Contribution)	80 Percent Coverage (Local Contribution)
Allegany	$1,193,125	$1,564,666	$1,936,208
Anne Arundel	$12,490,226	$16,379,705	$20,269,183
Baltimore City	$10,458,710	$13,715,571	$16,972,432
Baltimore	$18,192,155	$23,857,225	$29,522,295
Calvert	$1,864,495	$2,445,103	$3,025,710
Caroline	$690,590	$905,641	$1,120,693
Carroll	$2,720,285	$3,567,386	$4,414,488
Cecil	$1,727,557	$2,265,521	$2,803,485
Charles	$3,000,729	$3,935,161	$4,869,593
Dorchester	$567,839	$744,665	$921,492
Frederick	$4,667,619	$6,121,124	$7,574,629
Garrett	$620,903	$814,253	$1,007,603
Harford	$4,805,859	$6,302,412	$7,798,965
Howard	$8,043,185	$10,547,848	$13,052,510
Kent	$773,081	$1,013,820	$1,254,558
Montgomery	$30,765,741	$40,346,248	$49,926,756
Prince George's	$15,823,986	$20,751,604	$25,679,222
Queen Anne's	$1,239,934	$1,626,052	$2,012,170
Saint Mary's	$2,760,808	$3,620,529	$4,480,249
Somerset	$750,896	$984,727	$1,218,557
Talbot	$2,124,376	$2,785,910	$3,447,445
Washington	$2,251,539	$2,952,672	$3,653,805
Wicomico	$1,481,570	$1,942,933	$2,404,297
Worcester	$2,727,665	$3,577,065	$4,426,465
Local Total	$131,742,872	$172,767,841	$213,792,810
State Total	$139,164,762	$182,500,921	$225,837,080

Funding Universal Prekindergarten: Model 2 – State/Local/Family Share

- Costs shared between state, local district, and families who can make a contribution
- Family contribution based on household income. Families pay a percentage of the cost of prekindergarten – based on cost of quality report – on a sliding scale
- Model includes 4 income categories – lowest category (under 300% FPL/$75,000 per year) pay no family fee. Highest category (income over $150,000 per year) pay 66% of cost
- State/Local split is calculated as per Model 1, then local share is reduced based on total family contribution
- Income verification, and family fee collection administered by local district
- State contribution flows through school district - provider would receive one payment from school district

Family Contribution and Revised Local Contribution Under Model 2

District	60% Coverage		70% Coverage		80% Coverage	
	Revised Local Contribution	Family Contribution	Revised Local Contribution	Family Contribution	Revised Local Contribution	Family Contribution
Allegany	$770,944	$422,181	$1,077,534	$487,132	$1,384,125	$552,083
Anne Arundel	$1,388,576	$11,101,649	$3,570,109	$12,809,595	$5,751,642	$14,517,541
Baltimore City	$4,041,876	$6,416,833	$6,311,532	$7,404,038	$8,581,188	$8,391,244
Baltimore	$9,144,771	$9,047,384	$13,417,936	$10,439,289	$17,691,101	$11,831,195
Calvert	$16,835	$1,847,660	$313,187	$2,131,916	$609,539	$2,416,171
Caroline	$424,558	$266,033	$598,681	$306,961	$772,804	$347,889
Carroll	($468,635)	$3,188,920	($112,136)	$3,679,523	$244,363	$4,170,126
Cecil	$561,057	$1,166,499	$919,560	$1,345,960	$1,278,063	$1,525,422
Charles	$54,721	$2,946,008	$535,921	$3,399,239	$1,017,122	$3,852,471
Dorchester	$311,316	$256,524	$448,677	$295,989	$586,038	$335,454
Frederick	$308,287	$4,359,332	$1,091,126	$5,029,998	$1,873,964	$5,700,665
Garrett	$425,830	$195,072	$589,170	$225,084	$752,509	$255,095
Harford	$506,201	$4,299,657	$1,341,269	$4,961,143	$2,176,336	$5,622,629
Howard	($10,832)	$8,054,017	$1,254,751	$9,293,096	$2,520,334	$10,532,176
Kent	$552,554	$220,527	$759,366	$254,454	$966,177	$288,381
Montgomery	$6,686,415	$24,079,326	$12,562,411	$27,783,838	$18,438,406	$31,488,349
Prince George's	$2,044,892	$13,779,095	$4,852,649	$15,898,955	$7,660,406	$18,018,816
Queen Anne's	$367,155	$872,780	$618,998	$1,007,053	$870,842	$1,141,327
Saint Mary's	$805,525	$1,955,283	$1,364,432	$2,256,096	$1,923,340	$2,556,909
Somerset	$556,169	$194,728	$760,041	$224,686	$963,913	$254,644
Talbot	$1,594,459	$529,917	$2,174,468	$611,443	$2,754,476	$692,968
Washington	$867,143	$1,384,395	$1,355,293	$1,597,379	$1,843,442	$1,810,363
Wicomico	$542,221	$939,349	$859,070	$1,083,864	$1,175,918	$1,228,379
Worcester	$2,121,422	$606,243	$2,877,553	$699,512	$3,633,685	$792,780
Family Total		**$98,129,411**		**$113,226,244**		**$128,323,076**
Local Total	***$33,613,460***		***$59,541,597***		***$85,469,734***	
State Total	***$139,164,762***		***$182,500,921***		***$225,837,080***	
Total	**$270,907,633**		**$355,268,761**			**$439,629,890**

Report

Case Studies of High Performing and Improving Schools Cross Case Analysis

Purpose of Case Studies

- Inform components of the Maryland adequacy study
  - About successful school improvement programs and strategies
  - About the staffing costs of these programs and strategies
- Investigate programs that were effective in raising student achievement
- Compare these strategies to the EB Model
- Studies conducted between October 2014 and March 2015

Selection Criteria

- Used MSA and HSA assessment data for 2007-12 and 2008-13
- High Growth: 50% increase in percent proficient or above over 6-year period
- High Performing: 90+% at or above proficient over 6-year period
- High growth for student groups: 50% growth for at least two subgroups (FARM, ELL, Minority, Special education) and at least 60% overall at or above proficient in last year
- Reducing poverty gap: 2 standard deviations in reducing achievement gap (~16 percentage points) over six years, and at least 60% overall at or above proficient in last year

Case Study Schools

School	Students	% FARMs	% ELL	% Minority	Performance Category
Chillum Elementary	274	85%	32%	97%	High Growth, all Students
Parkland Middle	883	52%	10%	87%	High Growth, all Students
Somerset Intermediate	409	76%	<=5%	56%	High Growth, all Students
Bel Air Elementary	216	48%	<=5%	3%	High Performing, all Students
Chadwick Elementary	548	81%	21%	98%	High Performing, all Students
North Hagerstown High	1,280	49%	<=5	41%	High Performing, all Students

Case Study Schools

School	Students	% FARMs	% ELL	% Minority	Performance Category
James H. Harrison Elementary	220*	70%	16%	94%	High Growth for Student Groups
Patterson Park Charter K-8	670	80%	18%	87%	High Growth for Student Groups
Wiley H. Bates Middle	800	46%	10%	53%	High Growth for Student Groups
Fairmont Heights High	837	65%	<=5%	97%	High Growth for Student Groups
North Frederick Elementary	590	47%	14%	41%	Reducing the Poverty Gap
Redland Middle	545	40%	11%	67%	Reducing the Poverty Gap

**Harrison also has 110 special education students in a countywide program with separate staffing*

Common Elements of Schools

- Goals to improve performance in reading and math
- Adopt new curriculum materials to align with the Common Core
- Implement school wide approaches to effective instructional practice, including tailoring instruction to individual student needs
- Density of instructional leadership – teacher leaders, instructional coaches, principals, and central office personnel
- School culture characterized by both individual and school-wide accountability for results – success defined by impact on student achievement

Common Elements of Schools

- Similar strategies regardless of performance category
  - High performing
  - High growth
  - Closing the poverty gap
  - Closing the gap for subgroups of students
- Serious attention to talent – to recruiting, inducting, developing, and then keeping effective teacher talent

Core Class Sizes & Electives

School	Grades	Students	Percent FARM	Core Class Size	Percent Electives
Bel Air	PreK-5	216	48%	22	25%
Chadwick	PreK-5	548	81%	23	17%
Chillum	PreK-5	274	85%	25	11%
North Frederick	PreK-5	590	47%	22	25%
James H. Harrison	Prek-5	220	70%	20	20%
Patterson Park	PreK-8	670	80%	25	22%

Core Class Sizes & Electives

School	Grades	Students	Percent FARM	Core Class Size	Percent Elective Teachers
Wiley H. Bates	6-8	800	46%	19	34% 2 45-min plan periods
Parkland	6-8	883	52%	26	38%
Redland	6-8	545	40%	27	38%
Somerset	6-7	409	76%	20	35%
Fairmont Heights	9-12	837	65%	25	43%
North Hagerstown	9-12	1,280	49%	24	28%

Core Class Sizes and Electives

- Sizes ranged from 20-25 in elementary schools, and many teachers commented on the “small” class sizes
  - EB average elementary class size is 17.3
- Middle school core class sizes were 19 (for an art integration magnet school in Anne Arundel County), 20, 26, and 27; and high schools’ core class sizes were 24 and 25
  - EB average secondary school core class size is 25
- Elementary elective teachers ranged from 11% to 25%
  - EB average is 20% elective teachers
- Middle and high schools (with one exception) had block schedules and more than 33.3% elective teachers
  - EB is 20% for middle schools and 33.3% for high schools

Additional Critical Elements in these Successful Schools

- Instructional coaches
- Collaborative time built into school schedules allowing teacher groups to meet multiple times a week to use student data to inform instruction
- Multiple approaches to helping struggling students (e.g. Tier 2 interventions during the day, before- and after-school support, additional support for ELLs, etc.)
- Use of multiple assessments, including county developed formative assessment, to:
  - Inform core instruction
  - Plan interventions
  - Monitor student progress

Conclusions

- Maryland school improvement strategies are aligned with the improvement model embedded in the EB model
- Most case study schools sought to recruit and retain high quality teacher talent, often hiring individuals with experience at the school before offering a permanent position
- No school made heavy use of technology as a key element of its improvement strategy

Revised Reports

Study of Increasing/Declining Enrollment

Effects of Concentrations of Poverty Literature Review

Study of Increasing and Declining Enrollment

- The study team revised the section on changes in the number of schools to clarify that the study is looking at school programs, not only buildings
- A “school” is defined as having an MSDE-assigned school number and enrollment
- Using this definition, there were 1,413 schools in Maryland in the 2013-14 school year
- No substantive change in findings

Concentrations of Poverty Literature Review

- Question to be answered by this study:
  - Should compensatory funding increase for districts or schools with higher concentrations of poverty (linear vs. nonlinear approach to school funding)?
- New topics added:
  - Effects of high-poverty neighborhoods on families and on child development
  - Interactions between neighborhood and school-based concentrations of poverty
  - Community schools

New Information Highlights

- Studies show that poor children growing up in neighborhoods with concentrated poverty face greater challenges than poor children growing up in lower-poverty neighborhoods
  - Reasons include social and economic isolation, lower-quality schools, lack of employment, and health risks.
  - Children in poor neighborhoods suffer from higher rates of social-emotional problems
- Because of district attendance policies, students in poor neighborhoods most often attend schools with high concentrations of poverty – the two are linked

New Information Highlights

- It is more likely that students will be economically segregated in schools (e.g. surrounded by students from low-income families) than in neighborhoods. This is true even for students living in high-poverty neighborhoods
- Experiments in the 1990s provided financial assistance to poor families to help those families move to more affluent neighborhoods
  - There is some evidence that, if families used the assistance to help enroll their children in economically diverse schools, then children could experience better academic outcomes
  - However, parents often did not use the assistance for this purpose, for a variety of reasons: social stigma, jobs, family, and/or transportation

New Information Highlights

- Community schools are one strategy for combating the effects of concentrated poverty in schools
  - Designed to bring together community resources to support social-emotional needs as well as academic needs
  - Provide wrap-around services to children and their families
  - Examples are Baltimore City Schools and the Harlem Children's Zone in New York City
- Little evidence at this time of positive impacts on student learning

Revised Reports

Evaluation of Maryland's GCEI

Analysis of School Finance Equity and Wealth

Evaluation of GCEI

- Purpose is to evaluate the current methodology used to calculate the Maryland Geographic Cost of Education Index (GCEI) and provide recommendations about how and whether to change the methodology
- MSDE and partners then determine whether to alter the methodology
- Develop and model new GCEI based on the method selected

Current Maryland GCEI

- A weighted index of 4 components:
  1. An index of uncontrollable wage variation for professional employees (both teaching and non-teaching)
  2. A index of uncontrollable wage variation for non-professional employees
  3. An index of uncontrollable energy costs
  4. A fixed amount for other expenditures (e.g. supplies, materials, equipment, and miscellaneous items)

Alternative Approaches to GCEI

1. Cost of living adjustment
   - Similar to CPI, heavily influenced by variation in housing costs
   - Straightforward, but does not account for local amenities
   - Relies on multiple data sources
2. Comparable wage index (CWI)
   - Calculated by measuring variation in wages of workers similar to teachers
   - Considers worker preferences and local amenities
   - Easy to update (single data source)
   - Not influenced by district decisions
   - Assumes teacher preferences similar to other workers' preferences
   - Does not adjust for working conditions
   - Only considers variation in wage costs
3. Hedonic Wage Index
   - Accounts for variation in wage costs due to location, student characteristics
   - Can break out impact of specific cost factors
   - Captures impact of student characteristics
   - May consider worker preferences and local amenities – although confounded by use of actual salary data
   - May be difficult to update due to multiple data sources
   - More complex formulas inappropriate in states with few districts, like Maryland

Recommendations

1. Replace current GCEI with one using the CWI
2. Include only wage costs, eliminate energy and other cost components
   - May continue to estimate for professional and non-professional wage costs
3. Stop truncating the index to allow values less than zero
4. Incorporate the index into the base funding formula

Revisions and Updates

- Minor changes to September report:
  - Clarifies how the CWI accounts for the wide range of factors influencing teacher salaries (beyond district control)
  - Clarifies some of the advantages of moving from the current hedonic index to a CWI
- MSDE and partners have asked APA to move forward on constructing a GCEI using the CWI methodology to compare those results with the current index
- Final report with results due June 2016

School Finance Equity Findings

- Fiscal Capacity
  - Doing well and getting better over time
- Equity
  - Horizontal equity was generally better over time, although there was some increase in disparities in the lower half of the funding distribution
  - Vertical equity is better than horizontal equity

Response to Stakeholder Questions

- Equity Law Center Report
  - Main issue was Maryland's "regressive" funding system, in terms of funding for districts with concentrated poverty
  - Largely a function of local district revenues above the foundation program, which ranged from $404 to $5,868 per pupil. These amounts tended to vary inversely with student needs

Response to Stakeholder Questions

- Recommendations for improving equity through the use of state resources:
  - Increase foundation funding, providing greater support to low-wealth counties
  - Increase foundation amount and decrease weights for students with special needs
  - Modify fiscal capacity measure to use a multiplicative rather than add-on approach for including net taxable income in the fiscal capacity measure

Response to Stakeholder Questions

- Weights to measure equity
  - Maryland weights differ from those in most other states
  - Used standardized weights for comparison
  - Study team anticipates that new weights will be identified as part of the overall adequacy study

Wealth and Property Tax Study

- Activities:
  - Measured school district fiscal capacity, or wealth, in Maryland
  - Assessed property wealth in Maryland
  - TIF property tax exemption for economic development
- Recommendations:
  - Combination of property wealth and net taxable income is appropriate, but consider using a multiplicative rather than additive approach for NTI
  - Continue current assessment timelines
  - Include only a portion of TIF property tax exemptions in the measure of district fiscal capacity

Adequacy Study Updates

Study Updates

- Evidence-Based Approach
  - EB panels held in June 2015
  - Synthesis of input completed
  - EB Excel model ready for submission and approval
- Professional Judgment Approach
  - All PJ panels have been held, final panels completed on January 15, 2016
- Successful Schools Approach
  - School selections completed –111 schools selected
  - School expenditure data collection tool and instructions piloted in 3 districts
  - School expenditure data request going to all districts by end of January 2016

Study Updates

- The study team is working on identifying appropriate prices for Maryland resources used in adequacy models, such as salaries, fringe benefit amounts, technology costs, and energy costs
- The study team is working on calculating a new GCEI using the CWI methodology so the State can compare those results with the current GCEI

Questions?