Data Analysis for Budget Advocacy

Christopher Meyer, Research Analyst
Advocacy Workshop
Nonprofit Prince George's County, Bowie, MD
December 12, 2018
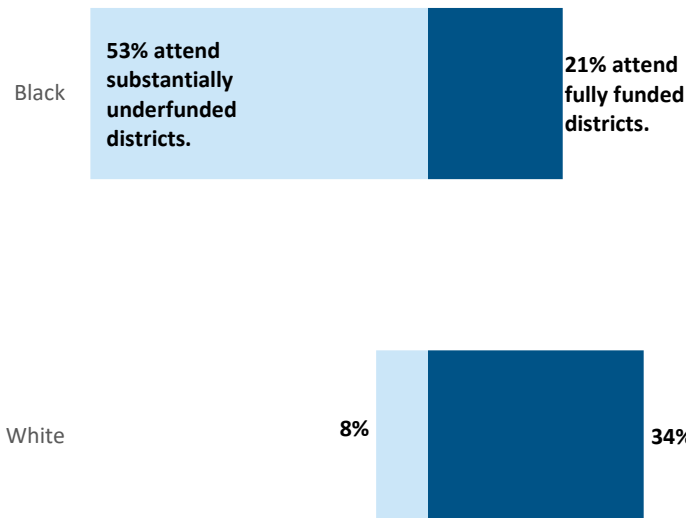
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Data: What Is It Good For?

Data: What Is It Good For?

Documenting a Disparity

More than Half of Black Students in Maryland Attended Substantially Underfunded Schools as of 2015

Black

53% attend substantially underfunded districts.   **21% attend fully funded districts.**

White

8%   **34%**

Schools in Predominantly Black Districts Are Older, on Average

Square footage-weighted average age of school buildings in years by percent of students who are Black, 2015–2016 school year

Older schools →

More Black students →
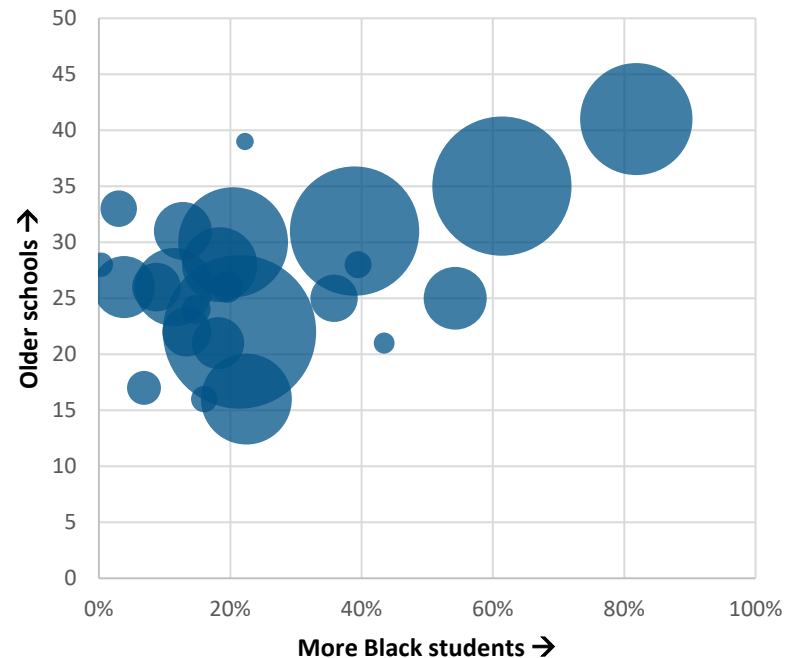
Source: MDCEP analysis of DLS funding adequacy data, Department of Management and Budget Managing for Results data on school construction, and National Center for Education Statistics data on enrollment by race.

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Data: What Is It Good For?

Documenting the Size of a Problem

- **363,000 Marylanders** went without health insurance in 2016.

- Black workers in southern Prince George's County spend **55** more hours commuting each year than their white neighbors.

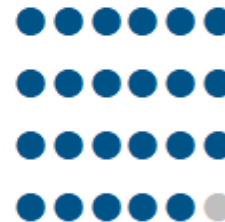Sources: American Community Survey 2016 one-year estimates; MDCEP analysis of 2012–2016 IPUMS American Community Survey microdata.

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Data: What Is It Good For?

Documenting Change Over Time

Maryland's Bridge to Excellence Law: A Story of Progress and Retreat
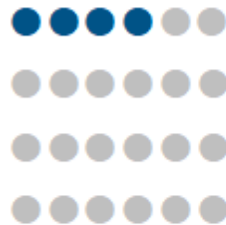
2004: When the state began phasing in the Bridge to Excellence formula, only 4 Maryland school districts were fully funded.

2008: After six years of consistent funding, 23 school districts were fully funded.

2015: After seven straight years of cuts, only 6 districts were still fully funded.

Source: MDCEP analysis of DLS funding adequacy data.

Data: What Is It Good For?

Maryland Has Come Far on Insurance Coverage, but Too Many Are Still Unprotected
Percent without health insurance, 2016

Overall — Maryland 6.1%, United States 8.6%
White
Black
Latinx — 22.0%
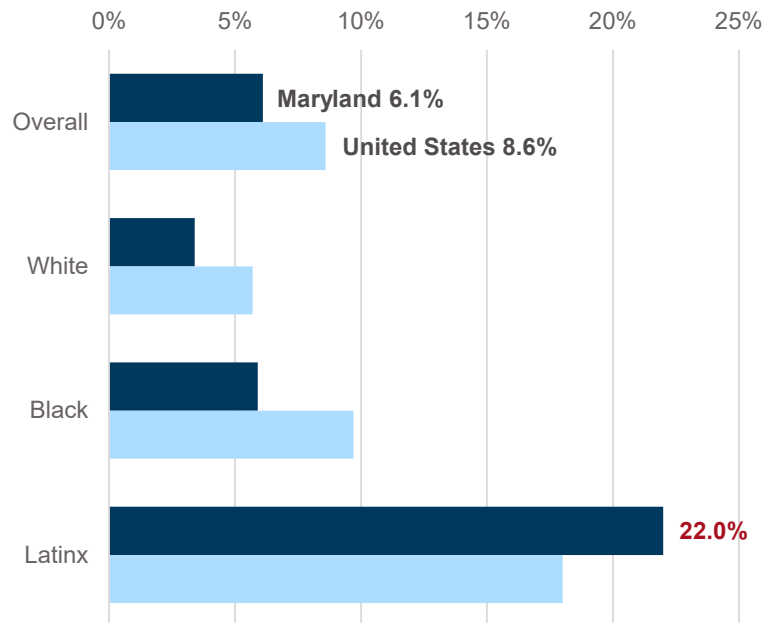
Source: American Community Survey 2016 one-year estimates.

- Providing context
- Understanding the contours of a problem
- Establishing credibility

Source: American Community Survey 2016 one-year estimates.

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Data Sources

Multipurpose Data Sources

American FactFinder

- https://factfinder.census.gov/

- American Community Survey

  - 3 million respondents per year

  - Income, employment, and poverty

  - Gender, age, education, race and ethnicity

  - Housing, health insurance, commuting …

  - Much more

- Population Estimates

- (Relatively) user friendly

Multipurpose Data Sources

IPUMS Abacus

- https://usa.abacus.ipums.org/

- American Community Survey microdata tool

- Customized tables

- Mobile friendly

- (Relatively) user friendly

- Use cases:

  - Analysis on the go

  - AFF doesn't have the table you need

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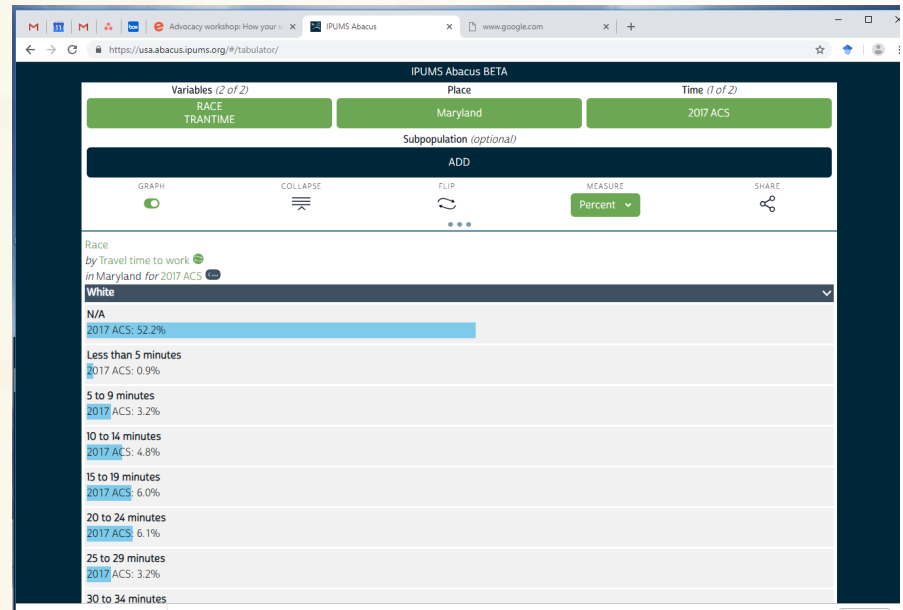
Multipurpose Data Sources

Department of Budget and Management

- http://dbm.maryland.gov/budget/Pages/operbud home.aspx

- Fiscal Digest: Current year's enacted budget

- Budget Highlights (proposed budget)

  - Appendix C: Detailed current year enacted budget and proposed budget

  - Appendix H: Detailed proposed contingent cuts

  - Appendix L: High-level breakdown of federal funds

- Budget books

  - Highly detailed breakdown of proposed budget

  - Includes current enacted budget and prior-year actual spending

  - Detail on local aid

  - Detailed federal funding sources

- Historical budget documents

Multipurpose Data Sources
Department of Legislative Services

- http://dls.maryland.gov/

- Budget analysis

  - http://mgaleg.maryland.gov/webmga/frmbgtnfiscal.aspx?pid=bnfpage&stab=01&id=sk001_tab01&tab=subject4&ys=2018RS

  - Trends, context, explanatory information, recommendations

- Fiscal and policy notes

  - Found on individual bill pages

  - Explanation of current law and how a bill would change it

  - Estimated spending and revenue impacts

  - Policy impacts (sometimes)

- Publications archive

  - http://dls.maryland.gov/publications/

  - State spending trends, local government finances, tax credit evaluations …

  - Much more

Analysis in Brief

Major Trends

Partnership for Assessment of Readiness for College and Careers Results Relatively Level: Partnership for Assessment of Readiness for College and Careers (PARCC) assessments were administered for the third time during the 2016-2017 school year. In total, 41% of students across all exams demonstrated readiness in English/language arts (ELA), a 1.6 percentage point increase over the previous year. Scores for mathematics were lower, with 33.6% of students statewide demonstrating readiness, which was about the same as the previous year. **The Maryland State Department of Education (MSDE) should update the committees on which local education agencies (LEA) are administering PARCC for optional grades and subjects, such as grade 9 ELA and Geometry. MSDE should also update the committees on the State's timeline for achieving the goal that students are college and career ready when leaving high school.**

Graduation Rate Slows in Growth: Cohort graduation rates indicate that an increasing number of Maryland students are graduating on time each year, though the growth has slowed recently. The four-year adjusted cohort graduation rate for the class of 2017 was 87.7%, which amounts to a 0.1 percentage point increase over the class of 2016 rate.

Issues

State Aid to Education: Under current law, public schools are expected to receive $6.5 billion in funding from the State in fiscal 2019, representing a $157 million (2.5%) increase over the prior fiscal year. The largest increases can be attributed to the Foundation program, funding for students with limited English proficiency, net taxable income grants, and supplemental grants that allow all LEAs to receive an increase in direct education aid. Reductions contingent on the BRFA of 2018 seek to reduce the fiscal 2019 appropriation by $19.3 million.

Commission on Innovation and Excellence in Education Requests Extension: The Commission on Innovation and Excellence in Education has submitted a preliminary report with recommendations arranged around five policy areas. The commission has also requested an additional year to fully respond to its charge and "cost out" its recommendations. Legislation has been introduced that would extend the commission's deadline while also implementing several of its preliminary
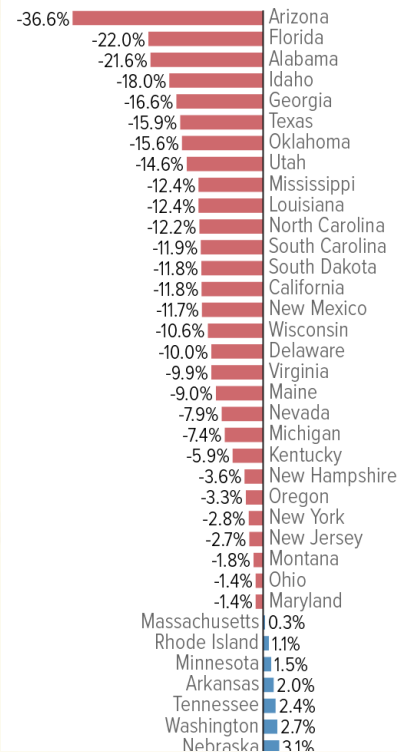
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Multipurpose Data Sources
CBPP State Fiscal Project

- https://www.cbpp.org/topics/state-budget-and-tax

- Annually updated reports on state budget trends, frequently including data tables

- High-quality analysis and policy recommendations

- Taxes, education, food assistance, federal aid …

- Much more

Total State K-12 Funding Below 2008 Levels in Most States

Percent change in total state funding per student, inflation adjusted, fiscal years 2008-2015

State	Percent change
Arizona	-36.6%
Florida	-22.0%
Alabama	-21.6%
Idaho	-18.0%
Georgia	-16.6%
Texas	-15.9%
Oklahoma	-15.6%
Utah	-14.6%
Mississippi	-12.4%
Louisiana	-12.4%
North Carolina	-12.2%
South Carolina	-11.9%
South Dakota	-11.8%
California	-11.8%
New Mexico	-11.7%
Wisconsin	-10.6%
Delaware	-10.0%
Virginia	-9.9%
Maine	-9.0%
Nevada	-7.9%
Michigan	-7.4%
Kentucky	-5.9%
New Hampshire	-3.6%
Oregon	-3.3%
New York	-2.8%
New Jersey	-2.7%
Montana	-1.8%
Ohio	-1.4%
Maryland	-1.4%
Massachusetts	0.3%
Rhode Island	1.1%
Minnesota	1.5%
Arkansas	2.0%
Tennessee	2.4%
Washington	2.7%
Nebraska	3.1%

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Topic-Specific Data Sources
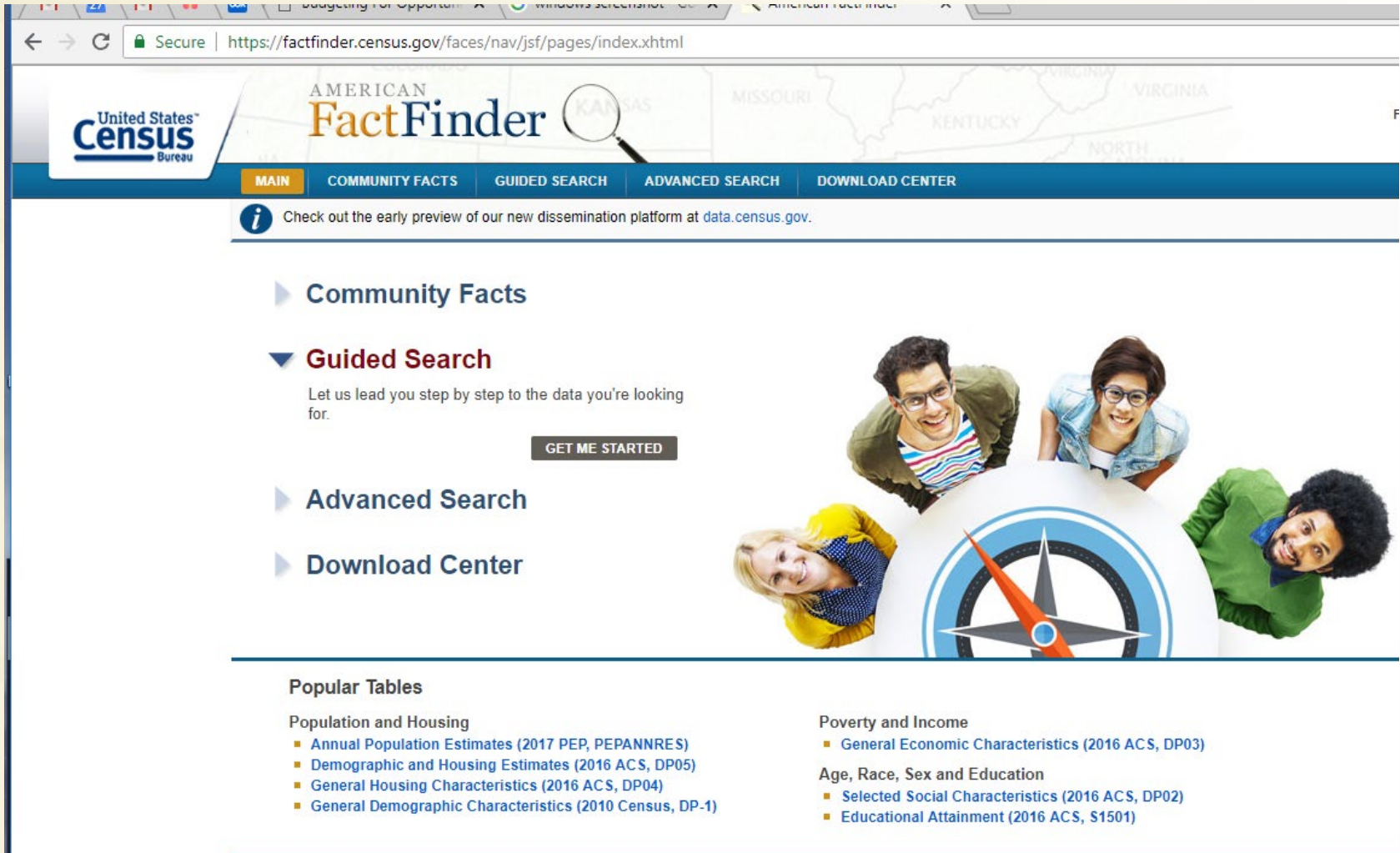
- Health

    - Maryland Vital Statistics (https://health.maryland.gov/vsa/Pages/reports.aspx)

    - CDC (https://www.cdc.gov/datastatistics/index.html)

    - County Health Rankings (http://www.countyhealthrankings.org/explore-health-rankings/use-data)

- Education

    - MSDE Selected Financial Data (http://www.marylandpublicschools.org/about/Pages/DBS/SFD/index.aspx)

    - Maryland Report Card data downloads (http://reportcard.msde.maryland.gov/downloadindex.aspx?K=99AAAA)

    - National Center for Education Statistics Common Core of Data

        - Data downloads—for complex analyses (https://nces.ed.gov/ccd/ccddata.asp)

        - Online tools—for simpler analyses (https://nces.ed.gov/ccd/elsi/)

        - Best data source for student race and ethnicity

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Using American Fact Finder

Using American Fact Finder

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Using American Fact Finder

Are you looking for data for a race or ethnic group (race, ancestry, or tribe)?

SKIP THIS STEP No, I'm not looking for race or ethnic group data

SELECT FROM BASIC GROUPS I'm looking for general information about basic groups, or basic counts of ancestries or tribes.

Use "Basic Groups" to find more than one race groups within a single table for instan the populations of the 57 race combinations.

SELECT FROM DETAILED GROUPS

I am looking for detailed information about race groups.

Use "Detailed Groups" to find detailed demographic data for one or more specific rac (e.g. White and Black, Navajo alone, or Taiwanese alone). These tables come from th Decennial Census (SF 2, SF 4, and AIAN) and the American Community Survey

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Using American Fact Finder

Using American Fact Finder

Versions of this table are available for the following years:

2016 ▶
2015

Subject	Total		Insured		Percent Insured		Uninsured		Percent Uninsured	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Civilian noninstitutionalized population	5,918,535	+/-2,341	5,555,356	+/-15,923	93.9%	+/-0.3	363,179	+/-15,850	6.1%	+/-0.3
AGE										
Under 18 years	1,344,588	+/-1,197	1,299,633	+/-6,185	96.7%	+/-0.5	44,955	+/-6,115	3.3%	+/-0.5
Under 6 years	433,900	+/-4,210	419,633	+/-5,336	96.7%	+/-0.7	14,267	+/-3,125	3.3%	+/-0.7
6 to 17 years	910,688	+/-4,257	880,000	+/-5,855	96.6%	+/-0.5	30,688	+/-4,367	3.4%	+/-0.5
18 to 64 years	3,721,766	+/-3,177	3,411,517	+/-12,687	91.7%	+/-0.3	310,249	+/-12,285	8.3%	+/-0.3
18 to 24 years	531,009	+/-4,362	482,264	+/-5,954	90.8%	+/-0.8	48,745	+/-4,329	9.2%	+/-0.8
25 to 34 years	807,769	+/-4,722	711,214	+/-6,809	88.0%	+/-0.8	96,555	+/-6,435	12.0%	+/-0.8
35 to 44 years	752,046	+/-3,901	677,621	+/-5,740	90.1%	+/-0.6	74,425	+/-4,465	9.9%	+/-0.6
45 to 54 years	844,688	+/-3,333	791,259	+/-5,594	93.7%	+/-0.5	53,429	+/-4,603	6.3%	+/-0.5
55 to 64 years	786,254	+/-1,857	749,159	+/-3,724	95.3%	+/-0.5	37,095	+/-3,554	4.7%	+/-0.5
65 years and older	852,181	+/-1,751	844,206	+/-2,304	99.1%	+/-0.2	7,975	+/-1,470	0.9%	+/-0.2
65 to 74 years	512,632	+/-2,194	506,684	+/-2,339	98.8%	+/-0.2	5,948	+/-1,261	1.2%	+/-0.2
75 years and older	339,549	+/-1,930	337,522	+/-2,016	99.4%	+/-0.2	2,027	+/-841	0.6%	+/-0.2
19 to 25 years	533,391	+/-6,716	481,419	+/-7,049	90.3%	+/-0.8	51,972	+/-4,545	9.7%	+/-0.8
SEX										
Male	2,848,901	+/-4,423	2,641,743	+/-10,250	92.7%	+/-0.3	207,158	+/-9,555	7.3%	+/-0.3
Female	3,069,634	+/-3,792	2,913,613	+/-10,178	94.9%	+/-0.3	156,021	+/-8,832	5.1%	+/-0.3
RACE AND HISPANIC OR LATINO ORIGIN										
White alone	3,343,098	+/-13,348	3,180,477	+/-14,021	95.1%	+/-0.3	162,621	+/-10,756	4.9%	+/-0.3
Black or African American alone	1,757,742	+/-9,690	1,654,716	+/-12,892	94.1%	+/-0.5	103,026	+/-8,375	5.9%	+/-0.5
American Indian and Alaska Native alone	14,879	+/-2,484	13,824	+/-2,296	92.9%	+/-4.0	1,055	+/-636	7.1%	+/-4.0
Asian alone	373,810	+/-4,962	353,834	+/-5,705	94.7%	+/-0.8	19,976	+/-2,945	5.3%	+/-0.8
Native Hawaiian and Other Pacific Islander alone	N	N	N	N	N	N	N	N	N	N
Some other race alone	228,802	+/-12,466	162,524	+/-10,842	71.0%	+/-2.6	66,278	+/-6,741	29.0%	+/-2.6
Two or more races	197,837	+/-10,934	187,695	+/-10,246	94.9%	+/-1.3	10,142	+/-2,699	5.1%	+/-1.3
Hispanic or Latino (of any race)	579,918	+/-1,186	452,140	+/-8,907	78.0%	+/-1.6	127,778	+/-9,068	22.0%	+/-1.6
White alone, not Hispanic or Latino	3,042,420	+/-3,209	2,938,464	+/-8,382	96.6%	+/-0.3	103,956	+/-8,158	3.4%	+/-0.3
LIVING ARRANGEMENTS										
In family households	4,904,313	+/-17,003	4,613,733	+/-20,023	94.1%	+/-0.3	290,580	+/-14,661	5.9%	+/-0.3
In married couple families	3,457,235	+/-33,273	3,308,295	+/-31,844	95.7%	+/-0.3	148,940	+/-10,812	4.3%	+/-0.3
In other families	1,447,078	+/-30,627	1,305,438	+/-28,665	90.2%	+/-0.7	141,640	+/-10,386	9.8%	+/-0.7
Male householder, no wife present	390,505	+/-19,289	331,320	+/-17,219	84.8%	+/-1.5	59,185	+/-6,549	15.2%	+/-1.5
Female householder, no husband present	1,056,573	+/-27,021	974,118	+/-26,234	92.2%	+/-0.6	82,455	+/-6,936	7.8%	+/-0.6
In non-family households and other living arrangements	1,014,222	+/-17,163	941,623	+/-15,808	92.8%	+/-0.6	72,599	+/-6,574	7.2%	+/-0.6
NATIVITY AND U.S. CITIZENSHIP STATUS										

Maryland

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Using American Fact Finder

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Analyzing Data

Easiest Case: Read the Table

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	Estimate	Margin of Error	Estimate	Margin of Error
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	Percent Uninsured	
	Estimate	Margin of Error
	6.1%	+/-0.3

RACE AND HISPANIC OR LATINO ORIGIN	Estimate	Margin of Error
White alone	4.9%	+/-0.3
Black or African American alone	5.9%	+/-0.5
American Indian and Alaska Native alone	7.1%	+/-4.0
Asian alone	5.3%	+/-0.8
Native Hawaiian and Other Pacific Islander alone	N	N
Some other race alone	29.0%	+/-2.6
Two or more races	5.1%	+/-1.3
Hispanic or Latino (of any race)	22.0%	+/-1.6
White alone, not Hispanic or Latino	3.4%	+/-0.3

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Pretty Easy Case: Make a Chart

% African American	Clinical care index	Food environment index
8.0	0.0	7.1
16.5	0.0	8.9
62.4	0.1	6.5
28.1	-0.1	8.3
12.7	-0.1	9.0
13.6	0.2	8.5
3.4	-0.1	9.4
6.6	0.2	8.5
45.3	0.0	8.2
27.9	0.2	7.4
9.0	-0.1	9.3
1.0	0.0	8.8
13.3	-0.1	8.9
18.4	-0.3	9.3
14.7	0.1	8.9
18.1	-0.1	9.5
62.5	0.2	7.8
6.4	0.0	9.3
14.0	0.0	8.8
41.7	0.0	6.1
12.4	-0.1	8.7
10.9	0.0	8.1
25.7	0.0	7.3
13.1	-0.1	8.0

Counties with More Black Residents Have Less Access to Healthy Food

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A Little More Work: Math

	Result	Formula
Total # Black students	302,263	=SUM(E2:E25)
# Black students >= 95%	63,280	=SUMIF(C2:C25, TRUE, E2:E25)
# Black students < 85%	158,737	=SUMIF(D2:D25, TRUE, E2:E25)
% Black students >= 95%	0.21	=H4/$H$3
% Black students < 85%	0.53	=H5/$H$3

19	Queen Anne's	90%	FALSE	FALSE	545
20	Saint Mary's	89%	FALSE	FALSE	3,273
21	Somerset	86%	FALSE	FALSE	1,264
22	Talbot	81%	FALSE	TRUE	744
23	Washington	86%	FALSE	FALSE	2,822
24	Wicomico	80%	FALSE	TRUE	5,120
25	Worcester	115%	TRUE	FALSE	1,287

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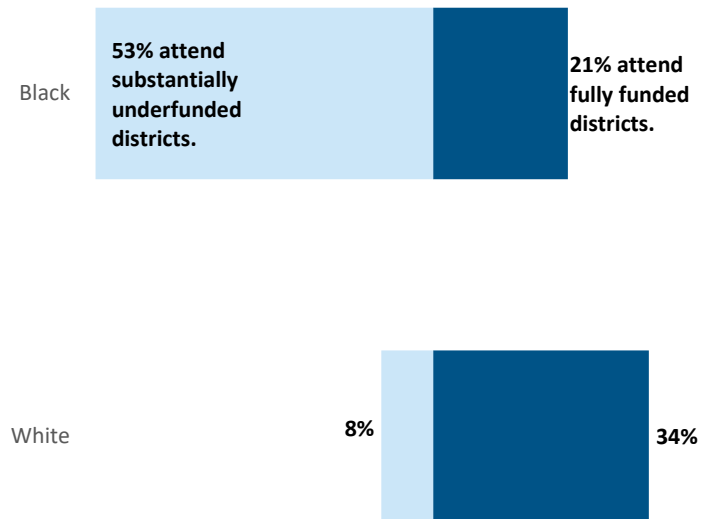MARYLAND CENTER
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Presenting Data

Making Comparisons

Maryland Has Come Far on Insurance Coverage, but Too Many Are Still Unprotected
Percent without health insurance, 2016

Overall — Maryland 6.1%, United States 8.6%
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Black
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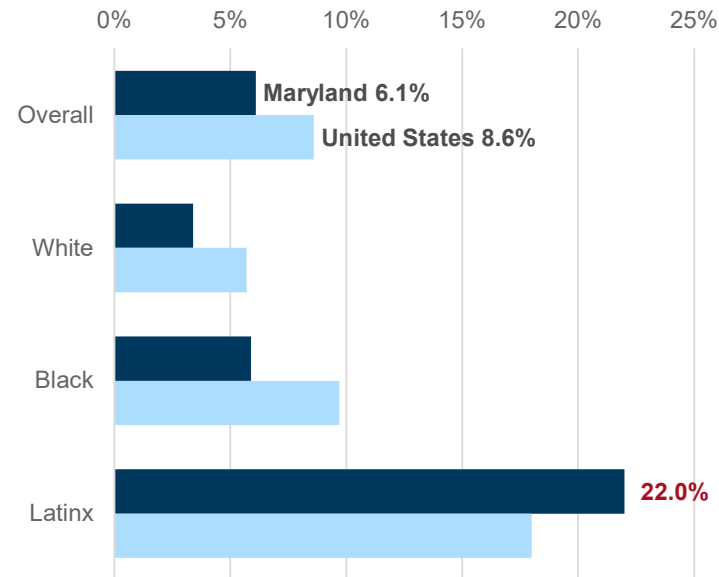
Source: American Community Survey 2016 one-year estimates.

More than Half of Black Students in Maryland Attended Substantially Underfunded Schools as of 2015

Black: 53% attend substantially underfunded districts. 21% attend fully funded districts.

White: 8% — 34%

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Showing Relationships

Food Access and Affordability Worse in Predominantly Black Counties
County Health Rankings Food Environment Index, income adjusted, by county % Black
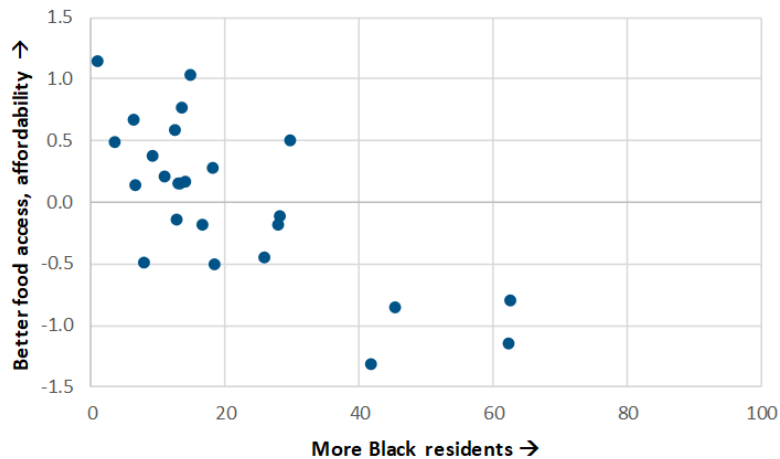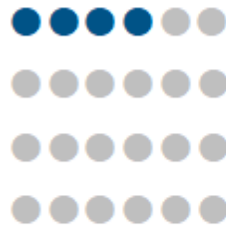

Schools in Predominantly Black Districts Are Older, on Average
Square footage-weighted average age of school buildings in years by percent of students who are Black, 2015–2016 school year
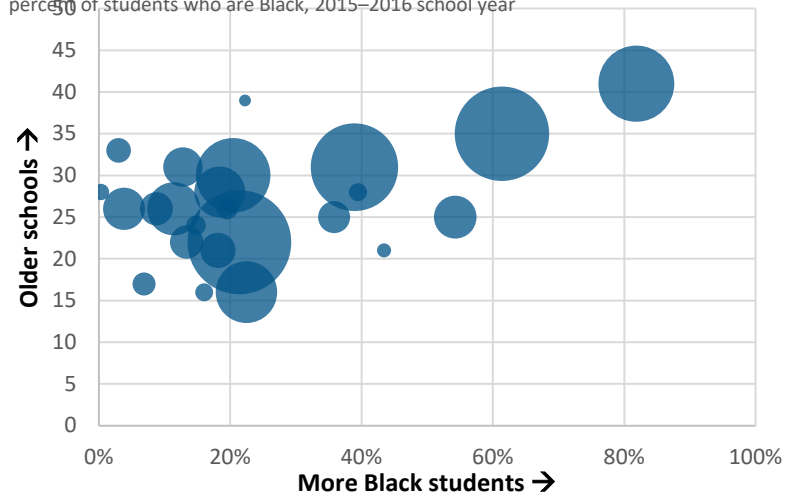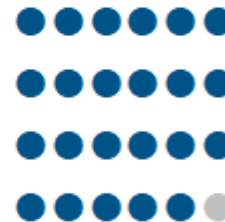
Telling a Story

Maryland's Bridge to Excellence Law: A Story of Progress and Retreat

2004: When the state began phasing in the Bridge to Excellence formula, only 4 Maryland school districts were fully funded.

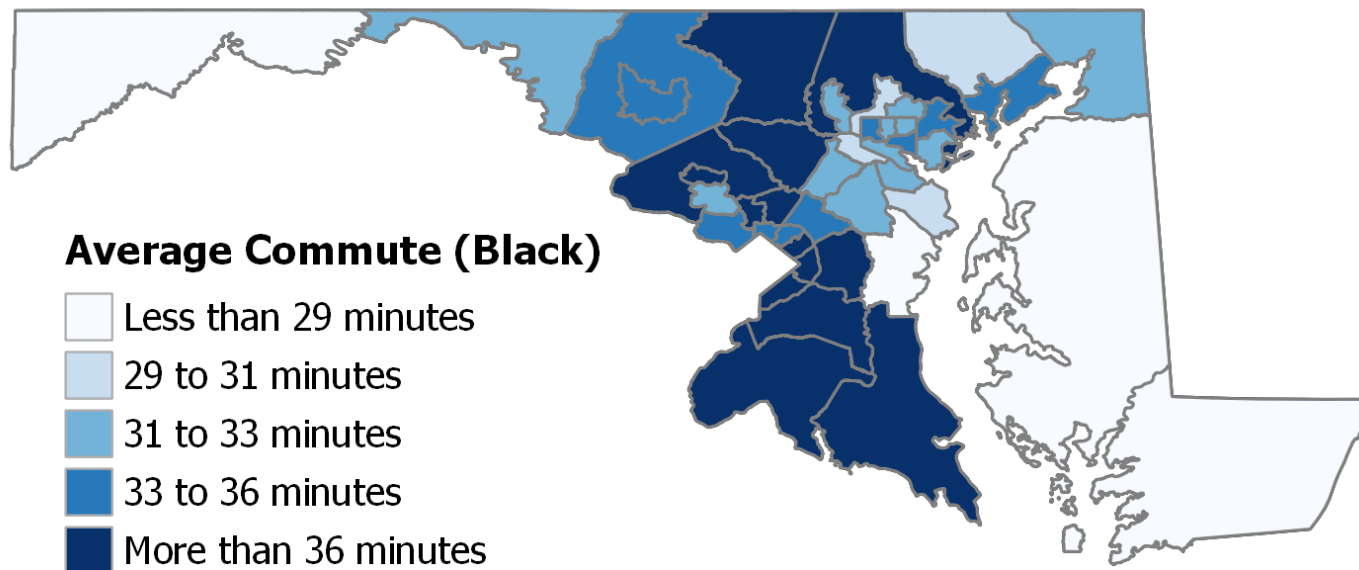**2008:** After six years of consistent funding, 23 school districts were fully funded.

2015: After seven straight years of cuts, only 6 districts were still fully funded.

The Big Number

- **363,000 Marylanders** went without health insurance in 2016.

- Black workers in southern Prince George's County spend **55** more hours commuting each year than their white neighbors.

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Everybody Loves Maps

Average Commute (Black)

- Less than 29 minutes
- 29 to 31 minutes
- 31 to 33 minutes
- 33 to 36 minutes
- More than 36 minutes

Source: MDCEP analysis of 2012–2016 IPUMS American Community Survey. Geographic unit of analysis is public use microdata areas (PUMAs).

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Getting Into the Weeds

Best Practices

- Cite your sources.

- Be ready to explain how you did it.

- Be precise when talking about correlations.

Getting Help

- cmeyer@mdeconomy.org

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