



Arizona State Board of Education
A-F School Accountability Ad Hoc Committee

NOTICE OF PUBLIC MEETING

Pursuant to Arizona Revised Statutes (A.R.S.) §38-431.02, notice is hereby given to the members of the A-F School Accountability Ad Hoc Committee and to the general public, that the Committee will hold a meeting open to the public as specified below. The Committee reserves the right to change the order of items on the agenda, with the exception of public hearings. One or more members of the Committee may participate telephonically.

Pursuant to A.R.S. §38-431.02 (H), the Committee may discuss and take action concerning any matter listed on the agenda.

Pursuant to A.R.S. §38-431.03 (A) (3), the Committee may vote to convene in executive session for discussion or consultation for legal advice from the Committee's attorneys concerning any item on this agenda.

Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting the State Board Office at (602) 542-5057. Requests should be made as early as possible to allow time to arrange the accommodation.

DATED AND POSTED this 25th day of November, 2016.

By: _____

A handwritten signature in black ink, appearing to read "K Schmidt", written over a horizontal line.

Dr. Karol Schmidt
Executive Director
(602) 542-5057

AGENDA

ARIZONA STATE BOARD OF EDUCATION
A-F SCHOOL ACCOUNTABILITY AD HOC COMMITTEE
Wednesday, November 30, 2016
9:00 AM
Arizona Department of Education
1535 W. Jefferson
Phoenix, AZ 85007
Conference Room 122

9:00 a.m. CALL TO ORDER

GENERAL SESSION

1. CALL TO THE PUBLIC. This is the time for the public to comment. Members of the Committee may not discuss items that are not specifically identified on the agenda. Therefore, pursuant to A.R.S. §38-431.01(H), action taken as a result of public comment will be limited to directing staff to study the matter, responding to any criticism or scheduling the matter for further consideration and decision at a later date.
2. Presentation, discussion and possible action regarding a timeline for implementation of the A-F school accountability plan for K-12.
3. Presentation, discussion and possible action regarding criteria used in the development of the draft A-F school accountability plan for K-12.
4. Presentation, discussion and possible action regarding college and career readiness criteria in the draft A-F school accountability plan for 9-12.
5. Presentation, discussion and possible action regarding a draft A-F school accountability plan for small schools, alternative schools and Arizona Online Instruction (AOI) Programs for K-12.
6. Presentation, discussion and possible action regarding physical/health education criteria in the draft A-F school accountability plan for K-12.
7. FUTURE MEETING AND PUBLIC HEARING DATES AND ITEMS FOR FUTURE AGENDAS. The executive director, presiding officer or a member of the Committee may discuss future meeting dates and direct staff to place matters on a future agenda.

ADJOURN

General Policy Questions

Question	Answer	Yes	No	Held
What are the proficiency characteristics of an A school?				
What are the growth characteristics of an A school?				
Should the amount of Title I schools being awarded an “A” grade be proportional to the number of non-Title I schools being awarded an “A” grade regardless of proficiency and growth performance?	No		X	

Grades K-8: Proficiency

Question	Answer	Yes	No	Held
Should a school be eligible for an “A” letter grade if a majority of the students are not proficient on the state assessment?				X
Should proficiency points only be awarded for proficiency and high proficiency?	No		X	
Should all scores be awarded proficiency points on a weighted scale regardless of the level of proficiency? Does this include minimally proficient? If not, which levels of proficiency should be awarded points?	No. Minimally proficient does not earn any points. Proficiency is a 1 and other proficiency levels are either higher or lower than a 1.		X	
If proficiency points are only awarded for proficiency and high proficiency, should these scores be weighted?	No. Proficiency is a 1 and other proficiency levels are either higher or lower than a 1.		X	

Grades K-8: Growth

Question	Answer	Yes	No	Held
Members of the AG have recommended that growth points in K-8 be awarded based on SGP and SGT (student growth to target). Do you agree? Should they be weighted or unweighted?	Yes. Medium growth is a 1 and other growth levels are either higher or lower than a 1.	X		
Members of the AG have recommended that SGP be calculated with 5 categories for SGP. Do you agree?	Yes.	X		
If growth scores include SGT, what should the target be? Progress toward closing the gap to proficiency in 3-8 or in a 3 year period? Once the gap is closed, should growth be awarded based on progress toward closing the gap to high proficiency? Should points be awarded for maintaining?				X
Should a school be eligible for an “A” letter grade if a majority of the students are not making progress on the growth targets?				X

Grades K-8: Acceleration measures

Question	Answer	Yes	No	Held
Should chronic absenteeism be added?	No.		X	

Grades 9-12: Proficiency

Question	Answer	Yes	No	Held
Should a school be eligible for an "A" letter grade if a majority of the students are not proficient on the state assessment?				X
Should proficiency points only be awarded for proficiency and high proficiency?	No		X	
Should all scores be awarded proficiency points on a weighted scale regardless of the level of proficiency? Does this include minimally proficient? If not, which levels of proficiency should be awarded points?	No. Minimally proficient does not earn any points. Proficiency is a 1 and other proficiency levels are either higher or lower than a 1.		X	
If proficiency points are only awarded for proficiency and high proficiency, should these scores be weighted?	No. Proficiency is a 1 and other proficiency levels are either higher or lower than a 1.		X	

Grades 9-12: Growth

Question	Answer	Yes	No	Held
Members of the AG have recommended that growth points in 9-12 be awarded based on growth in number of students reaching proficiency or above year-to-year at a school level rather than at the student level. Do you agree?	For math, student growth at the school level, year to year; consensus to model for Algebra II. For ELA, consensus to model at the student level.	X		
Would you support a multiple measure to include SGP? Would the SGP be based on all math EOC and all ELA EOC or something like Algebra 1 to Algebra 2 and the last 2 ELAs?				

Grades 9-12: College and Career Readiness Indicators

Question	Answer	Yes	No	Held
Concern has been raised that the indicators are tied to SES. Should an indicator be added for proficiency in Algebra 2 and ELA 3 as a CCRI?				
Should the indicators be in one bucket where students can earn points for achieving one or should there be separate buckets? Should this be done over time – year one is a combined bucket and year two or three are separate buckets? Should students be able to earn multiple points for their school? How do you resolve cost and access concerns?				
Should on track be added – is the student gaining enough credits annually to be on track to graduate in 4 years?				

Grades 9-12: Acceleration measures

Question	Answer	Yes	No	Held
Should chronic absenteeism be added?				

EVERY STUDENT SUCCEEDS ACT

Accountability, State Plans, and Data Reporting: Summary of Final Regulations

Today the U.S. Department of Education (Department) issued [final regulations](#) to implement provisions of the Every Student Succeeds Act (ESSA) regarding school accountability, data reporting, and state plans. The regulations incorporate the valuable feedback that the Department received through the public comment process, while maintaining the focus on providing states with new flexibility to ensure that every child gets a high-quality and well-rounded education, and enhancing equity and preserving critical civil rights protections for all students.

The bipartisan law and these regulations give states and districts the opportunity to move beyond No Child Left Behind's reliance on a limited range of metrics and punitive "pass/fail" labels for schools, and use their planning and accountability processes to reimagine and redefine what a high-quality education should mean for their students. To that end, the final regulations clarify ESSA's statutory language by ensuring that accountability systems use multiple measures of school success, including academic outcomes, student progress, and school quality, thereby reinforcing that all students deserve a high-quality and well-rounded education that will prepare them for success. The final regulations also build on ESSA's flexibility around school improvement and intervention by providing further support for locally designed solutions to improve struggling schools, and a clear role for parents, families, educators, and stakeholders to meaningfully share in the implementation process. Lastly, the final regulations uphold the strong civil rights legacy of the law by including all students and historically underserved subgroups in accountability decisions, ensuring meaningful action where whole schools or groups of students are falling behind, and providing clear and transparent information on critical measures of school progress and equity.

The implementation of the ESSA builds upon a period of important progress towards providing a world-class education for every student in America. Led by the hard work of students, families, and educators, the nation has hit important milestones. Graduation rates have reached an all-time high of 83 percent; dropout rates are at historic lows, fueled by dramatic reductions in the dropout rates for African-American and Hispanic students; and states and cities across the country are implementing college- and career-ready expectations for all students, expanding access to high-quality preschool and free community college. At the same time, disturbing achievement gaps for historically underserved students persist – and in far too many schools, those students continue to have less access to the resources and support they need to thrive in the classroom and beyond.

ESSA and these regulations present an opportunity to continue making progress towards educational equity and excellence for all. For the first time, the reauthorization of the nation's defining elementary and secondary education law explicitly supports a preschool to college- and career-readiness vision for America's students. It also supports states, districts, and educators in reclaiming the promise of a quality, well-rounded education for every student while honoring the law's civil rights legacy – and these final regulations help realize that potential.

MAJOR PROVISIONS

Accountability

The final regulations give states flexibility to create their own educational visions and incorporate new measures of school quality or student success into their accountability systems while maintaining the core expectation that states, districts, and schools work to improve academic outcomes for all students, including individual subgroups of students. And while states and districts will continue to be required to take comprehensive action to turn around struggling schools, they have new flexibility, working closely with stakeholders, to choose evidence-based interventions that are tailored to local needs.

Statewide Accountability Systems

- In order to **provide ample time for the transition to new statewide accountability systems**, particularly to allow for meaningful stakeholder engagement and thoughtful inclusion of new accountability indicators, **the final regulations give states until the 2018-19 school year to identify schools for [comprehensive and additional targeted support and improvement](#)**, with annual identification of schools with consistently underperforming subgroups for targeted support and improvement beginning in 2019-20. States may choose to implement sooner if they are ready.
- The final regulations allow states to **set their own ambitious goals and measurements of interim progress for academic outcomes**, taking into account the improvement necessary to make significant progress in closing statewide proficiency and graduation rate gaps.
- With regards to standards, the final regulations clarify that, **in their consolidated plans, States must simply assure that they will meet the requirements of the statute and any applicable regulations.**
- The final regulations reinforce the statutory requirement that states have **robust, multi-indicator statewide accountability systems for all public schools, including all public charter schools, underscoring the flexibility they have to choose new indicators that create a more holistic view of student success.** Those indicators must:
 - be the same for all public schools;
 - include valid, reliable, and comparable measures that are disaggregated by subgroup; and
 - measure each of the following: academic achievement; graduation rates for high schools and academic progress for elementary and middle schools; progress in attaining English language proficiency; and at least one state-selected indicator of school quality or student success (which may vary for schools in different grade spans).
- The final regulations provide states with **flexibility in their indicators to recognize the academic achievement of all students**, including those who have not yet reached proficiency or that have attained advanced levels, to reduce the focus solely on students “on the bubble” at the exclusion of others.
- Consistent with the law’s emphasis on transparency and clarity for parents and other stakeholders, the final regulations require that each state’s accountability system meaningfully differentiates schools by providing them with a **summative determination** from among at least three distinct, clear, and understandable categories, while allowing for multiple ways for states to designate schools in each category.
 - These categories **can be the same as those that ESSA requires out** – comprehensive support and improvement, targeted support and improvement, and other schools – or a state may develop its own system of summative determinations to describe school performance.
 - To ensure a nuanced and complete picture of school success, **states will also report a school’s overall result alongside performance on each individual indicator through a data dashboard** or other mechanism on its annual report cards.
- To give states flexibility to develop innovative approaches tailored to their individual needs, **the regulations do not prescribe specific weights or percentages for any of the indicators**; rather, they include the following provisions to ensure that states are emphasizing the indicators that the law requires be afforded “substantial” and “much greater” weight in their chosen approach:

- States must demonstrate that schools that would have been identified for comprehensive support and improvement on the basis of “substantial” indicators, but are not identified on the basis of the state-selected indicators taken together, have made significant progress for all of their students on at least one “substantial” indicator;
 - States must demonstrate that schools that would have been identified for targeted support and improvement on the basis of “substantial” indicators alone, but are not identified on the basis of all state-selected indicators taken together, have made significant progress for the subgroup that is struggling on at least one “substantial” indicator; and
 - To ensure that the system appropriately identifies schools with struggling subgroups of students, **states must demonstrate that a school with a consistently underperforming subgroup of students receives a lower summative determination** than it would have otherwise received without the underperforming subgroup.
 - Together, these provisions help ensure – consistent with the statute – that schools with low performance (including for individual subgroups) on indicators afforded “substantial” and “much greater” weight are more likely to be identified for support and improvement.
- The final regulations **allow states to choose their own indicators of Academic Progress and School Quality or Student Success, but to maintain the focus on student learning, they also require that these measures be supported by research indicating that high performance or improvement on such measures is likely to increase student learning**, such as grade point average; credit accumulation; performance in advanced coursework; or student achievement or growth. To reflect how these measures can be valuable indicators of students’ long-term success, for high schools, these outcomes can also include improved graduation rates; college enrollment, persistence, or completion; or career success.
 - Recognizing the growing size and diversity of the English learner population, the regulations **require that states consider at least one unique student characteristic, including students’ initial English language proficiency level, in determining ambitious but achievable targets for English learners’ progress toward English language proficiency**, within a state-determined maximum number of years. These targets are then used to set state-level, long-term goals and measurements of interim progress, and may also be used in the state’s indicator of progress in achieving English language proficiency, which can include all English learners, K-12.
 - To provide a fair and accurate picture of school success, and help parents, teachers, school leaders, and state officials understand where students are struggling and how best to support them, the law requires that all students take statewide assessments and that states factor into their accountability systems participation rates below 95 percent for all students or subgroups of students, such as English learners or students with disabilities. The regulations do not prescribe how states do this; rather they **suggest possibilities for how states might take into account low participation rates and allow states to propose their own actions that can be differentiated based on the extent of the issue**, but are sufficiently rigorous to improve schools’ participation rates in the future. Schools missing 95 percent participation must also develop plans to improve based on their local contexts and stakeholder input.
 - To ensure the statewide accountability system meaningfully **includes all students, especially historically underserved students**, the final regulations:
 - **require states to consider each student subgroup separately** so that a combined subgroup of students or “super subgroup” cannot replace an individual subgroup;

- **do not specify what a state’s n-size must be for accountability purposes, but require that any state proposing an n-size larger than 30 students justify its n-size in its state plan**, including information about the number and percentage of schools that would not be held accountable for the results of students in each particular subgroup, as compared to the number and percentage if the n-size were 30 students; and
- **permit states to consider the performance of former English learners and children with disabilities** on state assessments within indicators for those respective subgroups.

Supporting Low-performing Schools

- Under the statute and the final regulations, states must identify certain schools at least once every three years for **comprehensive support and improvement**, including:
 - at least the lowest-performing 5 percent of Title I schools in the state;
 - high schools with graduation rates at or below 67 percent (or a higher percentage selected by the state) for all students based on the four-year adjusted cohort graduation rate; and
 - Title I schools with chronically low-performing subgroups that have not improved after implementing a targeted support plan for a state-determined number of years.
- States must also identify schools for **targeted support and improvement**, including:
 - schools with a subgroup performing similarly to all students in the lowest-performing 5 percent of Title I schools, to be identified each time the state identifies its schools for comprehensive support (these schools must also receive additional targeted support); and
 - schools with a consistently underperforming subgroup, as defined by the state, annually.
- The regulations **provide flexibility for states to propose their own definitions of “consistently underperforming” subgroups of students**, as long as they identify schools with subgroups which, based on the state’s indicators, underperform over multiple years. States may use goals and targets to identify these schools, or another state-determined method. If states’ definitions examine performance over more than two years, they must demonstrate how the chosen timeframe supports low-performing students and will help the state make significant progress in achieving its long-term goals and closing statewide proficiency and graduation rate gaps.
- The final regulations **recognize the critical role of stakeholders, including parents, students, educators, principals, and other school leaders, in supporting the development and implementation of school improvement activities** by requiring that districts notify parents of students at schools identified for support of the school’s identification, and how to be involved in the improvement process. This will allow all stakeholders to join the school in developing a plan that fits its unique needs.
- **In place of prescriptive interventions required under No Child Left Behind, the regulations allow states and districts to select evidence-based strategies tailored to local needs**, and include stakeholders in developing these plans. They will also ensure that states and districts set meaningful exit criteria for identified schools, including requiring additional action where initial interventions do not work to improve student outcomes.
- In schools identified for comprehensive or additional targeted support and improvement, the final regulations **require that their improvement plans review resource inequities related to per-pupil expenditures and access to ineffective, out-of-field, or inexperienced teachers; advanced coursework; in elementary schools, full-day kindergarten and preschool programs; and specialized instructional support personnel** such as school counselors and social workers—drawing on data already collected and reported under ESSA.

- Under the final regulations, **states must continue to direct funds set aside for school improvement to schools most in need of support.** To ensure sufficient funds that provide meaningful support, the regulations require that a district receiving funds for school improvement receives a minimum of \$50,000 for each targeted support and improvement school it serves and \$500,000 for each comprehensive support and improvement school it serves; however, the state may determine that a smaller amount is sufficient in specific cases based on the school's size, identified needs, selected interventions, and other relevant factors. The regulations also reinforce the state's key role in providing technical assistance, monitoring, and other support, including ongoing efforts to evaluate the use of these funds for evidence-based interventions to improve student outcomes.

Data Reporting

One of the core goals of ESSA is to enable parents and other stakeholders to engage meaningfully in their local education systems, which is only possible when they have access to clear, robust, and ongoing information about how their students and schools are doing. To accomplish this goal, the final regulations seek to ensure that states and districts work with parents to develop report cards that include timely and essential information to inform educational improvement for all students, including by:

- requiring states and districts to **consult with parents in designing the report cards**, and make them publically available no later than December 31st of each year (with the flexibility to add the per-pupil expenditure data on a slightly delayed timeline);
- ensuring that **report cards include a full set of accountability information** (including student assessment outcomes and graduation rates) so that stakeholders can fully understand school performance and better participate in developing solutions that target the specific needs of schools and students;
- clarifying requirements for new provisions, **including how to include students with the most significant cognitive disabilities who earn alternate diplomas** in graduation rate calculations;
- clarifying that state and local report cards must include information on **district- and school-level per-pupil** expenditures calculated based on uniform, state-developed procedures; and
- improving the transparency of **postsecondary enrollment data** included on report cards so that stakeholders have greater insight into student preparation for postsecondary education.

Consolidated State Plans

The final regulations give states the flexibility, and responsibility, to think holistically about how to improve educational outcomes for all students while helping to ensure access to a well-rounded education. The regulations are designed to encourage each state to engage meaningfully with a wide array of stakeholders about implementation of the ESSA and to promote better coordination across ESEA formula grant programs to improve student outcomes and close achievement gaps. The consolidated state plan requirements also are intended to eliminate duplication and streamline requirements across programs, reducing burden and complexity for states in meeting federal requirements. Based on feedback, the final regulations are more streamlined compared to the proposed regulations.

- The final regulations **require broad, robust, and transparent consultation with a diverse, representative group of stakeholders** at multiple points during the design, development, and implementation of a consolidated state plan, to ensure state and local voices are included in each stage.

- The regulations reinforce the ESSA’s strong emphasis on **equitable access for all students**, particularly those who are traditionally underrepresented (including low-income students, students with disabilities, foster children, homeless students, and English learners)
- To ensure that educators have the training and support they need to best support their students, the final regulations ask **states to describe their strategies to support and develop excellent educators**, including efforts to enhance and expand their systems of professional development, retention, and advancement. To build upon the Administration’s Excellent Educators for All initiative, “Educator Equity Plans” will be integrated into the consolidated application, to operationalize the ESSA’s requirement that low-income and minority students in title I schools not be taught at higher rates by ineffective, out-of-field, or inexperienced teachers.
- To give states more time to consult with stakeholders and develop their plans, **states may choose from two submission dates – April 3, 2017 or September 18, 2017.**

NEXT STEPS

To provide states with additional support and assistance, the Department will be releasing guidance on accountability, data and reporting, and state plans in the coming weeks, and will be hosting a series of webinars to support states and educators in this transition, beginning in January 2017. The Department has also launched the State Support Network, a new, four-year technical assistance effort focused on helping states and districts in their work on school improvement, particularly achieving significant improvements in student outcomes, scaling up effective systemic approaches and practices within and across states and districts, and identifying and sharing effective practices.

College and Career Readiness Concept Proposal

(Proposed activities and Indicator Point values have been entered to explain the proposed concept and can be modified.)

SCORING

- Schools receive 1.0 Readiness Points for each high school senior who is college OR career ready.
- A bonus Readiness Point of .3 is awarded for every senior who demonstrates BOTH college AND career readiness.
- A Readiness Point is earned by accumulating at least 1.0 Indicator Points from a single indicator menu.
- If more than 1.0 Indicator Points are accumulated by a student, the maximum that can be earned in that category is still 1.0 Readiness Points.
- A Readiness Point is not earned if a student accumulates less than 1.0 indicator points from a single menu.

College Readiness Indicator Menu	
Point Value	Activity
.35 per exam	Meets cut score indicated on one of the following exams: ACT English -18 ACT Math - 22 ACT Science - 23 SAT English - 480 SAT Math - 530 ACCUPLACER or COMPASS Reading - * ACCUPLACER or COMPASS Writing - * ACCUPLACER or COMPASS Math - *
.5 per exam	Meets cut score indicated in math, English or science on one of the following exams: Advance Placement - 3 Cambridge - (AS or A exams) - E IB exam - 4
.5 per course	Passes a college level (i.e. dual enrollment, community college) math, English or science course with an A, B or C
.3	Completes the FAFSA

Career Readiness Indicator Menu	
Point Value	Activity
1	Completes a CTE program sequence and passes the Arizona Technical Skills Assessment for that program
.8	Completes a CTE program sequence
.25	Completes a CTE course (maximum of .5)
.3	Meets benchmarks for ASVAB or ACT WorkKeys
.3	Earns an Industry-Recognized Credential, Certificate, or License
.7	Completes a well-defined and rigorous internship of at least 120 hours
.5 per course	Passes a college level (i.e. dual enrollment, community college) CTE course with an A, B, or C
.3	Completes the FAFSA

*Cut scores to be determined

Note - All cut scores could be adjusted based on recommendations by ABOR and the community college presidents.



FY14 Accountability Models for K-2, Small, AOI, Alternative Schools

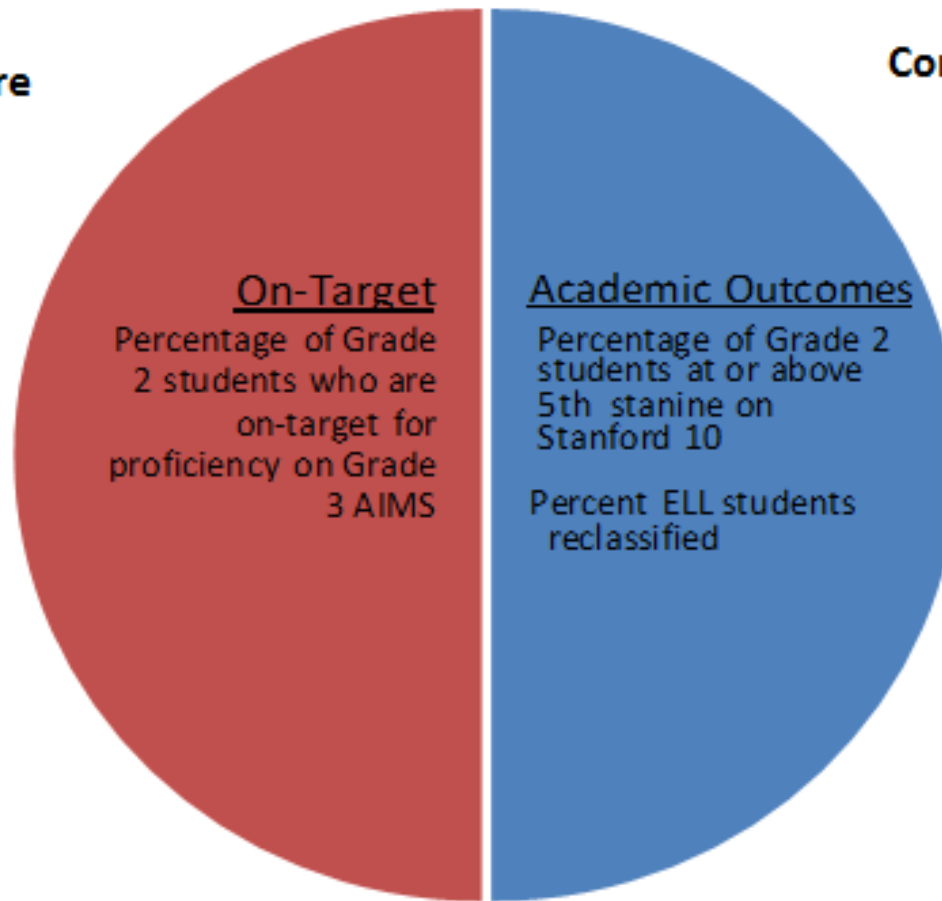
Dr. Jennifer Fletcher, ADE

2014 K-2 School Model



On-Target Score
50%

Composite Score
50%



On-Target
Percentage of Grade 2 students who are on-target for proficiency on Grade 3 AIMS

Academic Outcomes
Percentage of Grade 2 students at or above 5th stanine on Stanford 10
Percent ELL students reclassified

On-Target Score + Composite Score = A-F Letter Grade
(100 points possible) + (100 + 3 points possible) = 200+ points possible

K-2 Schools



Approximately 20 K-2 schools in FY17 (12 received a letter grade in FY14)

- Stanford 10 is no longer required for grade 2 students
- The components of a K-8 model (proficiency on AzMERIT, growth on AzMERIT, or any of the menu options) do not exist for K-2 schools: these grades are untested
- The only data ADE could have for K-2 schools would be ELL (AZELLA) if the school met the minimum n count (using prior year data we anticipate less than half of the schools to have 20 or more ELL students)

Options for holding K-2 schools accountable under ESSA:

1. Other states are proposing:
 - a) Self-reported qualitative accountability system*
 - b) The letter grade earned by the grades 3-8 school to which the K-2 feeds the most students is assigned back to the K-2 school
2. Discuss other options

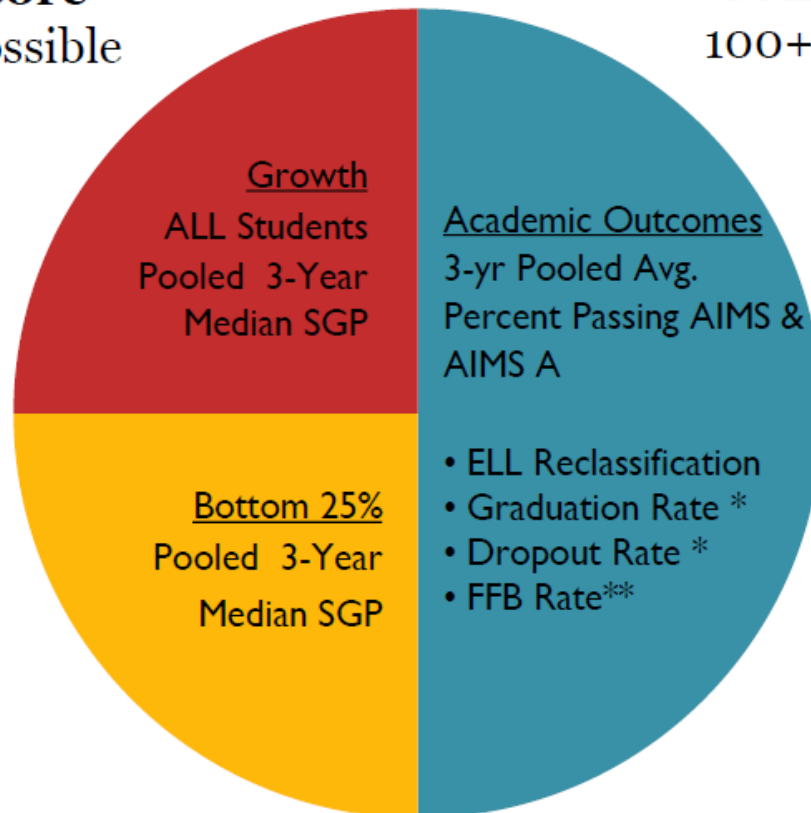
*ADE created a qualitative accountability system several years ago, Measure of Academic Progress (MAP), that could be re-designed for the purposes of schools with untested grades, extremely small schools, or other unique scenarios that cannot be held accountable under a traditional, alternative, or AOI model.

2014 Small Schools Model



Growth Score
100 points possible

Composite Score
100+ points possible



*High School only

**K-8 only

Growth Score + **Composite Score** = **A-F Letter Grade**
(100 points possible) + (100 + 3 + 3 + 3 points possible) = 200+ points possible

2014 Small Schools Definition



- Any school with **less than 30** test records from FAY students in the current year will be considered a small school (ELA and math records, fall and spring test dates)
- Use **max of 3 years** of data in pooling
- Pooling method **only includes students who are FAY in each of the 3 years** (regardless of whether a student is enrolled in the current year)

Small Schools



We anticipate approximately 100 small schools in FY17 (32 small schools in FY14 who received a letter grade [this count excludes extremely small schools])

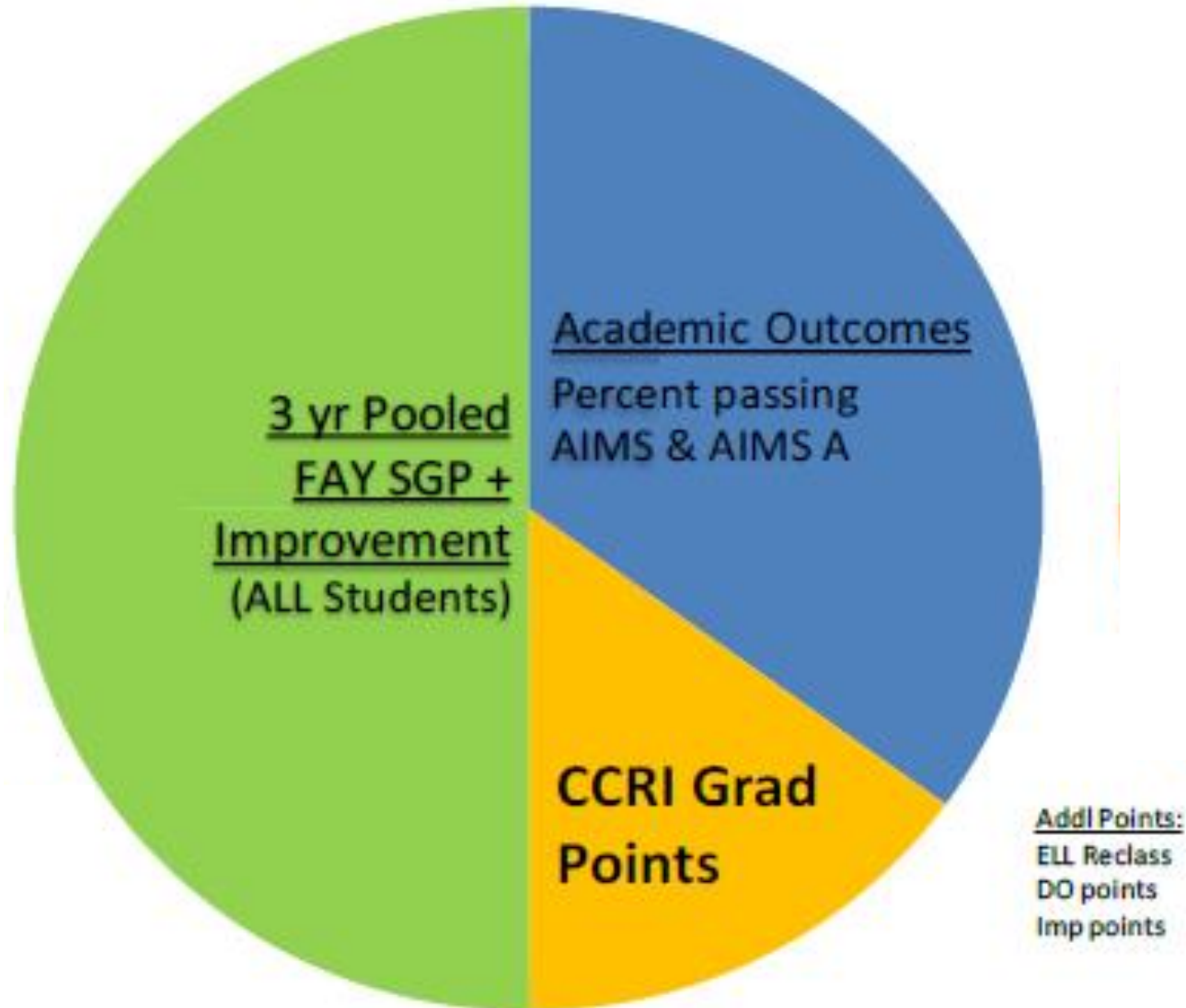
Options for holding small schools accountable under ESSA:

1. The committee can approve continued use of 3 years of pooled FAY data to acquire a minimum of 30 test records (for proficiency, growth, Bottom 25%, and Top 25%)
2. The components of the appropriate model (i.e., K-8 or 9-12) as proposed by the A-F Ad Hoc Committee could then be applied
 - a) Menu items that involve year over year change (i.e., grade 3 MOWR and grade 8 HS EOC participation rate) may need to be reconsidered

What happens if after pooling 3 years of data there still aren't enough test records?

- Historically, school was considered extremely small and not rated
- Moving forward could:
 1. Continue to not rate the school
 2. Use a self-reported qualitative accountability system
 3. Discuss other options

2014 AOI Model



AOI Schools



- In FY14, 30 AOIs received a letter grade
- In FY15, we had approximately 50 AOI schools, and 5 of them were K-8 schools
- In FY16, we have approximately 50 AOI schools, and 3 of them were K-8 schools

Options for holding AOI schools accountable under ESSA:

1. The committee can use the proposed traditional K-8 and 9-12 models for AOIs with no modifications
2. The committee can use the proposed traditional K-8 and 9-12 models for AOIs with several modifications similar to the way it was calculated historically:
 - Use 3 years of pooled FAY SGP and improvement data to calculate growth
 - Include FAY and non-FAY students in proficiency calculations
 - Discuss inclusion of dropout rate and/or AzMERIT improvement
 - May need to evaluate the acceleration/readiness items after seeing data
3. Other models and components to be discussed

What happens if after pooling 3 years of data there still aren't enough test records?

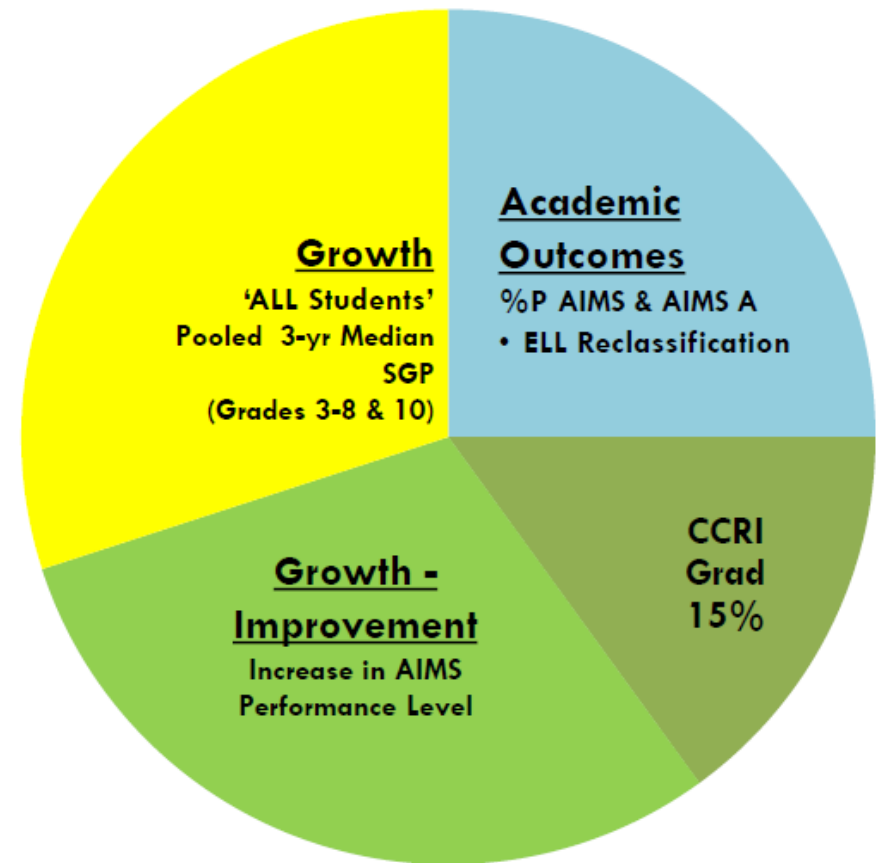
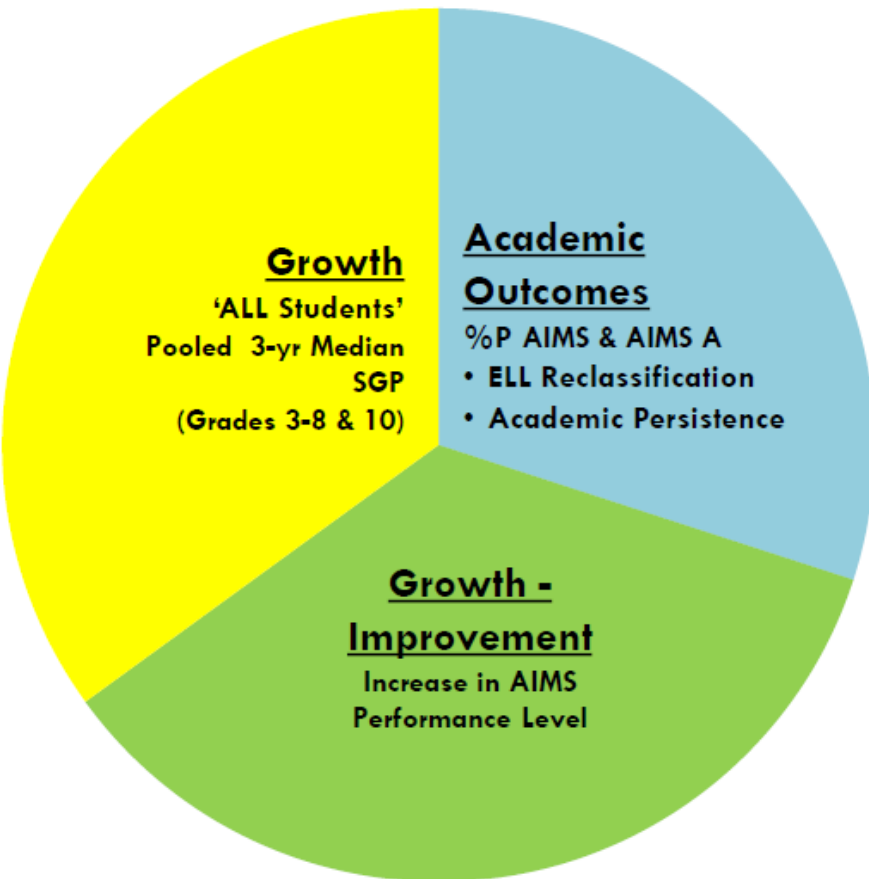
- Historically, school was considered extremely small and not rated.
- Moving forward could:
 1. Continue to not rate the school
 2. Use a self-reported qualitative accountability system
 3. Discuss other options

2014 Alternative Schools Model



Elementary

High School



Dropout Recovery Program (DRP)



There are approximately 8 DRPs in FY17 (5 in FY16, 4 in FY15)

Per ARS 15-901.06, “dropout recovery programs shall be classified as alternative schools and shall be subject to the accountability provisions of section 15-241, subsection 1.”

- This is the first year DRPs will be included in the accountability system

Alternative Schools



We anticipate approximately 150 alternative schools in FY17 (140 in FY16; 161 in FY15; 140 in FY14)

Options for holding alternative schools accountable under ESSA:

1. The committee can use the proposed traditional K-8 and 9-12 models for alternative with no modifications
2. The committee can use the proposed traditional K-8 and 9-12 models for alternative schools with several modifications similar to the way it was calculated historically:
 - Greater emphasis placed on growth (60-70%) to include 3 years of pooled FAY SGP and improvement data to calculate growth
 - Less emphasis placed on proficiency (25-30%)
 - Discuss inclusion of academic persistence for alternative schools ineligible for CCR points
 - Greater emphasis on the 7-year grad rate
 - May need to evaluate the acceleration/readiness items after seeing data for the K-8 model
3. Other models and components to be discussed

What happens if after pooling 3 years of data there still aren't enough test records?

- Historically, school was considered extremely small and not rated.
- Moving forward could:
 1. Continue to not rate the school
 2. Use a self-reported qualitative accountability system
 3. Discuss other options



Submitted to SBE A-F School Accountability Advisory Committee, 10/31/2016

Achievement Profiles for Alternative Schools

Alternative Schools' Value to Arizona

Arizona recognizes the value of the educational contributions of alternative schools to society.

Alternative schools re-engage or continue to engage students who are at-risk of not completing high school.

Alternative schools should be recognized for what they do well:

- Engage/re-engage at-risk students in schooling (rather than do what people do when not in school)
- Earn or recover high school credit at a reasonable pace
- Graduate students with a high school diploma while preparing them for postsecondary education and the workforce, thus a lifetime of better earnings

Alternative Schooling:

The National Dropout Prevention Center/Network, based on decades of research and analysis, identifies Alternative Schooling as a Core Strategy. <http://dropoutprevention.org/effective-strategies/>

In 2014, Arizona's State Board of Education approved an updated definition of alternative schools and a process for each school to certify annually its eligibility. <http://www.azed.gov/accountability/alt-school-status-app/>

The clearly identified mission of alternative schools is to serve a specific student population who will benefit from a nontraditional school setting. Arizona uses six categories for student eligibility. <http://www.azed.gov/accountability/alt-school-status-app/> Schools must annually certify that at least 70% of their students belong in at least one of those categories.

Key Points for Arizona School Accountability Model:

Alignment to State Board of Education Principles of Agreement

The proposed model includes multiple measures that are academic in nature.

The alternative school accountability model should be criterion-based. History shows that alternative-accommodation schools demonstrate improvement. Criterion referenced measures allow these schools to be recognized for their work increasing student academic achievement. If a constant distribution scale is used, schools will not obtain labels that reflect their continuous improvement. The model will change over the next few years as Arizona Department of Education gains capacity to add additional measures. The previous model changed. Change plus constant "grading on a curve" frustrates schools and confuses the public. It is an inaccurate way to measure alternative schools' true work. Stability is



Submitted to SBE A-F School Accountability Advisory Committee, 10/31/2016

desirable but not before appropriate measures are incorporated. ADE can suggest to SBE approval to recalibrate the point scale after the model is stable for a few years.

Achievement Profiles/Classification Labels

Arizona Revised Statute 15.241.H states:

Subject to final adoption by the state board of education, the department of education shall use achievement profiles appropriately to assess the educational impact of accommodation schools, alternative schools and extremely small schools, may develop profiles for schools that participate in the board examination system prescribed in chapter 7, article 6 of this title and schools that participate in Arizona online instruction pursuant to section 15-808 and may develop other exceptions as prescribed by the state board of education for the purposes of this section.

Unique achievement profiles/classification labels for alternative schools allow clear and transparent communication to the public, [Unique Achievement Profiles updated May 2016](#)

Academically Performing (in FY 14, A through C-Alt, 84%)
Academic Improvement Required (in FY 14, D-Alt, 9%)
Not Rated – Other
F-rated alternative schools (in FY 14, 8%)ⁱ

Menu of Assessments

Alternative/accommodation high school students do not follow a traditional sequence when taking ELA and Math courses. Measuring growth for alternative high school students should use the other measures, a menu of vendor assessments or academic credit growth, suggested.

The testing windows for AzMERIT result very often in the assessment not being available as an “end of course” assessment for alternative high schools’ students. Alternative high schools educate students with block scheduling or beginning with student enrollment throughout the school year. Alternative students need a state assessment that is available “on demand.”

Is there research support that AzMERIT is valid for alternative school high school students? Research shows that vendors had not normed their assessments for alternative education students. Certain vendors are in the process of norming and setting growth goals for alternative education students.

Two assessments that do appear in the recommendations of the College and Career Ready Task Force are

- Accuplacer
- ASVAB

In addition, vendor assessments sensitive to skill levels of all alternative school students may include

- Galileo
- GED Ready (GED Practice Test)
- STAR



Submitted to SBE A-F School Accountability Advisory Committee, 10/31/2016

Model using Multiple Measures		Short Term Transition	Long Term Goals
Indicators	Alternative Accountability Aligns with School Mission ⁱⁱ	Phase-in as data is available	<p>A truly sensitive alternative school accountability model does not simply use the traditional model indicators.</p> <p>A current review of alternative accountability models in other states including AR, CA, CO, NY, & UT suggests other indicators that are not currently used/available in Arizona.</p> <p>http://www.ccrscenter.org/products-resources/ask-the-ccrs-center/what-can-states-learn-about-college-and-career-readiness</p> <p>The Consortium is actively collaborating with alternative educators and researchers nationwide to create suggested domains and appropriate accountability measures outside of standardized testing.</p> <p>As has been done in other states such as AR, CA, CO, and UT, ADE should convene its Alternative Accountability Advisory Group to develop a genuinely appropriate and innovative alternative accountability framework and make evidence-based recommendations to the State Board of Education.</p>
Engagement to Receive Education	Academic Persistence Reengagement ⁱⁱⁱ	Academic Persistence Reengagement (option for schools with 25% or more recovered dropouts ^{iv})	
Proficiency & Growth	Menu of Vendor Assessments or Statewide Assessment Academic Credit Growth	Menu of Vendor Assessments OR Academic Credit Growth OR AzMERIT for all three administrations	
Graduation	Rate as calculated by best of 4 th , 5 th , 6 th , or 7 th year cohort (2014 ADE model) or Increased rate (similar to ADE 2012 model) Or One-year graduation “rate” ^v	Rate as calculated as best of 4 th , 5 th , 6 th , or 7 th year adjusted cohort (2014 ADE alternative school model) or Increased rate (similar to ADE 2012 alternative school model) or One-year graduation “rate”	
College & Career (Post-Secondary Education & Workforce) Readiness	CTE credit earned or Workforce certifications or Internships or Service learning credits or Dual enrollment	CTE credit earned Service learning credits Dual enrollment credit Internships	
English Language Proficiency & Growth	Improvement in performance band on state adopted Assessment	Additional Points for Improvement in performance band on state adopted Assessment ^{vi}	



Submitted to SBE A-F School Accountability Advisory Committee, 10/31/2016

State Board of Education’s Conceptual Model for Traditional High Schools Compared with Recommended Model for Alternative Schools

Guidance on weight	Indicators*	Model using Multiple Measures	
40%	Proficiency, Statewide Assessment	Indicators	Alternative Accountability Aligns with School Mission ⁱ
20%	Growth, Statewide Assessment	Engagement to Receive Education	Academic Persistence Reengagement ⁱⁱ
15%	High School Graduation Rate	Proficiency & Growth	Menu of Vendor Assessments or Statewide Assessment Academic Credit Growth
15%	College and Career Readiness	Graduation	Rate as calculated by best of 4 th , 5 th , 6 th , or 7 th year cohort (2014 ADE model) or Increased rate (similar to ADE 2012 model) Or One-year graduation “rate” ⁱⁱⁱ
10%	Proficiency and Growth, English Language	College & Career (Post-Secondary Education & Workforce) Readiness	CTE credit earned or Workforce certifications or Internships or Service learning credits or Dual enrollment
		English Language Proficiency & Growth	Improvement in performance band on state adopted Assessment

ⁱ Percentage is greater than 100 due to rounding.

ⁱⁱ See choice in Colorado’s Accountability Model for Alternative Education Campuses, [Selection of Accountability Measures for Alternative Education Campuses](#)

ⁱⁱⁱ Do former dropouts stay enrolled?

^{iv} Percentage should be set after viewing impact data. At this point, it is arbitrary to set a percentage.

^v Do graduation-eligible students graduate at end of the school year?

^{vi} A poll of Arizona Alternative Education Consortium members shows only a quarter have an ELL n-size of ≥10.



Submitted to SBE A-F School Accountability Advisory Committee, 11/21/2016

Supplement to Achievement Profiles for Alternative Schools: Requested Actions

Requested Actions:

1. Reconvene ADE's Alternative Schools Accountability Advisory Group (Alt AAG)

We respect the expertise of ADE's technical advisory group, the Accountability Advisory Group (AAG) – in fact we are often awed. ADE already has an accountability advisory group, the Alternative Schools Accountability Advisory Group (Alt AAG) with specific specialization in alternative education and alternative school accountability issues. In the spirit of being respectful of everyone's time, it seems a logical choice to ask the Alt AAG to be involved in work on the alternative school model. Several members of the AAG are also on the Alt AAG, yet there are additional members of the Alt AAG. Further, the Alt AAG includes representation beyond those who have chosen to be members of the Arizona Alternative Education Consortium. Utilizing the Alt AAG seems to be the most inclusive.

2. Make Data-Driven Decisions

We have not suggested weighting for the alternative school model. It seems premature to suggest weighting before seeing preliminary outcome data.

With that said, we as individual schools are looking at the internal data that we have available. The limitation is that we sometimes do not have access to statewide statistics, so there may be nuances we cannot anticipate from our perspective as individual schools. We also do not want to presume from our side what data is available at the state level, or how long it would take to get the data and/or make agreements with vendors for a Menu of Assessments for alternative schools.

3. Work within a reasonable, adjusted timeframe

We have heard the committee chair talk about an adjusted timeline, as well as public comment about the need for a reasonable timeframe to “get this right.” We urge the State Board of Education to set a reasonable timeframe that works for Arizona. We understand that Arizona is working within the federal requirements for each State Education Agency to submit an ESSA plan. We hope Arizona can accomplish submitting its ESSA plan while realistically timing its work on achievement profiles. There is precedent set in the state of Arizona that the traditional models are agreed upon first, and then the alternative school model. We are ready to work on these “exceptions” when slatted by the State Board of Education.

ACHIEVING A HEALTHY FUTURE FOR OUR STATE,
OUR SCHOOLS & OUR CHILDREN:

INCLUDING PHYSICAL & HEALTH EDUCATION METRICS
IN A-F ACCOUNTABILITY SCHOOL GRADE



Contact: Scott Turner scott.turner@edunuity.org

602-513-0028



11/30/2016 F

Introductions



2

AZHPE

Arizona Association of Health & Physical Education, established 1931

Arizona affiliate of SHAPE America (the national Society of Health And Physical Educators)

Close to **1000 members**, representing ~**2600 certified** physical & health educators of AZ

Healthy Future Arizona

Education, health, public-private, statewide **coalition** to dramatically improve health in AZ

Empower Youth Health

Highly effective **program** that substantially improves PE, PA, fitness, nutrition ed @\$10/student/yr

Hans van der Mars

Professor & Program Director, PE Teacher Ed & MPE Programs, ASU; PhD, Ohio State University

Over 60 refereed research & professional papers & 23 book chapters, 3 textbooks

Fellow, National Academy of Kinesiology; SHAPE America Research Consortium

Board, SHAPE America; President's Council on Fitness, Sport and Nutrition Science Board, 2011-14

Curriculum & Instruction Academy Honor Award, National Association for Sport & Physical Education



Jennifer Reeves

Associate Research Scientist, UofA (18 years); >\$200M in grants; hundreds of PE/HE projects

Principal Investigator, Empower Youth Health; developed PYFP/CDC training based on EYH

Content expert, *Comprehensive School Physical Activity Programs: A Guide for Schools*, 2013

Former Physical Education Teacher, Avondale, Tucson (20 years); Spanish-speaking

National award, SHAPE America (Society of Health & Physical Educators), 2015



Scott Turner

6 years *pro bono* social entrepreneur; 30 years business: AT&T, Motorola, Bain; tech, ed start-ups

BA Amherst *magna cum laude*; MBA, Stanford; MA, PhD Fielding Graduate University

Dissertation in AZ schools (2013): *Transformative Learning for Long-term Behavior Change: Preventing*

Child Obesity & Improving Health through In-school Curriculum-based Nutrition & Exercise Programs

Boards of ABEC & Social Venture Partners Arizona; ADHS AzHIP Workgroups; ASA/ASBA Confs.



A-F Accountability: Adding PE/HE Metrics Summary

3

- We must start improving K-12 **physical & health education *now***
- --which research shows **improves both academics & children's *current & future* health--**
- by increasing school accountability for **state-mandated standards-based PE & HE**
- using **ESSA-compliant evidence-based** approaches in A-F formula
- ***before it is too late.***

A-F Accountability: Adding PE/HE Metrics

Agenda & addenda

4

- Broad **stakeholder input**: *what gets measured gets managed*
- **Critical need** for accountability in physical (PE) & health ed (HE)
- Implementing AZ **standards & mandate**
- **ESSA- & AZ-compliant**
- **Voluntary/“extra-credit”, AZ-precedent-based**, all public schools
- Reasonable, step-by-step roll-out, with **multiple measures**
- Points for developing capability to improve, then for improving
- Includes nationally validated **FitnessGram** assessment
- **Modeling, example; addenda**: details, notes, research evidence
- A sense of **urgency**

AZ Stakeholder Input from:

5

Superintendents/Arizona School Administrators (ASA)

Debbi Burdick, Deb Duvall, Roger Freeman, Chad Gestson, Betsy Hargrove*, Mark Joraanstad, Melissa Sadorf, Jeff Smith, Paul Stanton*

AZ School Boards Association (ASBA), AEA, AZ Health & Physical Educators (AZHPE), SHAPE America, FTF

Carly Braxton, Steve Jeffries, Paul Kulpinski*, Susan Leonard, Matt Mixer, Andrew Morrill*, Tim Ogle*, Janice Palmer, Trish Robinson, Keri Schoeff, Hans van der Mars

Arizona State Board of Education (SBE) (& SBE's A-F School Accountability Ad Hoc Advisory Committee)

Calvin Baker*, Reg Ballantyne, Tim Carter, Roger Jacks, J.D. Rottweiler*, Tom Tyree; (April Coleman*, Michael Henderson*, Mitra Khazai*, Foster Leaf*, Paul Tighe*)

Nonprofits/NGOs/Misc. (AforAZ, ABEC, AHA, AZ Chamber, CAA, CFA, EMA, Fit Kids, GS, GPL, Goldwater, MA, Playworks, SALC, SVPAZ, TriAdvocates)

Amanda Burke, Ernie Calderon, Terri Wogan Calderon, Ellis Carter, Patrick Contrades, Pearl Chang Esau, Katie Fischer, Dick Foreman, Sybil Francis, Mike Gardner, Neil Giuliano, Stuart Goodman, Becky Hill*, Michael Hunter, Lisa Graham Keegan, Bert McKinnon, Jaime Molera, Dana Wolfe Naimark, Nicole Olmstead, John Pedicone*, Brandy Petrone, Jon Ragan, Paul Shoemaker, Marissa Theisen, Chuck Warshaver, Jim Zaharis

Health Care Providers & Plans (AHIP, AzAHP (AHCCCS), AzHAA, Banner, BCBSAZ, HSAA (Alliance), Mercy Care/MMIC/Aetna, Tenet/Abrazo, United HC)

Tony Astorga, Reg Ballantyne, Chuck Bassett, Jason Besozo*, Jennifer Carusetta, David Childers, Mark Fisher, Tad Gary, Joe Gaudio, Deb Gullett, Debbie Hillman, Christi Lundeen, Andy Kramer Petersen*, Karrie Steving, Trisha Stuart, Deborah Fernandez-Turner, Greg Vigdor

Governor's Office (including GOYFF)

Kirk Adams*, Christina Corieri, Governor Ducey*, Debbie Moak, Danny Seiden*, Kristine FireThunder, Dawn Wallace

State Agencies (ACA, ADE, ADHS, AHCCCS)

AZ Commerce Authority*, ADE (AZ Department of Education): School Health/PE, ADHS (AZ Dept. of Health Services): AzHIP Obesity & Cross-Cutting Strategies/School Health Workgroups & BNPA, AHCCCS*

Legislators & Legislative Staff

Sylvia Allen, Catcher Baden, Nancy Barto, Carlyle Begay, David Bradley, Kate Brophy-McGee, Paul Boyer, Heather Carter, Regina Cobb, Jeff Dial, Adam Driggs, Randall Friese, Gail Griffin, Katie Hobbs, Jay Lawrence, Debbie Lesko, Emily Mercado, Eric Meyer, Lynne Pancrazi, Matt Simon, Steve Smith, Reed Spangler, Melissa Taylor, Bob Worsley*, Kimberly Yee*

Foundations/Grantmakers (Arizona Community Foundation/ACF, AGF, AZSTA, BHHS Legacy, Helios, Piper, Rodel, United Way)

Jacky Alling, Don Budinger, Shelley Cohn, Robbin Coulon, Kim Covington, Charles Hokanson, Kimberly Kur, Robin Lea-Amos, Laurie Liles, Jackie Norton, Janice Palmer, Sue Pepin, Marilee Dal Pra, Suzanne Pfister, Roy Pringle, Steve Seleznow, Brian Spicker, Mary Thomson, Merl Waschler, Glenn Wike, Jerry Wissink, Vince Yanez

Higher Education/Research

Tacy Ashby(GCU), Chuck Corbin(ASU), Dirk DeHeer(NAU), Kimberly LaPrade(GCU), Melanie Logue(GCU), Teri Pipe*(ASU), Jennifer Reeves(UofA), Hans v.d. Mars (ASU)

National Leaders, Experts & Others

CDC, CMS, David Katz, Lloyd Kolbe, Michael O'Donnell, US House & Senate Legislators & Staff

Notes: *=spoke briefly with; []=[scheduled]. Not a comprehensive list. **Green:** particular thanks for key early encouragement and/or involvement by organization leaders—note: these organizations are not yet formally affiliated with HFA. Key input goals: Do homework, understand perspectives, build consensus, figure out win-wins, etc. Lessons learned include: avoid unfunded mandates; no new taxes; must be accountable; non-punitive; need credible ROI; etc. Slide @11/25/2016

State Mandate & Standards

K-8 students **must be competent in PE** before HS—
using local school board metrics—**but it's not happening**

6

PE: Most recent (2015) physical education **standards**:

“The goal of physical education is to develop literate individuals who have the

- **knowledge, skills and confidence**
- **to enjoy a lifetime of healthful physical activity.**”

HE: Most recent (2009/2010) health education **standards**:

“The educator’s role includes teaching skills and functional information (essential concepts), helping students

- determine personal values that support healthy behaviors,
- helping students develop group norms that **value a healthy lifestyle,**
- and helping students **develop the essential skills necessary**
- **to adopt, practice, and maintain health-enhancing behaviors.**”

Physical & Health Education Accountability?

Not Enough

7

2010 ADE School Survey

- Majority of schools ≤ 2 days PE/week
- Almost $\frac{1}{2}$ of schools ≤ 20 minutes Recess/day
- Almost $\frac{1}{3}$ schools = no PE-certified teachers

Recent Student Data from Schools

- Lower-income students unfit \rightarrow unhealthy future
 $> \frac{1}{3}$ students \rightarrow diabetic adults

How to Add PE/HE Metrics to A-F?

Key requirements & approaches

8

- **ESSA-compliant**
 - Valid, reliable, research-based, statewide, differentiated by LEA & by sub-group
- **State A-F priority elements**
 - Proficiency, growth, multiple measures, alternatives, transparency/simplicity, piloting
- **Voluntary/extra-credit/bonus points, based on precedents**
 - Helps not hurts schools; pilot separate from main 0-100 calculation
 - **Bonus point precedents:** ELL/AZELLA proficiency, Annual dropout rate, Annual graduation rate (0 or 3 points each, separate from 0-100 AIMS proficiency/growth points, out of 200 total)
 - *ELL precedent details:* min. 150 days, 10+ students, $\geq 95\%$ tested, $\geq 30\%$ ELL students reclassified as proficient for 3 bonus points
- **Other goals: practical to implement, low cost, broad-based, evolving**
 - Data collected statewide from all public schools via upcoming School Report Card process
 - Relative point values/weightings evolve:
 - From all-students (school-level) toward each-student (individual assessments)
& from outcomes-associated *input data* toward range of *outcomes*
 - Starting at 3 bonus points, growing to 5 in 2019-20; i.e., 3-5% on top of 0-100% total A-F point-scale

Notes: Bonus points were awarded for ELL--based on reclassification; for Annual dropout rate & Annual graduation rate—if HS met target. For PE/HE-related metrics, can use School Report Card process to collect data. References: ADE: Arizona's A-F Letter Accountability System – 2011 Technical Manual, Nov. 2011; Arizona's A-F Accountability System, 2012; discussions with ADE, 2016. Slide @11/29/2016.

PE/HE Metrics in A-F

Indicators & relative values (proposed)

Indicator	Indicator Point Ranges			
	NA/-	+	++	+++
1) School wellness policy plan incl. SHI & staff support	No	Yes	Yes	Yes
2) PE minutes taken per week (K-6; 7-12)	0-59	60-89; 60-119	90-119; 120-169	120-150+; 170-225+
3) Recess/Other PA minutes per day	0-19	20-29	30-44	45+
4) PE delivered by PE-certified teacher	No	Yes	Yes	Yes
5) SHI Parts 1-4 average score growth $\geq 10\%$	No	$\geq 10\%$	$\geq 15\%$	$\geq 20\%$
6) PE teacher trained in FitnessGram	No	Yes	Yes	Yes
7) Fruit & vegetable consumption--reporting	No	Yes	Yes	Yes
8) $\geq 10\%$ of students reclassified to Healthy Fitness Zone	$< 10\%$	$\geq 10\%$	$\geq 20\%$	$\geq 30\%$
9) Alternative: AZHPE-approved portfolio assessment	N/A	TBD	TBD	TBD
10) % currently smoking	$> 10\%$	7-10%	4-7%	$< 4\%$
11) Recess & non-PE PA w/quality trained leader/peer	No	Yes	Yes	Yes
12) Ate breakfast at least 5/7 days?	No	Yes	Yes	Yes
13) Fruit & vegetable consumption--improvement	< 1	≥ 1 unit	≥ 2 units	≥ 3 units

PE/HE Metrics in A-F

School example: 2016-18 (proposed)

10

Example: High % FRL students, K-6 school			2016-17	2017-18	2018-19	2019-20
Max. bonus points			3	3	4	5
			Points per indicator/range			
2016-17 (max. 3 points)	Reported	Pts Earned	NA/-	+	++	+++
1) School wellness plan incl. SHI & staff support	Yes	1	0	1.00	1.00	1.00
2) PE minutes taken per week	0-59	0	0	0.50	1.00	1.50
3) Recess/Other PA minutes per day	30-44	0.25	0	0.25	0.33	0.50
4) PE delivered by PE-certified teacher	Yes	0.5	0	0.50	0.50	0.50
<i>Points calculated</i>		1.75	0	2.25	2.83	3.50
Total points awarded (up to max.)		1.75	0	2.25	2.83	3.00
2017-18 (max. 3 points)	Reported	Pts Earned	NA/-	+	++	+++
1) School wellness plan incl. SHI & staff support	Yes	0.5	0	0.50	0.50	0.50
2) PE minutes taken per week	60-89	0.5	0	0.50	1.00	1.50
3) Recess/Other PA minutes per day	30-44	0.33	0	0.25	0.33	0.50
4) PE delivered by PE-certified teacher	Yes	0.5	0	0.50	0.50	0.50
5) SHI Parts 1-4 average score growth >=10%	>=10%	0.5	0	0.50	0.75	1.00
6) PE teacher trained in FitnessGram	Yes	0.5	0	0.50	0.50	0.50
<i>Points calculated</i>		2.83	0	2.75	3.58	4.50
Total points awarded (up to max.)		2.83	0	2.75	3.00	3.00

Notes: Example is for hypothetical K-6 school with high % of Free-and-Reduced-Lunch students, i.e., lower income families. SHI=School Health Index. PE=Physical education. PA=physical activity. Slide @11/29/2016

PE/HE Metrics in A-F

School example: 2018-19 (proposed)

11

2018-19 (max. 4 points)	Reported	Pts Earned	NA/-	Points per indicator/range		
				+	++	+++
1) School wellness plan incl. SHI & staff support	Yes	0.25	0	0.25	0.25	0.25
2) PE minutes taken per week	60-89	0.5	0	0.50	0.75	1.00
3) Recess/Other PA minutes per day	30-44	0.33	0	0.25	0.33	0.50
4) PE delivered by PE-certified teacher	Yes	0.25	0	0.25	0.25	0.25
5) SHI Parts 1-4 average score growth >=10%	>=10%	0.25	0	0.25	0.50	0.75
6) PE teacher trained in FitnessGram	Yes	0	0	0.00	0.00	0.00
7) Fruit & vegetable consumption--reporting	Yes	0.5	0	0.50	0.50	0.50
8) >=10% of students reclassified to Healthy Fitness Zone	>=10%	1	0	1.00	1.50	2.00
9) Alternative: AZHPE-approved portfolio assessment			0	TBD	TBD	TBD
10) % currently smoking	NA (K-6)	0	0	0.25	0.33	0.50
11) Recess & non-PE PA with quality trained leader/peer	Yes	0.5	0	0.50	0.50	0.50
12) Ate breakfast at least 5 days?	Yes	0.5	0	0.50	0.50	0.50
<i>Points calculated</i>		4.08	0	4.25	5.41	6.75
Total points awarded (up to max.)		4	0	4.00	4.00	4.00

PE/HE Metrics in A-F

School example: 2019-20 (proposed)

12

2019-20 (max. 5 points)	Reported	Pts Earned	Points per indicator/range			
			NA/-	+	++	+++
1) School wellness plan incl. SHI & staff support	Yes	0.25	0	0.25	0.25	0.25
2) PE minutes taken per week	90-119	0.75	0	0.50	0.75	1.00
3) Recess/Other PA minutes per day	30-44	0.33	0	0.25	0.33	0.50
4) PE delivered by PE-certified teacher	Yes	0.25	0	0.25	0.25	0.25
5) SHI Parts 1-4 average score growth >=10%	>=15%	0.5	0	0.25	0.50	0.75
6) PE teacher trained in FitnessGram	Yes	0	0	0.00	0.00	0.00
7) Fruit & vegetable consumption--reporting	Yes	0.25	0	0.25	0.25	0.25
8) >=10% of students reclassified to Healthy Fitness Zone	>=20%	1.5	0	1.00	1.50	2.00
9) Alternative: AZHPE-approved portfolio assessment			0	TBD	TBD	TBD
10) % currently smoking	NA (K-6)	0	0	0.25	0.33	0.50
11) Recess & non-PE PA with quality trained leader/peer	Yes	0.5	0	0.50	0.50	0.50
12) Ate breakfast at least 5 days?	Yes	0.5	0	0.50	0.50	0.50
13) Fruit & veg. consumption--improvement	>=1 unit	0.5	0	0.50	0.75	1.00
<i>Points calculated</i>		5.33	0	4.50	5.91	7.50
Total points awarded (up to max.)		5	0	4.50	5.00	5.00

Notes: Example is for hypothetical K-6 school with high % of Free-and-Reduced-Lunch students, i.e., lower income families. SHI=School Health Index. PE=Physical education. PA=physical activity. HFZ=FitnessGram Healthy Fitness Zone. AZHPE=AZ Health & Physical Educators. Slide @11/29/2016

Why Now? Why Us?

Our personal & collective opportunity & responsibility

13

Children's lifetime health **determined during K-8 years**

1/3 diabetic, unless we dramatically improve PE, HE, etc.

No one else is coming to “save” us...It's On Us

First in USA: PE/HE into A-F

Tired of being **40-something?** (ranked 45th/49th/etc.)

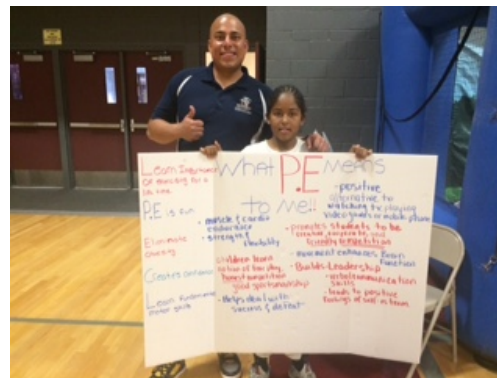
New \$\$\$ School Funding: Health Sector → K-12

e.g., Fit Kids (NAH) → AZ-wide: \$1M/yr → \$100M+/yr

Note: NAH=Northern Arizona Healthcare (funds ~10K students in Fit Kids @\$1M/year); similar statewide funding for 1M+ students by the health sector would total >\$100M/year. AzHIP=Arizona Health Improvement Plan: school health strategies--particularly much more moderate-to-vigorous activity (MVPA)--is a critical part of draft statewide plan to improve health in AZ. References: Diabetes stats/projections: *Pediatrics*, 2012 in USNews, 5/21/2012 (youth prediabetes); Diabetes.org (adults); Boyle et al, 2010 (“middle-ground projections”); CDC, 2014: *Long-term Trends in Diabetes*; Schneiderman et al, 2014; Edunuity ests. First in USA: NASBE., 2011: http://www.nasbe.org/healthy_schools/hs/bytopics.php?topicid=1110; *Shape of the Nation 2016: Status of Physical Education in the USA*, 2016; E CS personal communications, 2015-16. PYFP, 2014. Plowman et al, 2013. <https://nahealth.com/fit-kids/learning-healthier-way-live> Slide @11/28/2016

Additional/Background Slides

14



Notes: (clockwise from upper left): PE; classroom activity break; peer-led physical activity; PE teacher & student; parent involvement.
References: top photos from mrhpwb.weebly.com & georgiahealthnews.com from Google images; bottom from EYH AZ/Sunnyside USD.

PE/HE Metrics in A-F

Notes on indicators: 1-6

15

General:

Schools can estimate & report school-level, average-student data within 10-20% accuracy, for "input" data such as PE & PA/recess minutes.

Each indicator is supported by research evidence.

Each indicator is timely, statewide, valid, reliable, by school (within school & differentiated by LEA), by sub-group

Sub-groups for school-level data calculated based on school demographics.

Basic approach: We begin by focusing on readily available information at the all-student, school level. We also show schools future metrics, so that students can prepare for more outcomes-based metrics in future years. In addition, we focus on schools preparing a strong plan with broad leader and staff support, to substantially improve student/school health across a range of areas, including PE, HE, PA and nutrition.

PE/HE/Related (general): Some indicators span across physical & health education & include related areas heavily impacting PE & HE, such as recess, before/after-school activities, and food policies & services. Particularly given the scale of health challenges and the lack of PE & HE instructional time, schools need to carefully plan, train & assess, and then continuously improve, in order to achieve sustainable improvements.

1) PE/HE/Related (plan): many schools are required to develop school-wide wellness policy plans, but do not do so, or do not have quality plans with broad support. A quality wellness policy is needed for sustained improvements. Wellness policy must be approved by at least the principal, PE teacher, head of food services, and representatives of classroom teachers

2) PE Minutes (definition): Average across all grades, entire year ("typical week"). Nationally recommended target is 150 minutes/week of PE for grades K-6. Grades 7-8: same as HS; based on nationally recommended target of 225 minutes/week of PE. Minutes are calculated using estimated # minutes taken by all students physically able to participate in PE. In other words, if some students are able to do PE but are exempted from PE for marching band, JROTC, etc., their minutes are 0 in the calculation; minutes spent in non-PE subjects, which are PE substitutes or waivers, cannot be counted toward PE minutes.

3) Recess/Other PA minutes: Average across all grades, entire school year ("typical day"). Typically expected to be: primarily Recess for K-8, Other PA for HS. 20 minutes/day recess are recommended nationally for K-8, but this is a minimum, especially since PE minutes are typically very low; so more Other PA minutes, such as before/during/after-school exercise or sports, are needed to reach adequate levels of physical activity. Minutes may be estimated based on the number of minutes assigned to recess or to other physical activity, divided by the total number of students physically able to participate in physical activity. Longer term, starting in 2018-19, minutes should be calculated based on the estimated number of minutes of actual physical activity. Trained recess and other PA leaders, including peer-led activity by other trained students, can ensure high amounts of physical activity.

4) Certified PE teacher: PE certification key for improving quality of PE, PE-related assessments. With limited minutes, and needing to work effectively with other teachers and staff to maximize impact with limited PE minutes, a certified PE teacher is needed to maximize impact with limited time.

5) SHI: >=10% improvement/growth from previous year in summative School Health Index score for SHI Parts 1-4. [e.g., 65% to 75% = 10% improvement]. The School Health Index is the nationally validated standard for school wellness policy assessment. SHI points are aggregated to indicate the status of school PE & HE & related policies & practices. Proposed A-F indicators focus on Modules 1-4: 1) School Health/Safety; 2) Health Ed; 3) PE & PA; 4) Nutrition Services.

6) PE teacher trained in FitnessGram: Incentive to start training PE teacher in administering FitnessGram. Ultimately phased out as FitnessGram introduced. The vast majority of PE teachers are not using FitnessGram, so training will assist them in coming up to speed, before FitnessGram is implemented.

PE/HE Metrics in A-F

Notes on indicators: 7-13

16

- 7) Fruit & vegetable consumption-reporting:** Based on YRBS or other comparable state-approved metric. Include parents in education to improve out of school nutrition behavior.
- 8) PE fitness & FitnessGram/HFZ:** Reclassifying students from not being in the Healthy Fitness Zone to developing into the HFZ, is a strong nationally validated indicator that the student is on track for a life of fitness. FitnessGram is a multi-factor criterion-based PE evaluation, which ultimately can be used in lieu of certain other PE-related input indicators. Indicator metric is calculated based on the % of students reclassified from--**not** in the FitnessGram Healthy Fitness Zone (HFZ) or equivalent--into the HFZ. 10% improvement is a typical target. The Empower Youth Health program achieved 10-30%+ reclassification into HFZ, among approx. 90% FRL K-12 population, 2012-15.
- 8) FitnessGram in future years:** Schools that maintain HFZ% \geq 30% above baseline year continue to receive at least the minimum/+ bonus points, with bonus point value above minimum/+ based on most recent reclassification %.
- 8) FitnessGram reclassification conditions:** Conditions are patterned on AZ state precedents for ELL, dropout, and graduation bonus points. At least 95% of students physically capable of completing tests must be tested. Schools must have at least 10 students assessed. Only FAY students are counted, and all FAY students are counted, unless they cannot physically participate. Any FAY students withdrawn by parent request are included in the FitnessGram reclassification calculation. (Schools may use valid randomized testing as approved by AZHPE.)
- 9) PE portfolio assessment:** Up to 3? bonus points: details to be decided (TBD). A comprehensive portfolio assessment could include and replace many other separate PE-related metrics. Portfolio assessment using validated approaches is AZHPE's long-term target, because it can capture so many aspects of PE & HE standards, inputs and outcomes. The portfolio approach is well-aligned with the multiple measures and menu of options philosophy. AZHPE should recommend valid, reliable, practical standard portfolio rubrics, and review non-standard portfolio rubrics for validity.
- 10) Smoking %:** "Currently" = "current use", defined as "the use of any form of tobacco during the past 30 days, including just a puff of a cigarette or dip of chew". MS, HS only. Based on confidential, privacy-protected, validated survey, such as YRBS, AYS, or AYTS. For perspective, Hispanic/Latino HS students currently smoking was 9.3% in 2015 YRBS survey.
- 11) Recess/Other PA minutes (training):** Provides "structure" with qualified leadership to maximize physical activity, & minimize conflict, & improve social-emotional learning. A quality, trained recess/PA leader, including older-student-peers, can maximize moderate-to-vigorous PA (MVPA), while instructing children in conflict management & social-emotional learning.
- 12) Breakfast:** Breakfast in Classroom (BIC) normally counted as 5 days. Or may use YRBS or other valid, reliable instruments, if BIC is not implemented. Daily breakfast, such as with BIC, has been shown to help students academically, while also providing the nutrients needed to maximize moderate-to-vigorous physical activity (MVPA).
- 13) Fruit & vegetable consumption:** Points earned based on \geq 1 unit improvement in fruit & vegetable consumption, per YRBS F&V questionnaire average; typically 1 unit improvement = 1 more serving per day. Increased fruit and vegetable consumption is very important for health. YRBS provides a long-standing, valid, self-reporting process for monitoring changes in nutrition behavior. F&V consumption improvement trends show the effectiveness of physical and nutrition education in increasing students' knowledge, attitude and behavior about F&V. It also is dependent on availability of fruit and vegetables at school meals, which is supported by NSLP & USDA standards. Increases in YRBS units, i.e., typically in #servings/day, determines amount of points. Schools may use other, valid, state-approved methods, if YRBS questions are not utilized.
- 13) Fruit & vegetable consumption (future years):** Similarly to FitnessGram, schools that maintain F&V consumption above baseline year continue to receive at least the minimum/+ bonus points, with bonus point value above minimum/+ based on most recent reclassification units #.



FitnessGram: Balanced Fitness Assessment

(replaced Presidential Physical Fitness Test)

evaluates if student at level of fitness for good health

17

Key criterion-referenced metric: % students in Healthy Fitness Zone (HFZ)

- **Aerobic capacity**

- 15-20 meter sprints (PACER/“beep test”), 1 mile run/walk

- **Muscular strength & endurance, flexibility**

- curl-ups (crunches), arm hang/pull-ups, push-ups, trunk lift

- **[Body composition]**

- [BMI]

Notes: Healthy Fitness Zone standards “represent the minimal levels of fitness needed for good health based on the student’s age and gender”, per Presidential Youth Fitness Program (PYFP). BMI = Body Mass Index: comparing height vs. weight. [BMI]: Not recommending including BMI. References: PACER photo: [blogs.birmingham.k12.mi.us](https://www.youtube.com/watch?v=lroAhVO83il) from Google images; cooperinstitute.org; PACER test overview: <https://www.youtube.com/watch?v=lroAhVO83il> Slide @11/25/2016



Fitness Assessments esp. FitnessGram

Multi-state precedents

yet FitnessGram rare in AZ; & is only part of solution

18

- PE assessments mandated in **21+** states:

AL, AR, CA (grades 5,7,9), **CT, DC, DL, GA, LA** (focused on high-poverty districts), **MO, MN** (local assessments), **MS** (grade 5), **NC, NY** (local assessments), **RI, SC** (grades 2,5, 8-12), **TN, TX** (grades 3-12), **VA** (grades 4-12), **VT** (grades 5-12), **WV** (grades 4-8 & HSx1), **WI**

- Mandated public reporting of results in **10+** states:

AL, CA, CT (in Strategic School Profile), **DC, DL** (results to parents), **MO** (% meeting min.), **SC** (to parents + school effectiveness score), **TX** (summarized results to TEA) **VA, WV**

Research Evidence

PE/MVPA, Nutrition & Academics

19

- Ahamed, Y., Macdonald, H., Reed, K., Naylor, P.-J., Liu-Ambrose, T., & McKay, H. (2007). School-based physical activity does not compromise children's academic performance. *Medicine and Science in Sports and Exercise*, 39(2), 371-376.
- Desy, E.A., Peterson, S.A., & Brockman, V. (2013). Gender differences in science-related attitudes and interests among middle and high school students. *Science Educator*, 20 (2), pp.23-30. [Note: includes data on PE/gym being the favorite subjects of high percentages of students.]
- Donnelly, J. E., Greene, J. L., Gibson, C. A., Smith, B. K., Washburn, R. A., Sullivan, D. K., . . . Williams, S. L. (2009). Physical activity across the curriculum (PAAC): A randomized controlled trial to promote physical activity and diminish overweight and obesity in elementary school children. *Preventive Medicine*, 49, 336-341.
- Fedewa, A.L., & Ahn S. (2011). The effects of physical activity and physical fitness on children's achievement and cognitive outcomes: A meta-analysis. *Research Quarterly for Exercise & Sport*, 82, 521-535.
- Frivold, D.E. (2015). Nutrition and cognitive achievement: An evaluation of the School Breakfast Program, *Journal of Public Economics*, 124, 91-104.
- Hillman, C.H., Pontifex, M.B., et al (2009). The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. *Neuroscience*, 2009 March 31; 159(3): 1044–1054. [immediate one-grade-level improvement in test score performance from recent moderate-to-vigorous physical activity]
- Hollar, D., Messiah, S. E., Lopez-Mitnik, G., Hollar, T. L., Almon, M., & Agatston, A., S. . (2010). Effect of a two-year obesity prevention intervention on percentile changes in body mass index and academic performance in low-income elementary school children. *American Journal of Public Health*, 100, 646-653.
- Lees, C. & Hopkins, J. (2013). Effect of aerobic exercise on cognition, academic achievement, and psychosocial function in children: a systematic review of randomized controlled trials. *Preventing Chronic Disease*, 10, October 24, 2013.
- Mackey, A.P., Finn, A.S., et al (2015). Neuroanatomical Correlates of the Income-Achievement Gap, *Psychological Science*, 26 (6), 925-933.
- Reeves, J. (2016). US Department of Education Grant Performance Report (ED 524B). [report on early Empower Youth Health & related elements]
- Rumberger, R.W. (2011). *Dropping Out: Why students drop out of high school and what can be done about it* (chapters 6, 7). Harvard University Press.
- Sallis, J. F., McKenzie, T. L., Kolody, B., Lewis, M., Marshall, S., & Rosengard, P. (1999). Effects of health-related physical education on academic achievement: Project SPARK. *Research Quarterly for Exercise and Sport*, 70, 127-134.
- Singh, A., Uijtendwilligen, L., Twisk, J.W., van Mechelen, W., & Chinapaw, M.J. (2012). Physical activity and performance at school: A systematic review of the literature including a methodological quality assessment. *Archives of Pediatric Adolescent Medicine*, 166, 49-55.
- Trost, S., & van der Mars, H. (2009). Why we should not cut PE. *Educational leadership*, 67(4), 60-65.
- Trudeau, F., & Shephard, R. J. (2008). Physical education, school physical activity, school sports and academic performance. *International Journal of Behavioral Nutrition and Physical Activity*, 5(10).

Research Evidence

SHI, FitnessGram, MVPA/Fitness & Child/Adult Health

20

School Wellness Policy Plan / SHI

Brener N.D., Pejavara A., McManus T. (2011). Applying the School Health Index to a nationally representative sample of schools: update for 2006. *Journal of School Health*, 81: 81-90.

CDC (2014). School Health Index: A Self-Assessment and Planning Guide. Elementary school version. Atlanta, Georgia.

CDC (2014). School Health Index: A Self-Assessment and Planning Guide. Middle school/high school version. Atlanta, Georgia.

FitnessGram

Plowman, S.A. & Meredith, M.D. (Eds.). (2013). Fitnessgram/Activitygram Reference Guide (4th Edition). Dallas, TX: The Cooper Institute.

MVPA/Fitness and Child/Adult Health

Crump, C., Sundquist, J., et al. (2016). Physical fitness among Swedish military conscripts and long-term risk for type 2 diabetes mellitus. *Annals of Internal Medicine*, doi:10.7326/M15-2002.

DeHeer, H. (2014). Fit Kids at School: Executive Report Parts 2 & 1. Summer 2014.

Herman, K., Craig, C., et al (2009). Tracking of obesity and physical activity from childhood to adulthood: the Physical Activity Longitudinal Study. *International Journal of Pediatric Obesity*, 4: 281-288.

Hogstrom, G., Nordstrom, A., & Nordstrom, P. (2014). High aerobic fitness in late adolescence is associated with a reduced risk of myocardial infarction later in life: a nationwide cohort study in men. *European Heart Journal*, 35, 3133–3140.

Katz, Cushman, Reynolds, et al (2010). Putting physical activity where it fits in the school day: preliminary results of the ABC (Activity Bursts in the Classroom) for fitness program. *Preventing Chronic Disease: Public Health Research, Practice, and Policy*, 7 (4), A82 (1-10).

Schuch, F.B., Vancampfort, D., Richards, J., et al. (2016). Exercise as a treatment for depression: A meta-analysis adjusting for publication bias. *Journal of Psychiatric Research*, 77, 52-51.

Turner, S. (2016). Achieving a healthy future for our state, our schools & our children: Healthy Future Arizona & Empower Youth Health. [full presentation with all background slides, including details on health improvement & health cost reduction potential for children & adults]. www.edunuity.org

Yamamoto, (2013). Health care costs—from birth to death. Part of the Health Care Cost Institute's *Independent Report Series* – Report 2013-1. Society of Actuaries.

Zhuo et al, (2014). The lifetime cost of diabetes and its implications for diabetes prevention. *Diabetes Care*, 37: 2557-2564.

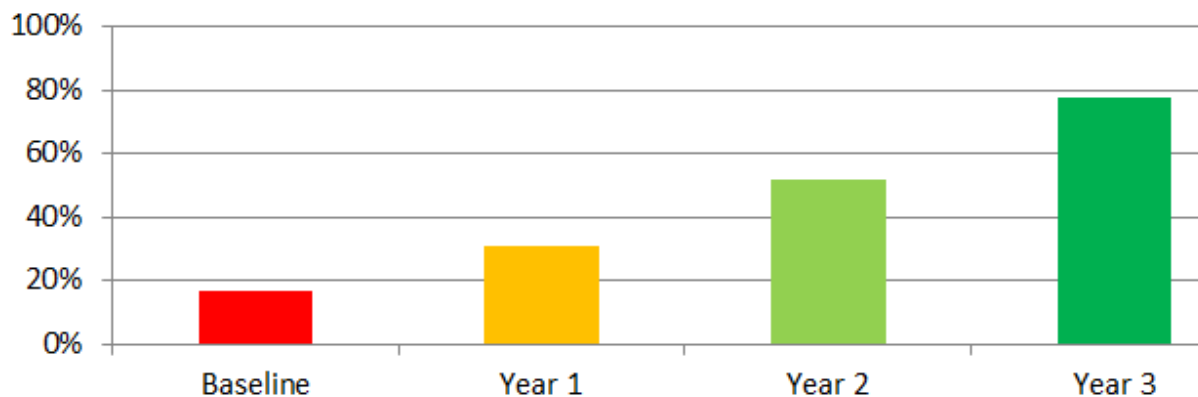
Bad News / Good News:

Terrible status quo / Breakthrough improvements

Empower Youth Health (EYH) program @\$10/student/year

21

Students Reaching Cardiovascular Healthy Fitness Zone



Notes: Empower Youth Health (EYH) results 2012-2015 from lower-income AZ schools with 79-98% FRL (Free & Reduced Lunch) student population; 90% Hispanic, 5% Native-American, 3% White, 2% African-American. By Year 3: 20 schools in EYH, 16,000 students; **increased % students with cardio-vascular aerobic fitness 4x from 17% to 78%**; **>6x increase in % of students with good nutrition: 11% → 73%** consuming recommended fruit & vegetable servings; **% of students at normal weight increased by 12.5% from 48% to 54%** among students in the Healthy Fitness Zone (HFZ), even though students would typically be increasing BMI and becoming more obese as they age; 35-40% of students receiving 60+ mins. PA/day. Healthy Fitness Zone is the FitnessGram/PYFP (Presidential Youth Fitness Program) standard for fitness, as measured by objective aerobic capacity (PACER), BMI, & muscular strength & endurance metrics. **EYH costs \$10/student/year at scale** (produce costs may be additional). References: Reeves, 2016: *US Department of Education Grant Performance Report (ED 524B)*: Jennifer Reeves, UofA, Principal Investigator; fall 2012 - spring 2015. Other notes/references: EYH costs kept low by: school-wide wellness policy planning; training existing PE & classroom teachers & MS/HS student fitness volunteers (& not adding more staff); and regular assessment with FitnessGram. Moderate-to-vigorous physical activity (MVPA) & healthy nutrition increase brain capacity & academic achievement, per extensive research evidence. Teen aerobic fitness is correlated with 35% less heart attacks in middle-age (Hogstrom, Nordstrom, 2014); reducing % of Medicaid enrollees with CVD by 35% would save \$50B/year nationally (Kaiser Family Foundation, 2012). Teen fitness correlated with 1/2-2/3 less risk of type 2 diabetes in middle-age (Crump et al, 2016). Potential to **reduce chronic health conditions & costs by 20+% with 100x or more ROI** (Edunuity estimate). Rapid payback for health sector within first year of EYH implementation in schools, due to reduced health costs for ADHD, asthma, obesity, depression, and related preventable child health issues (see Payback slides/references). Rationale: as fitness increases & nutrition improves, chronic health conditions decrease, Medicaid/AHCCCS/health insurance & out-of-pocket health costs decrease, & productivity & GDP increase from less absenteeism/presenteeism (Milken, 2007); also, as a result, state (& local & federal) tax revenues go up & govt. costs go down. Slide@11/28/2016. Contact: Scott Turner 602-513-0028 scott.turner@edunuity.org



How EYH So Effective & Low Cost ?

P-T-A: Plan + Train + Assess → Continuous improvement ⇌

Optimizing existing school staff & students & community partnerships, with current PE & recess time*, without added personnel → keeps down costs = \$10/student/year @scale

22

1) **Self-Assessment** of all School-based Health-related Elements

- School Health Index (SHI) to identify & reduce health risk behaviors, including addressing gaps & weaknesses

2) **Policy/Plan Development** for School-based Health Promotion

- Mutually agreed plan by staff to improve health: incl. administration, food services, nurse, classroom & PE teachers

3) **Standards-based Instruction K-12 w/training: Physical/Nutrition/Health Education**

- professional development of PE teachers, other staff + on-going field support

4) **Youth Development & Student Leadership**

- Student volunteer peer-led physical & wellness activities before, during, after school incl. lunch & recess

5) **Collaborations with Community Partnerships**

- including before, during, and after school, as well as on weekends, holidays, and vacations (e.g., parents, school food service vendor, neighborhood associations, youth physical activity promoting CBO's, park and recreation, YMCA's, after-school programs, Walking School Bus Programs, local businesses, and more)

6) **School Health Advisory Councils**

- Improve instructional programs, policies, & support services for the 8 components of a coordinated school health/WSCC model; meet min. every other month, ensure wellness implementation for students, staff, & community

7) **Regular Assessment** of Student Health Behavior

- FitnessGram (Presidential Youth Fitness Program), YRBSS, portfolio/"resume", & other validated assessments for reliable, balanced, comprehensive review & continuous improvement

60 Minutes/Day Physical Activity

EYH can reach 60 mins. PA even with limited PE minutes

Physical Activity (PA)	Mins./day offered	Mins./day activity
Classroom breaks during school (3/day x 7 mins. ea.)	21	16
Physical Education class (60 minutes/ week PE)	12	8
Recess #1 (one 15 minute/day)	15	12
Recess #2 (or PE #2: add'l 60 mins./week PE, totaling 120 mins/week PE)	12-15	12
Before/after-school program/morning/afternoon activity	<u>15</u>	<u>12</u>
Total Physical Activity	75-78	60

Notes: Physical activity (PA) should be moderate to vigorous physical activity (MVPA) for full academic and health benefits: moderate to vigorous physical activity = e.g., after several minutes of MVPA, children are panting, starting to sweat, & having trouble conversing while moving.

References: Adapted from LMAS PAL training, 2015 Slide @11/15/2016 Classroom exercise break sample, GoNoodle example:

<https://www.youtube.com/watch?v=TbzFq7gH2Zw&list=PLX0p6gjOu3DWJIPWagUwbFS-Bgm8AQbXj&index=3>

EYH School Example

*Stanfield SD can do PE/PA/EYH; **so can your school***

24



- Rural (near Casa Grande), 1 school, 85% FRL, 510 students PK-8
- 20% Native-American, 60% Hispanic, 20% white
- 72 FTE, Total budget FY15 \$4.2 million
- Loss of an override, \$650,000 reduction to M&O in FY13&14
- ***Yet 30+ minutes/day physical activity, 4-5 days/week PE***



Fit Kids

AZ Health Care Provider
stepping outside the health sector silo,
investing \$1M/year in schools



25

- Founded 2012, Flagstaff: ~\$1M/yr from Northern AZ Healthcare
 - ~\$100/student/year (if NAH's AZ peers all invested a comparable amount = \$100M/year new money into AZ schools)
- 20 elementary/middle schools, 5 districts, >9000 students/year
- Mandatory 1 class/week moderate-to-vigorous physical activity (MVPA) & nutrition ed, led by trained Health Aides
 - Optional before/after/lunch activity sessions
 - Supplements existing PE, health education
- Evaluation:
 - 2350 children, 4x BMI measurements over first 2 years
 - Outcomes: **~50% reduction in likelihood* of being overweight**

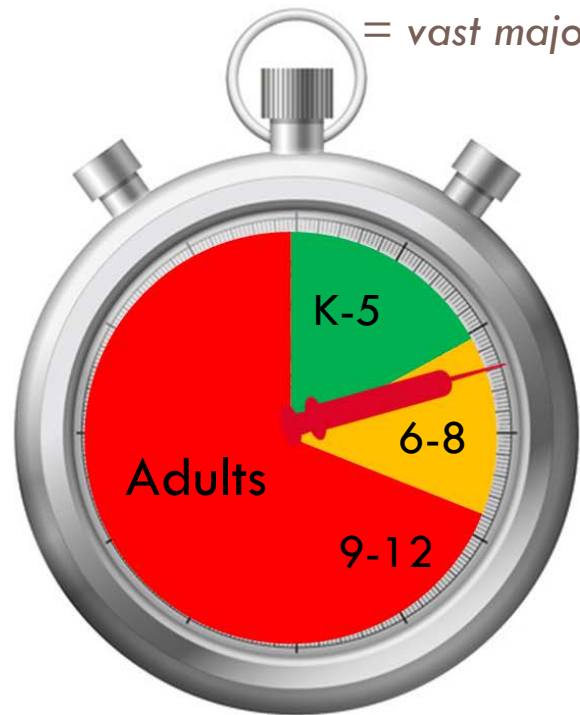
Time Running Out from K to 12 →

A Life Sentence for Diseases & Costs



26

the vast majority of low-income K-12 students have *unhealthy habits* & are *unfit*
+ *without effective physical & health education*, they do not change their habits
= vast majority of *unfit students* remain *unhealthy as adults*



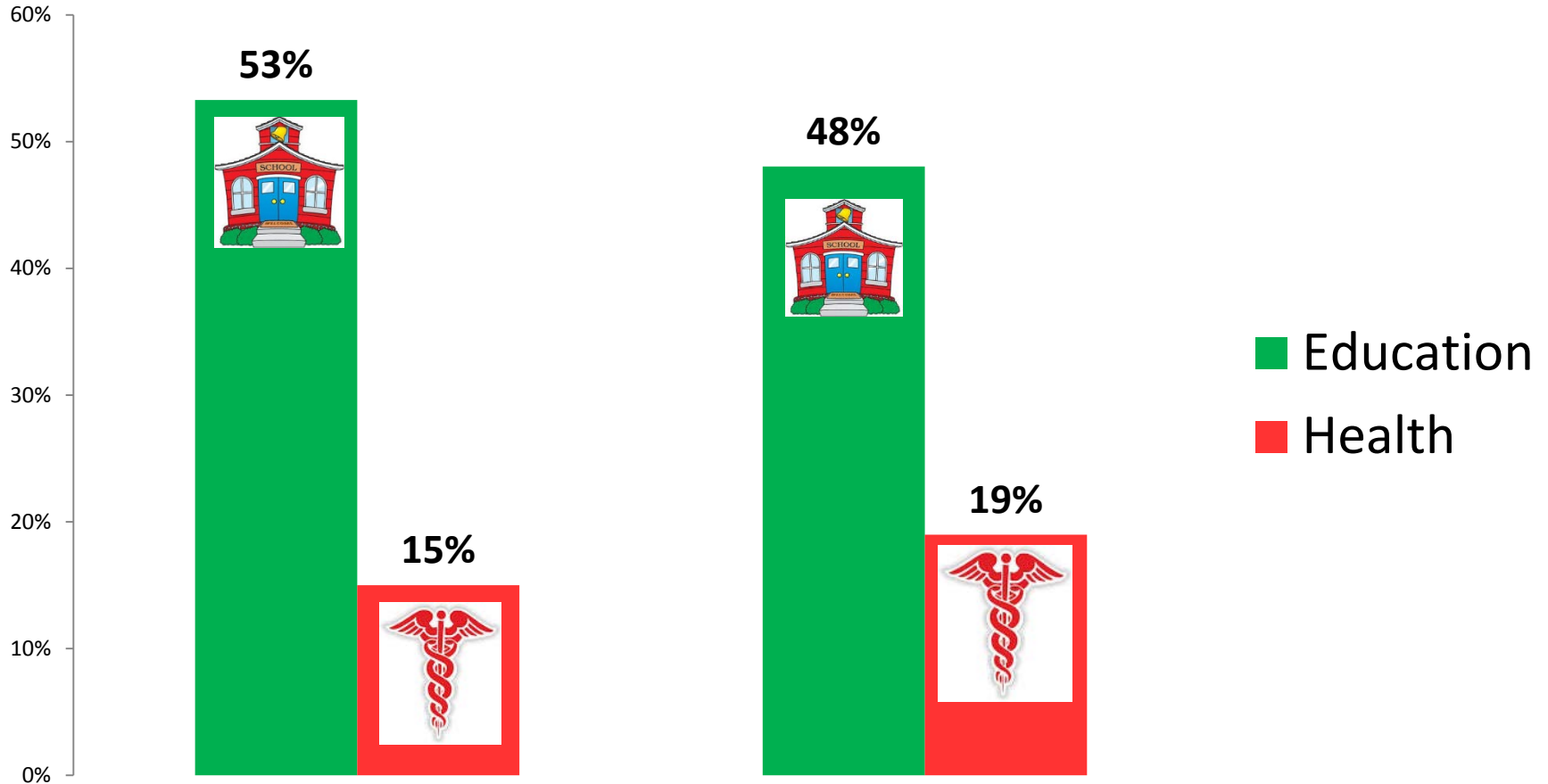
- % Fit teens
- % Unfit teens who become fit as adults
- % Unfit teens who stay unfit as adults

Notes: It is very difficult & expensive to change adults' health behavior, and even changed behavior often reverts. Initial measurements indicate that >80% of lower-income AZ students are unfit. National longitudinal data indicate that > 2/3 of lower-income students will not change their health behavior, and will remain unfit & increasingly unhealthy as adults, unless their habits change K-8. Low-income student fitness data based on baseline Empower Youth Health (EYH) FitnessGram results from representative sample of approx. 16,000 students in 20 lower-income schools in AZ, indicating 83% with cardiovascular aerobic unfit (i.e., not in aerobic "Healthy Fitness Zone"). Adult unfit estimates based on 80+% persistence of overweight/obesity from adolescence into adulthood. References: Google images: 123RF.com; <http://www.clker.com/cliparts/y/R/v/V/H/k/red-syringe-hi.png>; wupr.org; AZ student fitness EYH baseline FitnessGram PACER data, 2012--Jennifer Reeves, UofA, Principal Investigator, EYH; Herman, Craig, et al, 2009: *Tracking of obesity and physical activity from childhood to adulthood*. Also, see Kaiser Family Foundation, 2012: *The Role of Medicaid for Adults with Chronic Illnesses*; Whitaker, Wright, Pepe, Seidel, & Dietz, 1997; Brownell & Horgan, 2004; CDC, 2015. Slide @11/15/2016.

AZ State Spending: 2002 vs 2012

need to reverse trend of less *educating*, more *medicating*—by *increasing healthier behavior*

27



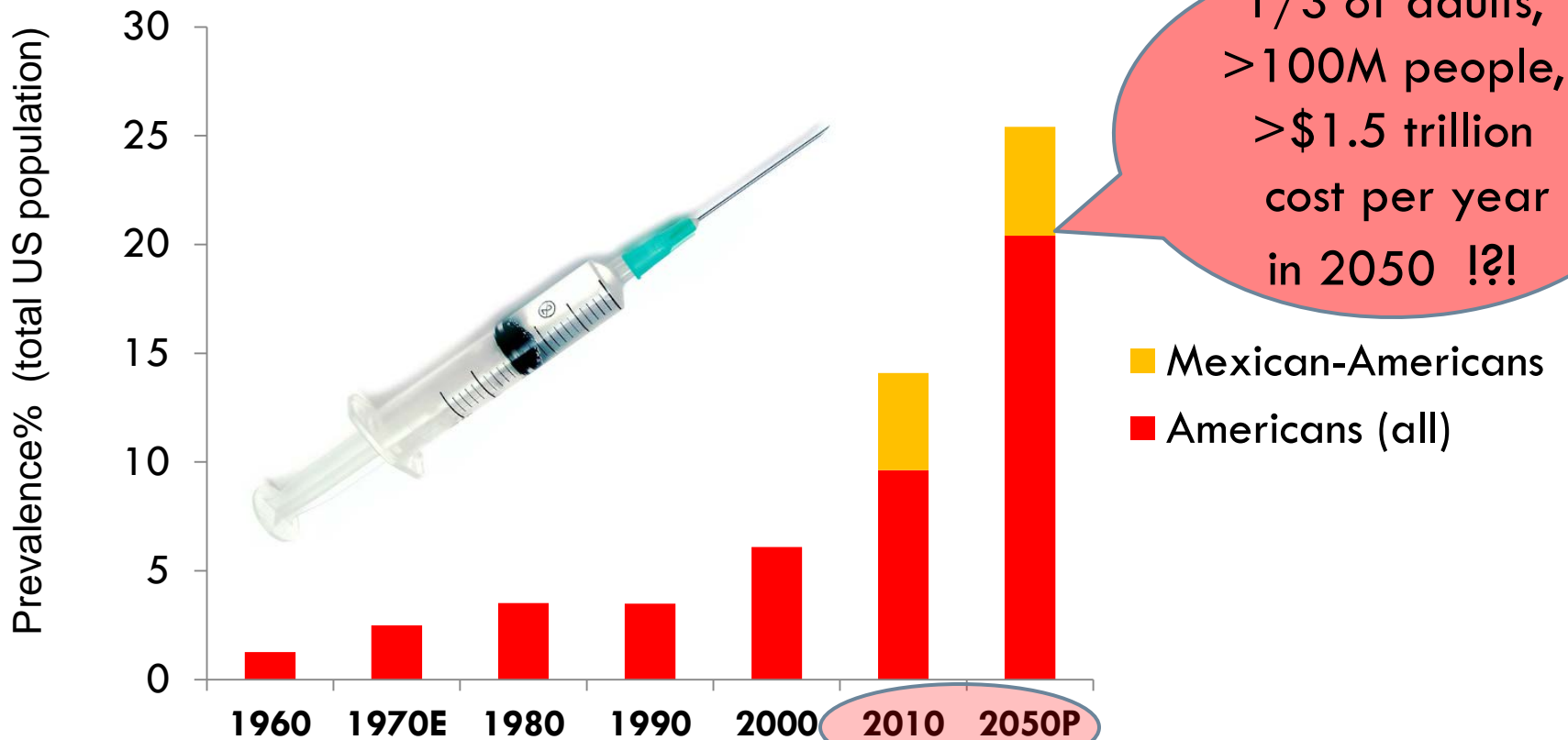
Notes/References: % of state budget. Also, USA total national education public + private spending as % of GDP, per OECD: education, 7%; health: 17%. Azleg.gov: AZ Joint Legislative Budget Committee 2013: General fund operating budget spending. Fiscal years 1979-2014. JBLC, 2014: Other appropriated fund operating budget spending: Fiscal years 1989-2014. (Health: AHCCCS + ADHS + Veterans Services) Slide @11/11/2016

1 / 3 Students will become Diabetic !?!

pre-diabetic already: 23+% US teens, 35+% adults

28

US Diabetes cost \$245B [3x non-diabetic costs/person]

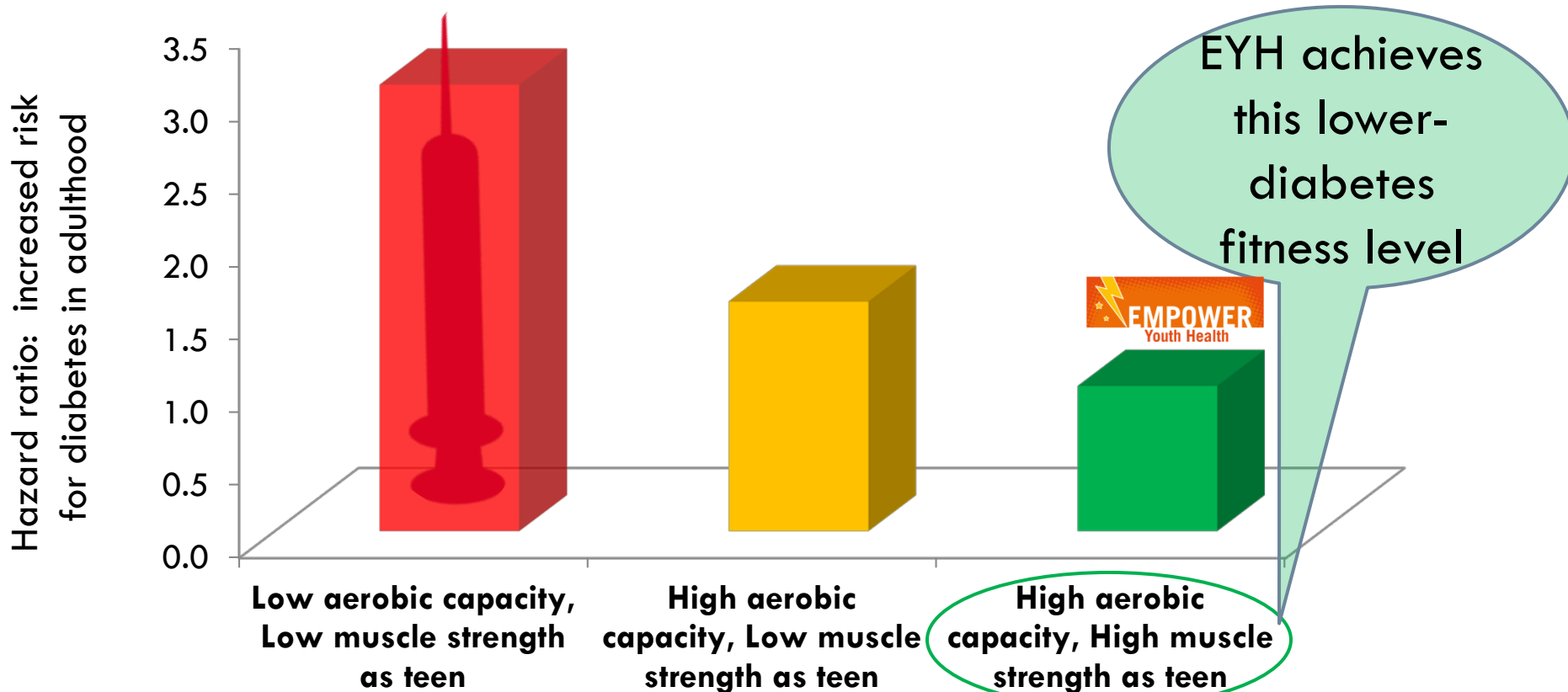


Notes: Approaching 500,000 w/diabetes in AZ now. Much higher-than-average diabetes rates among Mexican-American, Native-American, & lower-income population. Diagnosed + undiagnosed diabetes, prevalence% of US population calculated using same diag./undiag. ratio as in 2010. 86M adults pre-diabetic out of 243M adults. \$245B = USA 2012, and growing fast. Annual medical expenditures per nonelderly (ages 18-64) adult enrollee in Medicaid, 2009: No chronic conditions=\$4,342/year; CVD (cardiovascular disease)=\$9,414/yr; Diabetes=\$13,313/year; after out-of-pocket costs; per Kaiser FF. References: *Pediatrics*, 2012 in USNews, 5/21/2012 (youth prediabetes); Diabetes.org (adults); Boyle et al, 2010 ("middle-ground projections"); CDC, 2014: *Long-term Trends in Diabetes*; Schneiderman et al, 2014; Edunuity ests.; Google images. Slide@10/21/2016.

Teen Fitness → 1/2 - 2/3 less Diabetes as Adult

>100x lifetime payback/ROI for EYH “ed-vaccination”

29



Notes: Type 2 diabetes. Hazard ratio (HR) (95% CI), P value <0.001: 1.00, 1.58, 3.07 respectively (controlled for SES, education level, BMI, family history of diabetes, etc.; national cohort study population of 1.53M 18-year-old males without prior diabetes). Aerobic capacity had biggest associated impact, but muscle strength was also important. “Overall, the combination of low aerobic capacity and muscle strength was associated with a 3-fold risk for type 2 DM...Overall, these findings suggest that physical fitness has important health benefits for all, even for persons who are not overweight or obese...These findings suggest that interventions to improve aerobic and muscle fitness levels early in life could help reduce risk for type 2 diabetes mellitus in adulthood.” Empower Youth Health (EYH) is an evidence-based program that helps K-12 schools improve physical & nutrition education, including both aerobic/cardiovascular fitness and muscular strength, as verified by FitnessGram. Reference: Crump, Sundquist, et al, 2016: *Physical fitness among Swedish military conscripts and long-term risk for type 2 diabetes mellitus*. Reeves, 2016. Slide @11/28/2016



Why Educators Support?

M-V Physical Activity Improves Academics



30

- **Reallocating time from PE does not improve achievement**
 - Wilkins et al, 2003; Trudeau & Shephard, 2008
- **Keeping/increasing time allocated to PE does not harm achievement**
 - Kwak et al., 2009; Lees & Hopkins, 2013; Rasmussen & Laumann, 2013; RWJF, 2009; Shephard, 1996; Singh et al., 2012; Trost & van der Mars, 2010; Trudeau, 2010; Trudeau & Shephard, 2010; USDHHS, 2010)
- **Regular PA throughout day helps academic outcomes**
 - Ahamed et al, 2007: Action School! BC; Donnelly et al, 2009: PAAC; Sallis et al, 1999
- **Moderate-to-vigorous PA (MVPA) improves cognitive functioning & academic performance**
 - Fedewa et al., 2011; Hillman, Castelli et al, 2007- ; Hollar et al, 2010; Kamijo et al, 2011, 2012; Shephard, 1996
- **PE, PA, Sports increase engagement & reduce drop-outs**
 - Desy et al, 2013; Rumberger, 2011

Notes: e.g., Trudeau & Shephard, 2008: "Given competent providers, [up to 60 minutes] PA can be added to the school curriculum by taking time from other subjects without risk of hindering student academic achievement. On the other hand, adding time to 'academic' or 'curricular' subjects by taking time from physical education programs does not enhance grades in these subjects and may be detrimental to health." Lees & Hopkins, 2013: systematic review of RCTs: "There was no documentation of APA [aerobic physical activity] having any negative impact on children's cognition and psychosocial health, even in cases where school curriculum time was reassigned from classroom teaching to aerobic physical activity." References: See other slides, edunuity.org for detailed references. Slide @11/27/2016

School Wellness Policy Plans & SHI

31

- **Local School Wellness Policy**

- Each LEA in NSLP required by Congress to establish plan for all schools in LEA, review at least every 3 years
- Schools required to meet federal school nutrition standards

- **School Health Index (SHI)**

- Form & process for self-assessment, prioritization & planning by schools
- 4/8 modules: 1) School Health/Safety; 2) Health Ed; 3) PE & PA; 4) Nutrition Services
- Schools identify strengths & weaknesses of their health & safety policies
- Input from administrators, teachers, food services, parents, students & community
- Develop action plan based on school priorities to improve student health
- Add permanent School Health Advisory Committee including parents, community

Notes: LEA = Local Education Authority, i.e., school district. NSLP = National School Lunch Program. PE = physical education. PA = physical activity.

Reference: USDA: <http://www.fns.usda.gov/tn/local-school-wellness-policy> CDC: <http://www.cdc.gov/healthyschools/shi/index.htm> Slide @11/28/2016.

Whole School, Whole Community, Whole Child Model

WSCC=Coordinated School Health 2.0: a collaborative preventive approach to health via schools

Empower Youth Health addresses many of these

32





Strategies that Worked vs. Smoking...

Yet We **Aren't Doing Now** to Promote Physical Activity & Healthy Nutrition

[Report Card graded (A-F) on if & how well we are re-using strategies that helped reduce smoking]

33

- **Strong health-related education programs in schools** (D)
- **Broad & profound awareness of seriousness of problem** (D)
- **Hard-hitting, pervasive public information campaigns** (F)
- **Large insurance premium discounts for healthy behavior** (D⁺)
- **Cost-effective behavior cessation/adoption products/programs** (D)
- **Very strong government health warnings** (D)
- **Government restrictions on unhealthy prod. marketing/promotion** (F)
- **Dramatically increased unhealthy product sales taxes** (F)

Notes: **Effective steps we can realistically start taking NOW** are bold and/or underlined. Anti-smoking track record: 42% US adults smoked in 1965 → 17% US adults now. List of key strategies that helped to dramatically reduce smoking among Americans; followed by an (A-F) grade, indicating Edunuity's rating of how well AZ & the USA are using the particular strategy to prevent other unhealthy behaviors--particularly lack of physical activity and unhealthy nutrition--and thereby prevent or reduce chronic health conditions. Ranked by Edunuity in rough order of what is realistically implementable & politically achievable starting in 2016. *Population-wide K-12 preventive education ("ed-vaccination") builds a foundation of support for other policies, including by "raising consciousness" of students & their parents about the impact of health-related behavior.* References: alexiamuscat1.blogspot.com at Google images; CDC, 2015 (NHIS, 1965; YRBSS 2013 data, AZ: HS student cigarette use); *Ending the Tobacco Problem*, Institute of Medicine, 2007; Turner, 2014-16



What is HFA Initiative?

34

- Growing statewide coalition of education, health & other leaders

Vision: Arizona the healthiest state

Mission:

- Develop, fund & implement
- **systemic, sustainable, long-term**
- **evidence-based, highly-effective, high-ROI,**
- **school-based & other mutually-reinforcing approaches**
- to **empower individuals**
- to substantially improve their health
- *in the broadest sense & in social context*

“Health”: Whole-person: physical, cognitive, social-emotional, mental, financial, civic, creative, etc.



EYH can Payback costs in <1 Year

rapid ROI from health sector investment in EYH @\$10/child/year cost

“PE not Pills”

35

Health Condition	Treatment Cost (per treated student/year)	Prevalence (% students with condition)	Reduced Incidence (% drop in students with condition)	Grade Levels with Most Reduced Costs	Average Reduced Health Cost per Student/Year (all students)
Asthma, ADHD, Obesity, Depression/Other Behavioral Health	\$400-1500	5-24%	14-33%	Roughly spread across K-12	\$30-50

Notes: Evidence-based Empower Youth Health (EYH) “ed-vaccination”, primarily in the form of high levels of moderate-to-vigorous physical activity (MVPA) in this research analysis, reduces health costs by preliminary est. \$30-50/child/year @scale cost of \$10/student/year = <1 year payback. EYH costs per student are higher at smaller scales: ~\$15-30/student/year. It often only takes ~1-2 children per class becoming healthier to pay back EYH investment within 1 year.

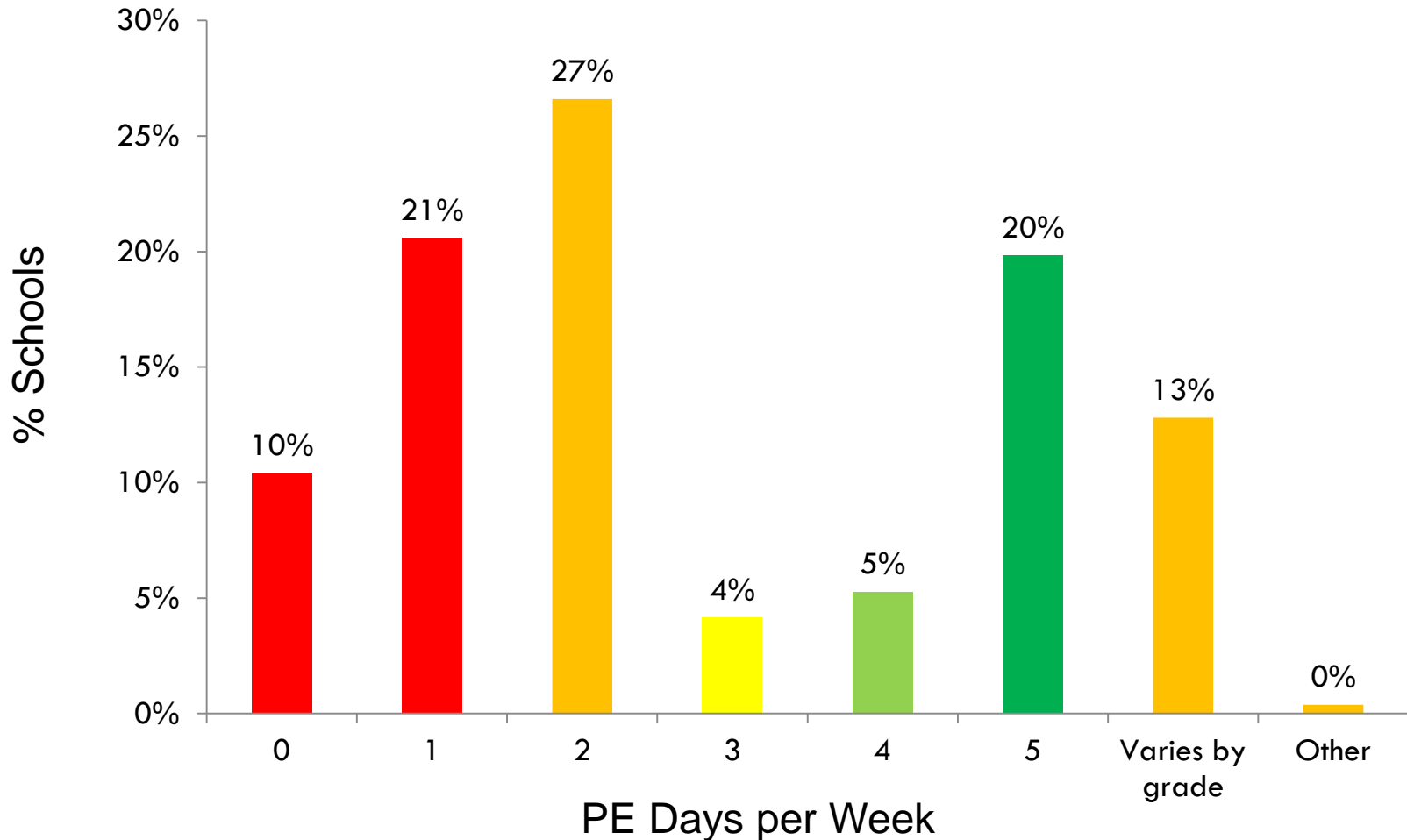
Payback/ROI formula: Condition Cost x Condition Prevalence x Reduced Incidence of Condition = Treatment Cost Reduction per Average Student (across all students).

K-12: Kindergarten through 12th grade. ADHD: attention deficit/hyperactivity disorder. BH: behavioral/mental health. MS: middle school. HS: high school. MVPA is key to improving many of these conditions: MVPA=e.g., after several minutes of MVPA, children are panting, starting to sweat, & having trouble conversing while moving. Target total of 60 minutes/day of MVPA from before, during and after school activities. Utilized peer-reviewed journal articles, when available, and also population data from government statistics/reports. ADHD & depression can improve particularly quickly, though BMI has been improving within 1-2 years in both EYH and Fit Kids. Reduced incidence of obesity estimated based on reduced obesity compared to what would have been expected in that sociodemographic population at those ages. Longer-term ROI = >100x, as health condition on-set is delayed or averted & the severity in middle age & later is postponed and reduced. Rapid payback at all grade levels by particularly reducing: Elementary: ADHD, asthma; MS: ADHD, misc.; HS: obesity, depression/BH. ADHD & depression costs vary dramatically based on type of treatment, and can be much higher. Also, EYH payback/ROI is estimated based on changes in the 78% of students now in the Healthy Fitness Zone (HFZ); however, the 22% non-HFZ obesity rates did not likely improve as much. There is some possible double-counting of teen obesity/depression/BH savings, since obesity costs can include some depression/BH costs. Class size assumption: 30-35 students. References include: Domino et al, 2009; Fullerton et al, 2012; Hampl et al, 2007; Katz et al, 2010; Kuhle et al, 2011; MACPAC, 2015; Pelham et al, 2007; Schuch et al, 2016; Skinner et al, 2016; Thapar et al, 2012; Wang et al, 2005. More Notes & References: see Payback Details slide. Slide @11/15/2016.

Low # PE Days per Week in AZ

Most schools: **too little time** to teach standards

36

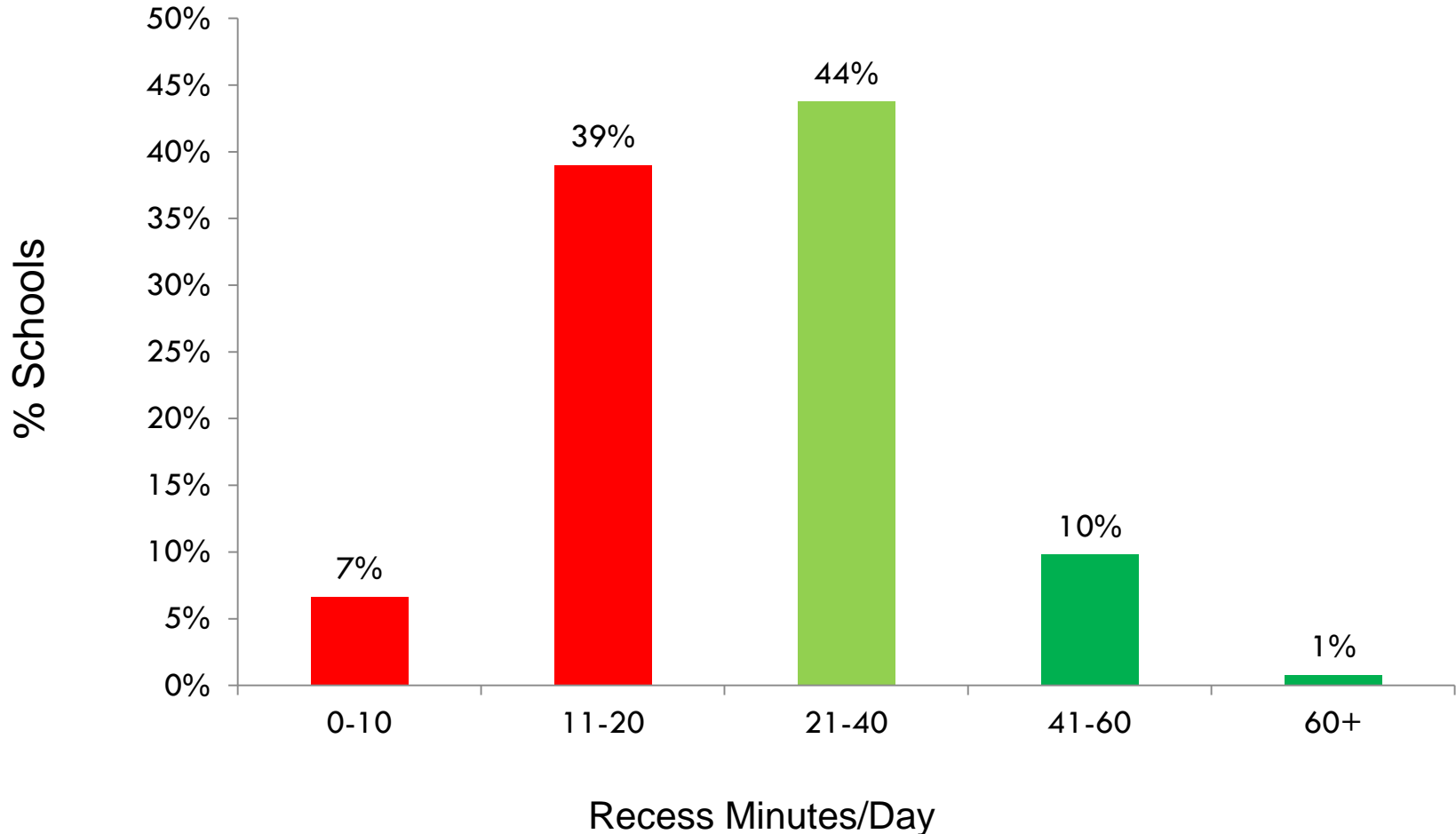


Note: Question asked in survey: "How many days a week is PE offered in each grade?" Surveyed 765 schools, across all grades K-12; 75% of schools included grades K-5. References: Recess and Physical Education Survey Results, ADE Survey of Arizona Public Schools, Fall 2010

Low # Recess Minutes in AZ

Many schools: **very little time** for physical activity

37

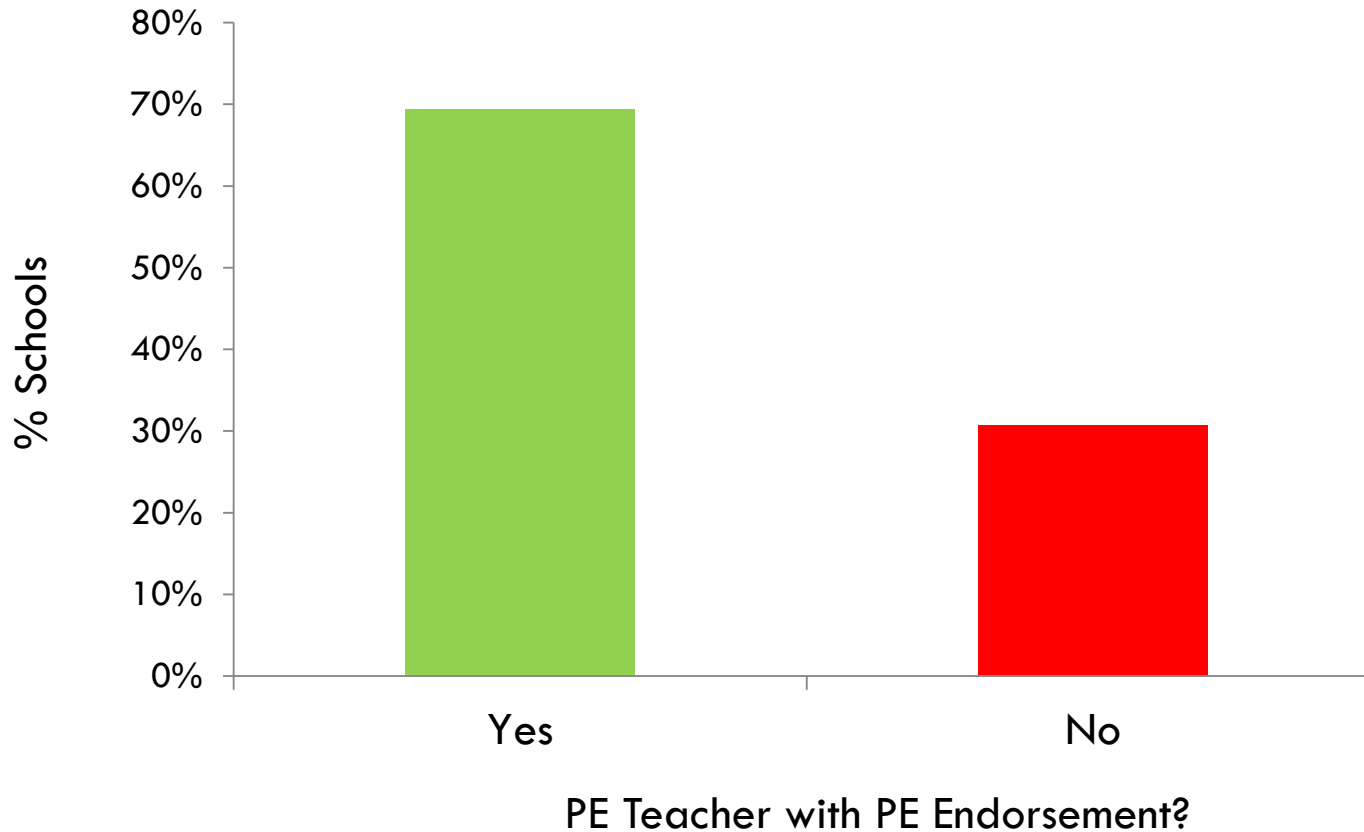


Note: Question asked in survey: "How many minutes of recess are provided each day?" Included 619 schools, possibly only K-8.
References: Recess and Physical Education Survey Results, ADE Survey of Arizona Public Schools, Fall 2010

Almost 1 / 3 of Schools have no Certified PE Teachers

with limited PE/PA time, education & training: very **hard to teach standards**

38



Note: Question asked in survey: “Do you have PE instructors who hold a valid Arizona Teaching Certificate with a Physical Education endorsement?” 41% of schools surveyed had more than one PE teacher; so some of the “Yes” schools may only have 1 certified PE teacher and/or may have at least 1 uncertified PE teacher. 751 schools responded, across all grades K-12; 75% of schools included grades K-5. References: *Recess and Physical Education Survey Results*, ADE Survey of Arizona Public Schools, Fall 2010. Lack of PE teacher training information based on broad anecdotal evidence.

Which PE/HE Metrics to A-F?

Multiple categories/measures (proposed)

39

Reflecting the state standards—& preventing bad habits/health:
lack of physical activity, unhealthy nutrition, smoking

- **General (PE/HE/Related)**

- Quality school wellness policy plan + Improvement in practices (SHI)
- Healthy behavior - Portfolio assessment

- **PE**

- Minutes - PE certification - Fitness assessments: training & improvement

- **Recess/Physical Activity (PA)**

- Minutes - Quality trained leaders/peers - Fitness assessments: improvement

- **Health Ed incl. Nutrition**

- Nutrition behavior (breakfast, fruit & vegetable consumption)
- Other health behavior (smoking)

Which PE/HE Metrics to A-F & When?

By year (proposed)—assuming 2016-17 start

40

- **2016-17: Simple, easily available input data associated with good outcomes (3 points)**
 - + School wellness policy plan incl. SHI ? (Yes/No)
 - + PE minutes (#) + Recess/PA minutes (#) + PE-certified teacher? (Yes/No)
- **2017-18: Adding school wellness policy improvement outcomes & training metrics (3 pts)**
 - 2016-17 + school wellness policy plan % improvement (SHI % increase)
 - + PE teacher FitnessGram training (Yes/No)
- **2018-19: Adding fitness outcomes, recess/PA quality, nutrition & health behavior (4 pts)**
 - 2016-18 + fitness improvement (%) + recess/PA leader/peer quality training (Yes/No)
 - + breakfast consumption (5 days: Yes/No) + smoking (%)
- **2019-20: Adding more nutrition behavior data (5 pts)**
 - 2016-19 + fruit/vegetable consumption improvement (%)

Why Educators Support Improving PE/PA/HE?

41

- **Academic Improvement & Student Engagement**

- Evidence-based cognitive improvement via effective PE/PA & nutrition
- Neuroscience: building physical brain “infrastructure” capacity for learning
- PE/PA/Sports motivate many student to stay in school

- **Children’s Health**

- Widespread recognition of health issues & value of school role by ed leaders

- **Financial Resources for Schools**

- **Playing Offense:** New \$\$ from Health sector into K-12
 - Example: Northern Arizona Healthcare ~\$1M/year since 2012 in increased PE & nutrition ed
 - Long-term potential: \$300M+/year in new money from health sector/budgets into K-12
- **& Defense:** Protecting current & future Ed. \$\$ from Health Cost Tidal Wave
 - Physical & mental health-related absenteeism, dropping out--hurts ADA & enrollment-based funding
 - Rapidly rising school district health insurance costs
 - Future threat of health-related government & family budget squeezes:
 - health cost pressures on federal & state government spending & on family ability to pay higher taxes for education: **our health overrides all other spending priorities**

Why *Schools* Essential for Health ?

“*ed-vaccination*” for healthy behavior: biggest *health issues* now from *behavior*, not *microbes*

42

- Captive long-term audience: 180 days/year x 13 years
- Developmentally ideal stages for learning: ages 5-17
- Very low cost per individual: main school/staff costs covered already by public K-12 funding
- Many effective, evidence-based approaches: @PE, HE, recess, classroom, before/lunch/after-school, etc.
- Can influence parents (adults) through children
- Lays foundation for personal “ownership” of health,
& for adopting future *clinical* & public health advice
- Nothing else comes close in low cost total population impact

[*Alternatives* ??: Clinical settings *not turning the tide*...

& Improving adults’ behavior is *very expensive & much less effective*.]

Why Us? Why Now?

Our personal & collective opportunity & responsibility

43

It's Too Late to Wait

Addressing 25+ years of widespread **neglect/negligence** of PE/HE/child health

Children's lifetime health **determined during K-8 years**

Each year delayed increases risk—a **permanently lost opportunity**

1/3 of current K-12 students will become diabetic, unless we improve PE, HE, etc.

Future ed **funding at risk** from skyrocketing health costs

Essential for Arizonans' Health

No alternatives to affordably improve health on large scale (e.g., AzHIP)

There is no other plan—and no one else is coming to “save” us...it's on us

First in USA into A-F

Tired of being **40-something?** (45th/49th/etc.)

School Funding

We have a realistic, sustainably “self-funding”, politically feasible plan

- Health sector new \$\$\$ into K-12 schools (e.g., Fit Kids→AZ-wide: \$100M/yr)