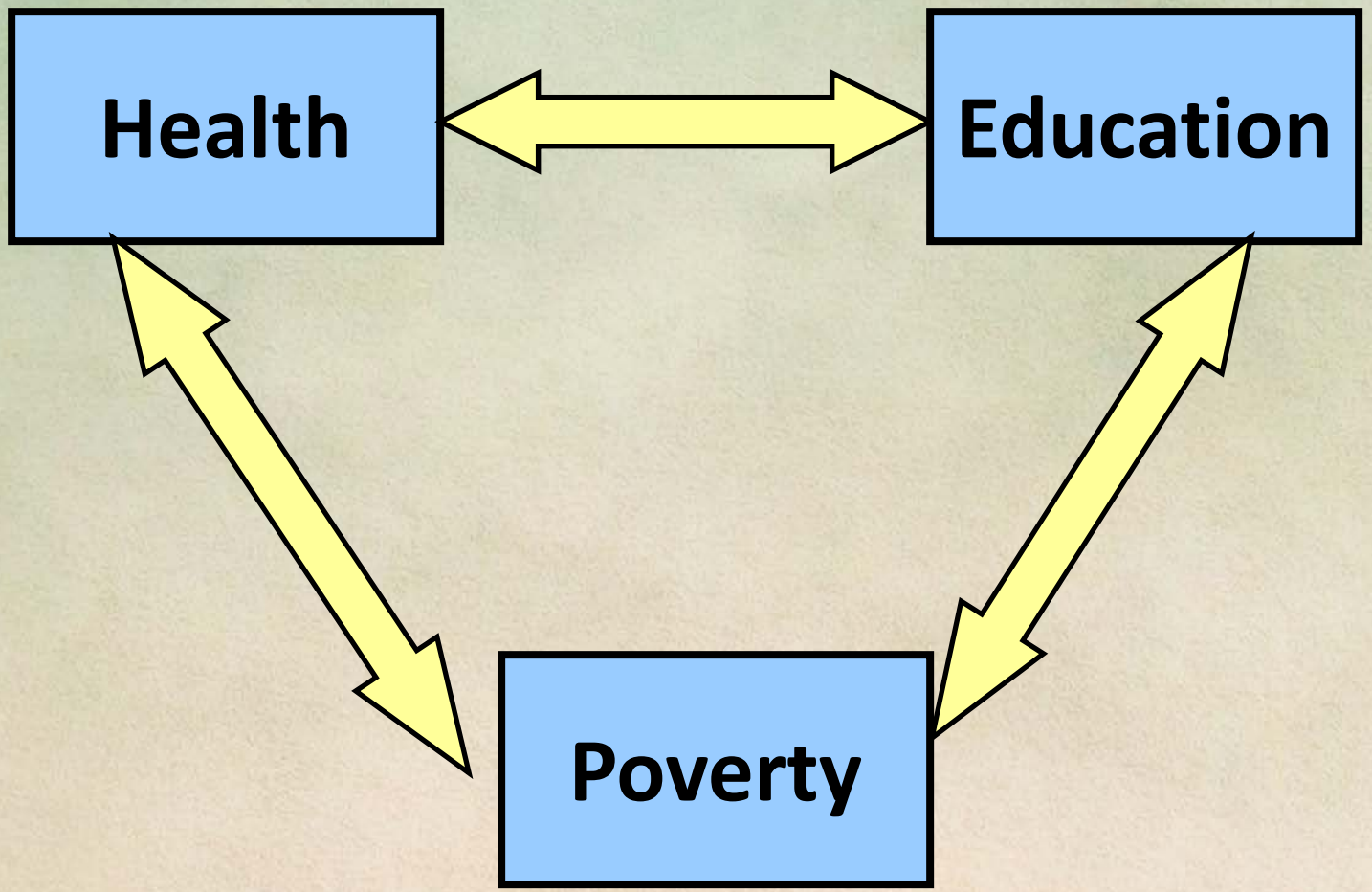
Causal Pathways for Health Effects on Educational Outcomes

Charles E. Basch

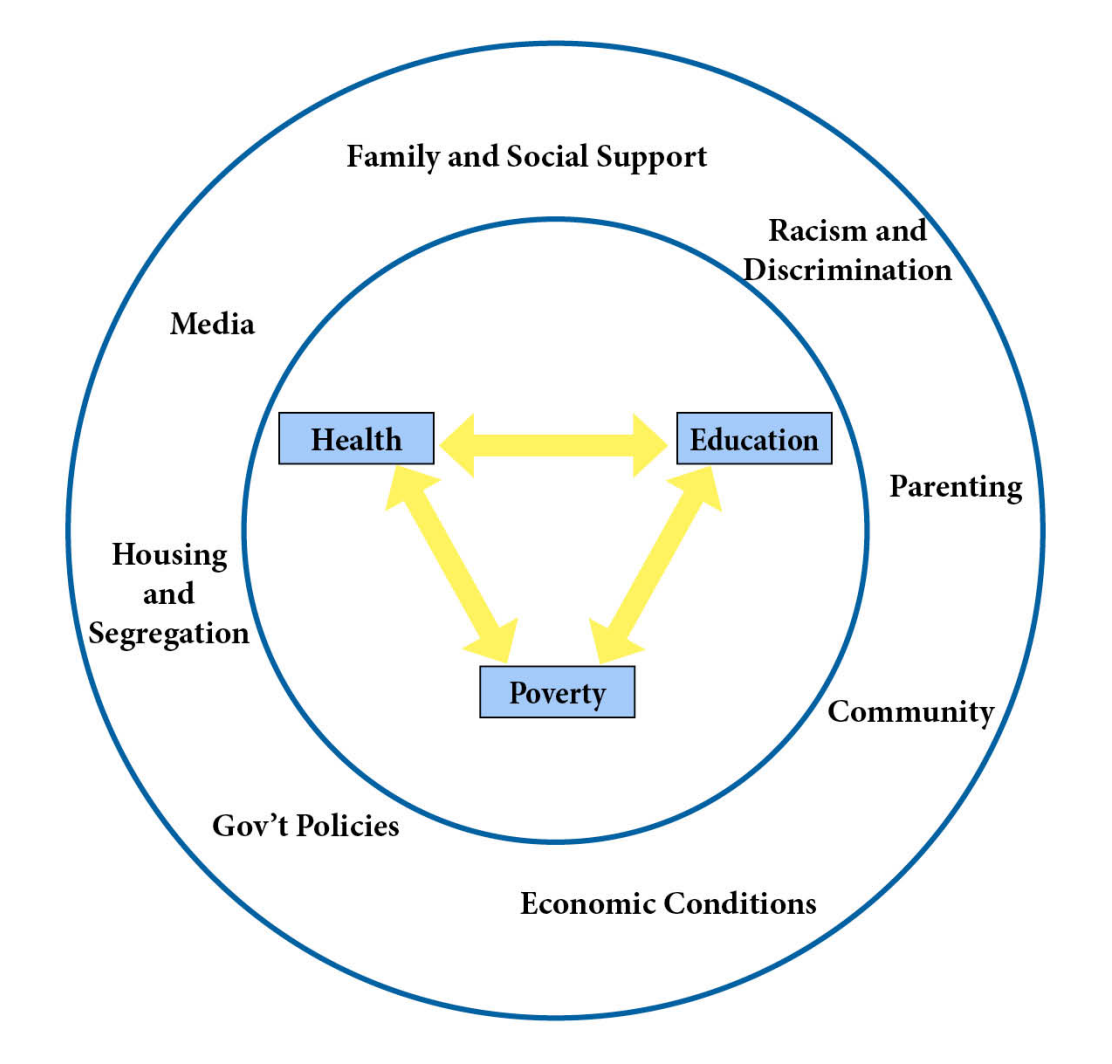
Context for Addressing Health Problems in Schools

- Standards and accountability
- Revising school financing
- Teacher preparation
- Rigorous curricula
- Charter schools
- Reducing health barriers to learning

Reciprocal Relationships



Larger Context of Social Determinants of Health



Delimitations

Focus is on …

- Urban minority youth from low-income families
- School-age youth
- Health problems that can be feasibly and effectively addressed by schools

Health and Educational Outcomes: Strategic Priorities

Schools can't address all the health needs of youth

Strategic Priorities are needed

Criteria for Selecting Strategic Priorities

- Prevalence and health disparities
- Causal effects on educational outcomes
- Feasibility and effectiveness of school-based programs and policies

8 Priority Health Barriers to Learning

1. Vision
2. Asthma
3. Teen pregnancy
4. Aggression and violence
5. Physical activity
6. Breakfast
7. ADHD
8. Oral health problems

High Prevalence

- Visual problems: ~20% of low-income youth
- Asthma: ~8.3% of youth (<18) with current asthma
- Teen births: 20.3 births/1,000 15-19 year-olds
- Violence: 20% of high school students bullied at school
- Physical activity: ~50%-75% don't get enough
- Breakfast: ~14% of high school students skip it
- ADHD: ~11% of 4-17 year-olds ever diagnosed;

  8.8% current diagnosis
- Untreated caries: 23% of 2- to 11-year-olds

High Prevalence

Mental Health

During the 12 months before the 2015 YRBS survey…

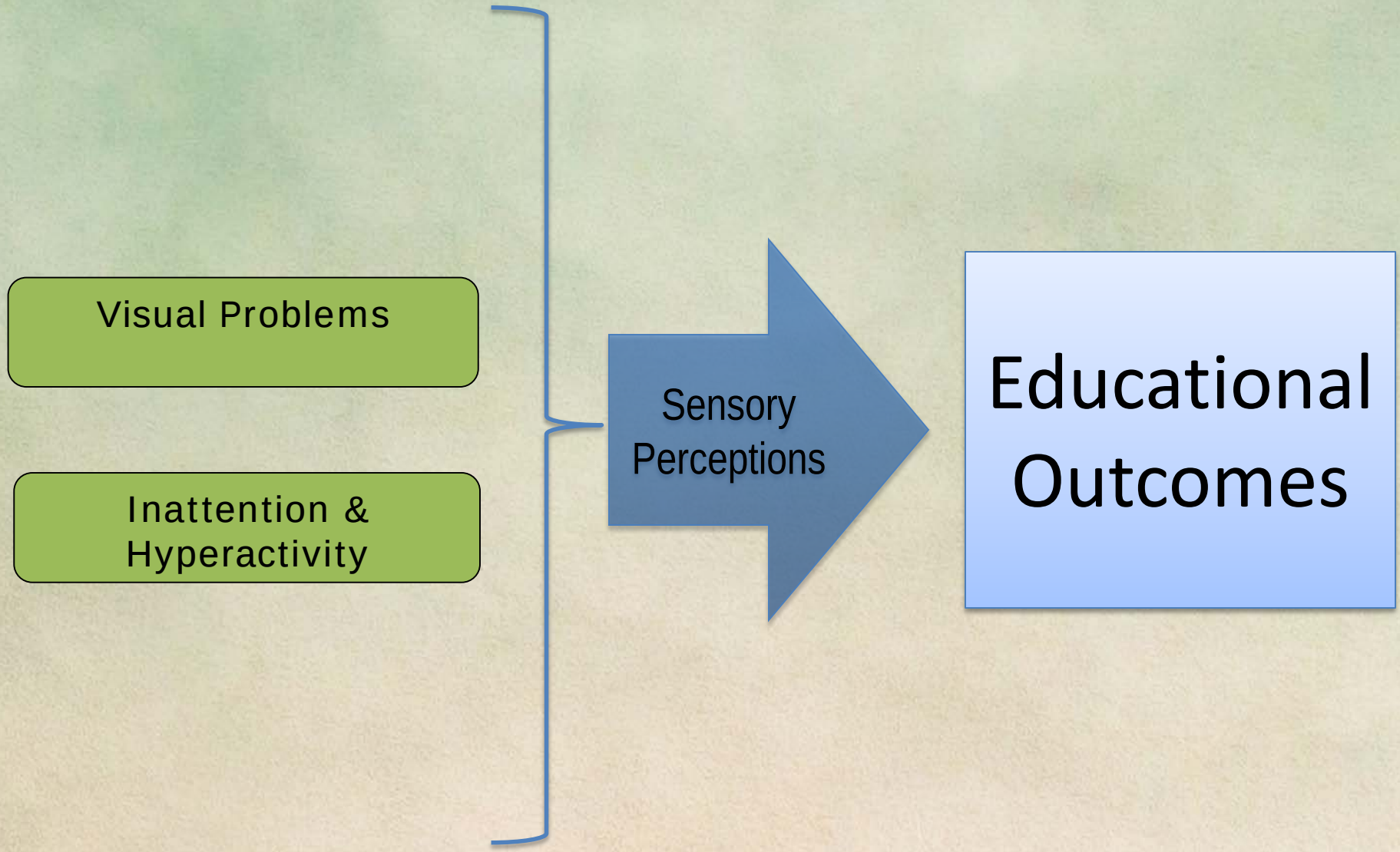
- “29.9% of students nationwide had felt so sad or hopeless almost every day for 2 or more weeks in a row that they stopped doing some usual activities”
- The prevalence was almost twice as high for females (39.8) than males (20.3%)

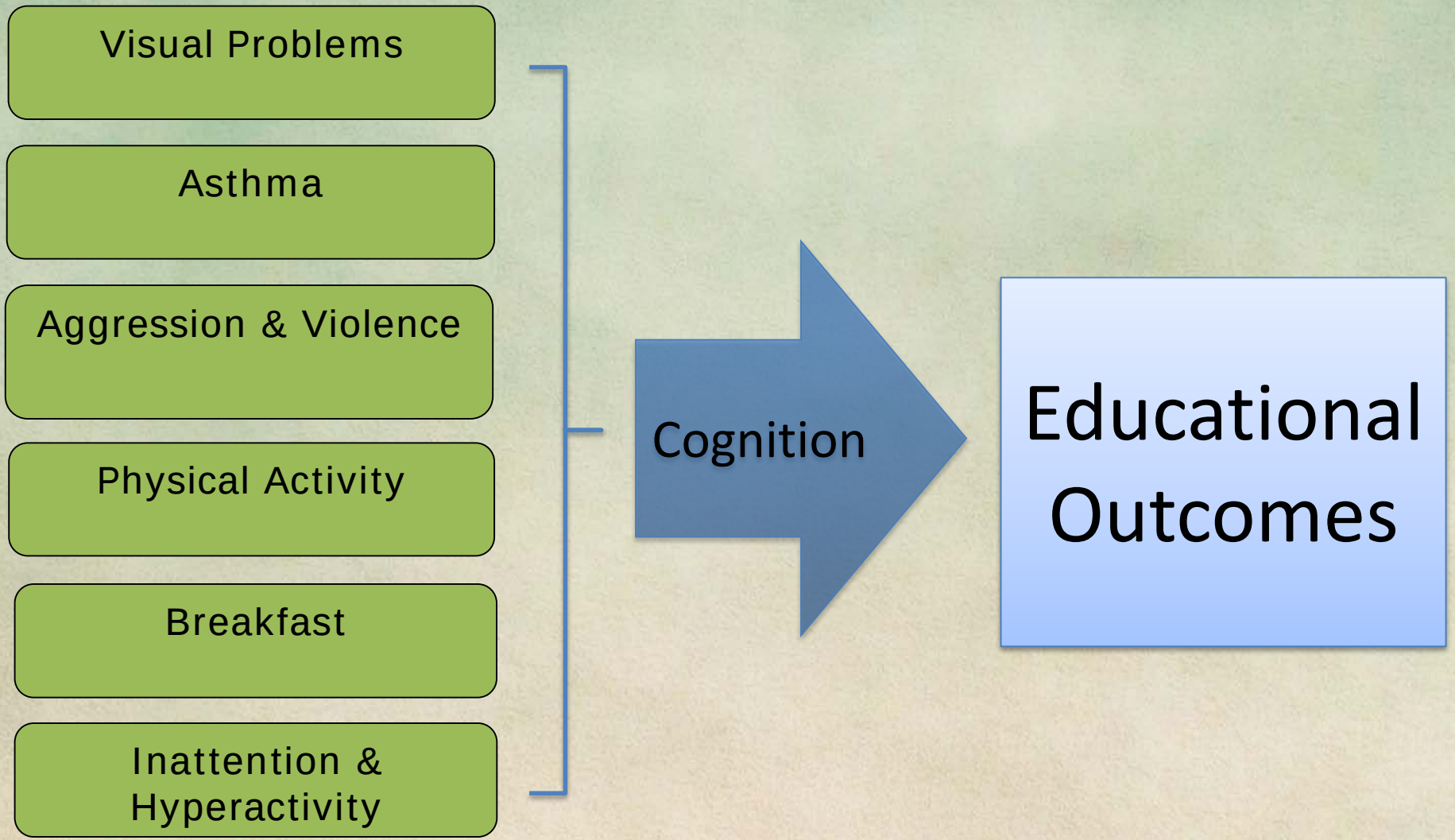
Causal Pathways

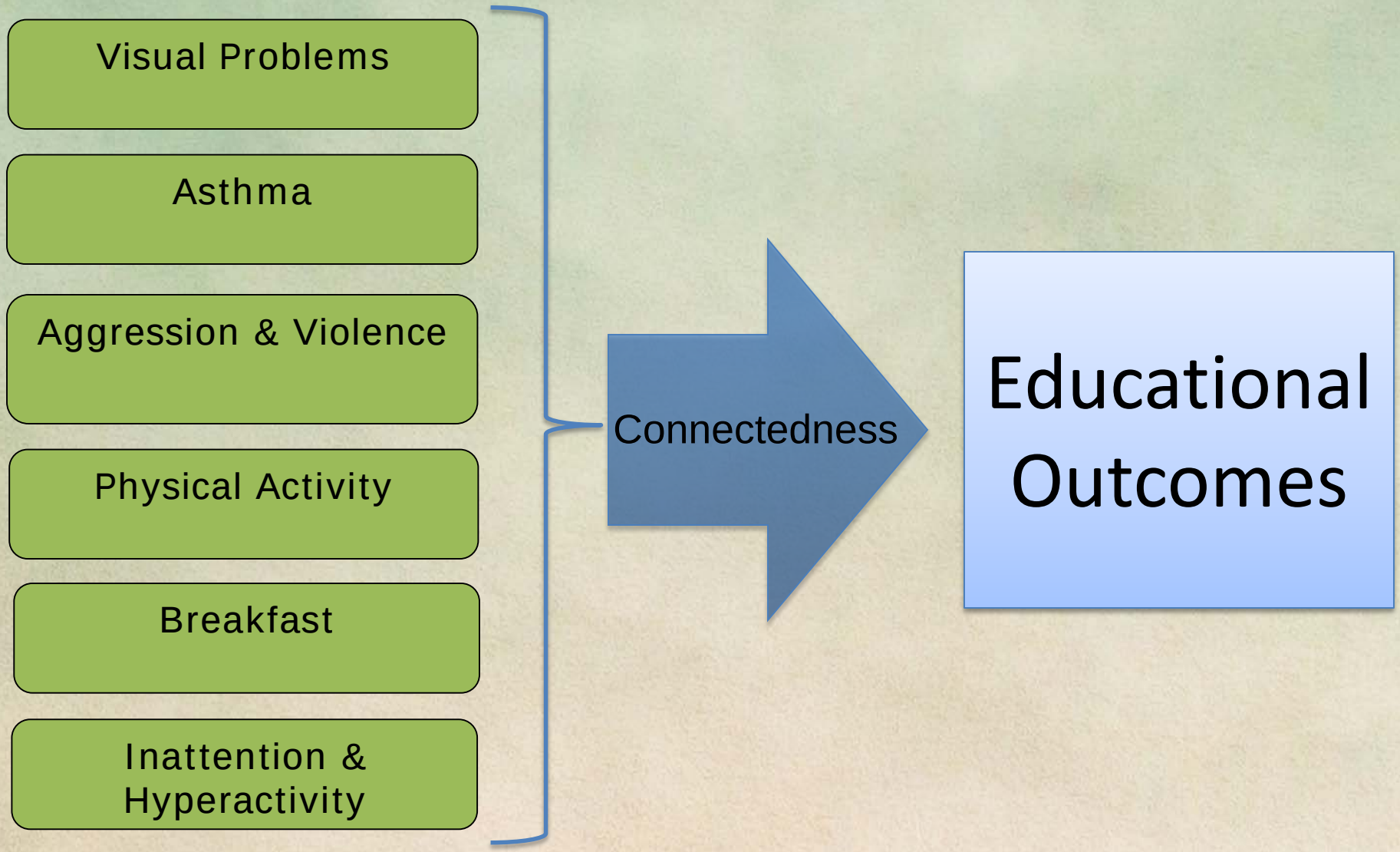
How do Health Factors Affect Educational Outcomes?

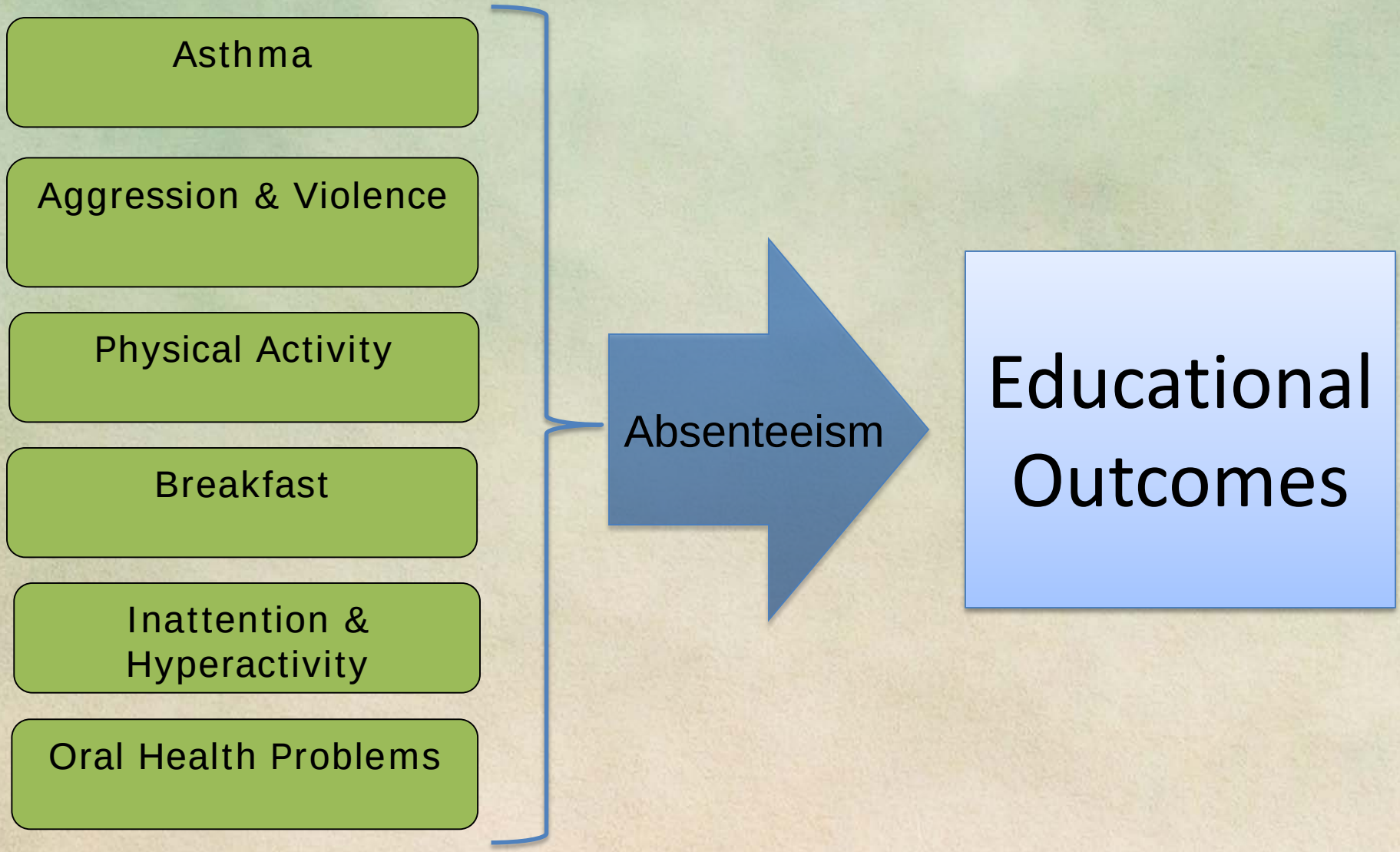
Causal Pathways

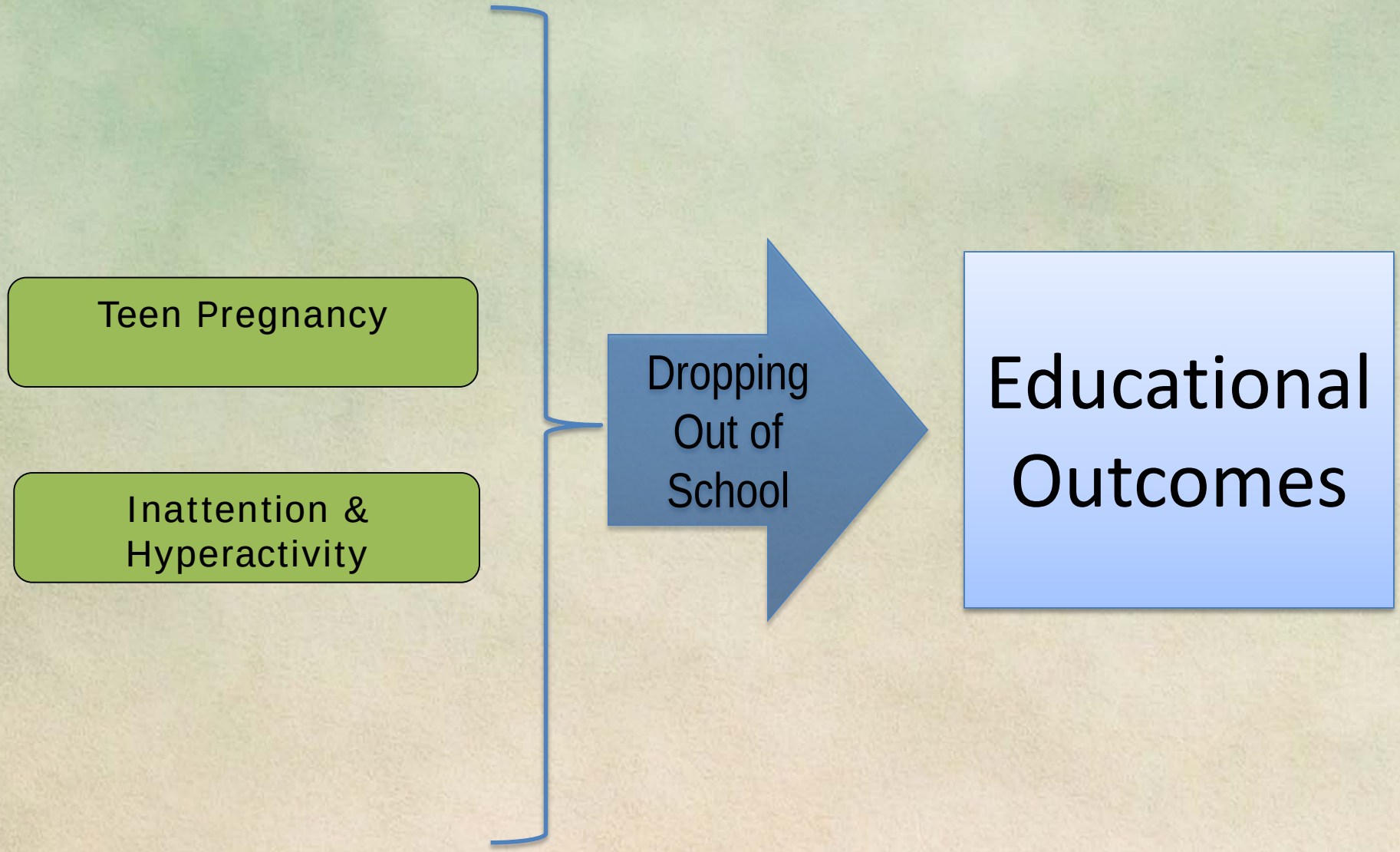
1. Sensory perceptions
2. Cognition
3. School connectedness and engagement
4. Absenteeism
5. Temporary or permanent dropping out


Visual Problems
Inattention & Hyperactivity
Sensory Perceptions
Educational Outcomes


Visual Problems
Asthma
Aggression & Violence
Physical Activity
Breakfast
Inattention & Hyperactivity
Cognition
Educational Outcomes


Visual Problems
Asthma
Aggression & Violence
Physical Activity
Breakfast
Inattention & Hyperactivity
Connectedness
Educational Outcomes


Asthma
Aggression & Violence
Physical Activity
Breakfast
Inattention & Hyperactivity
Oral Health Problems
Absenteeism
Educational Outcomes


Teen Pregnancy
Inattention & Hyperactivity
Dropping Out of School
Educational Outcomes

CONCLUSIONS

An Academic Imperative

If…

Synergistic Effects

- Many youth are affected by multiple health barriers to learning (e.g., breakfast, physical activity, sleep), which may have *additive and synergistic effects*
- School health programs will achieve the greatest educational benefits by focusing on *multiple* health barriers to learning

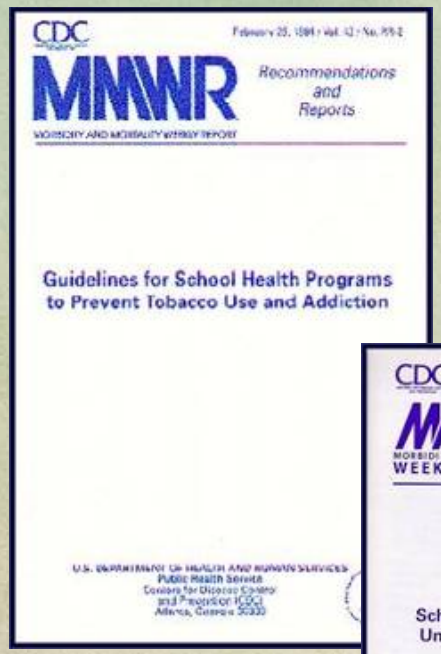
What Can Schools Do?

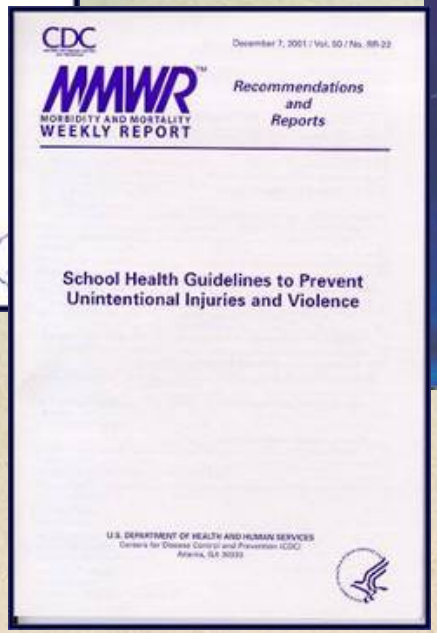
- Strategic Priorities
- High Quality (Evidence-Based) Approaches
- Effective Coordination

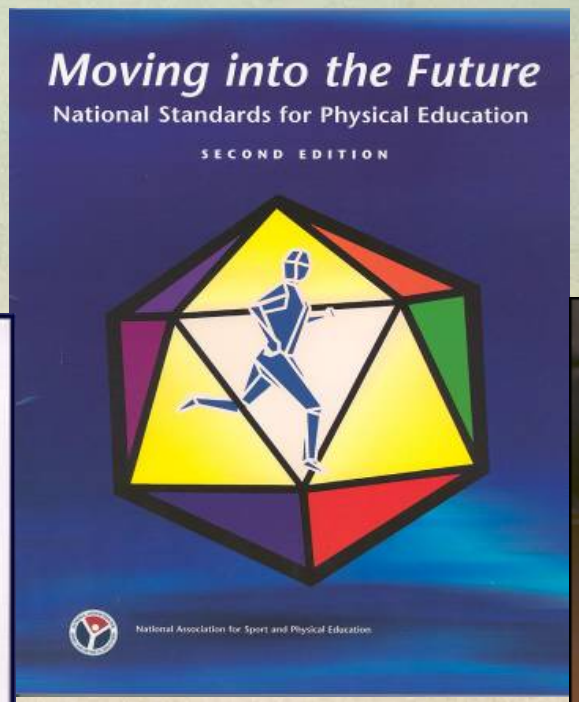
Strategically Priorities

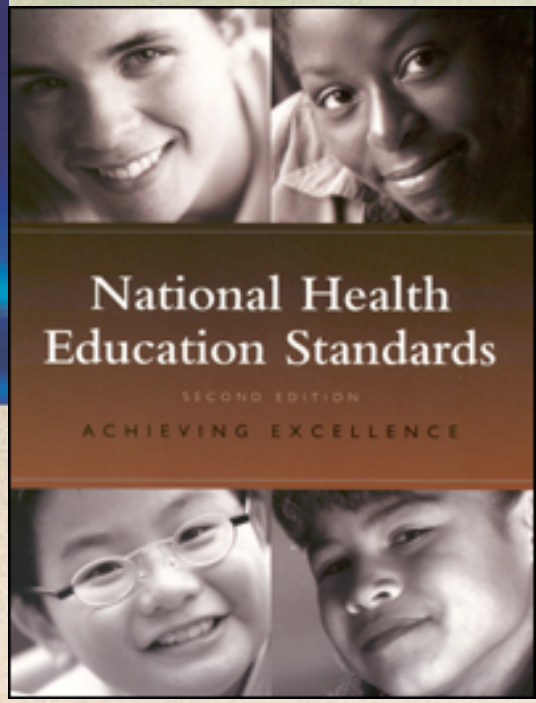
- Maximize yield from investments
- School-specific priorities based on
  - Importance, Feasibility and Acceptability
- Ongoing process
- Community involvement-Schools need help

High Quality, Evidence-Based







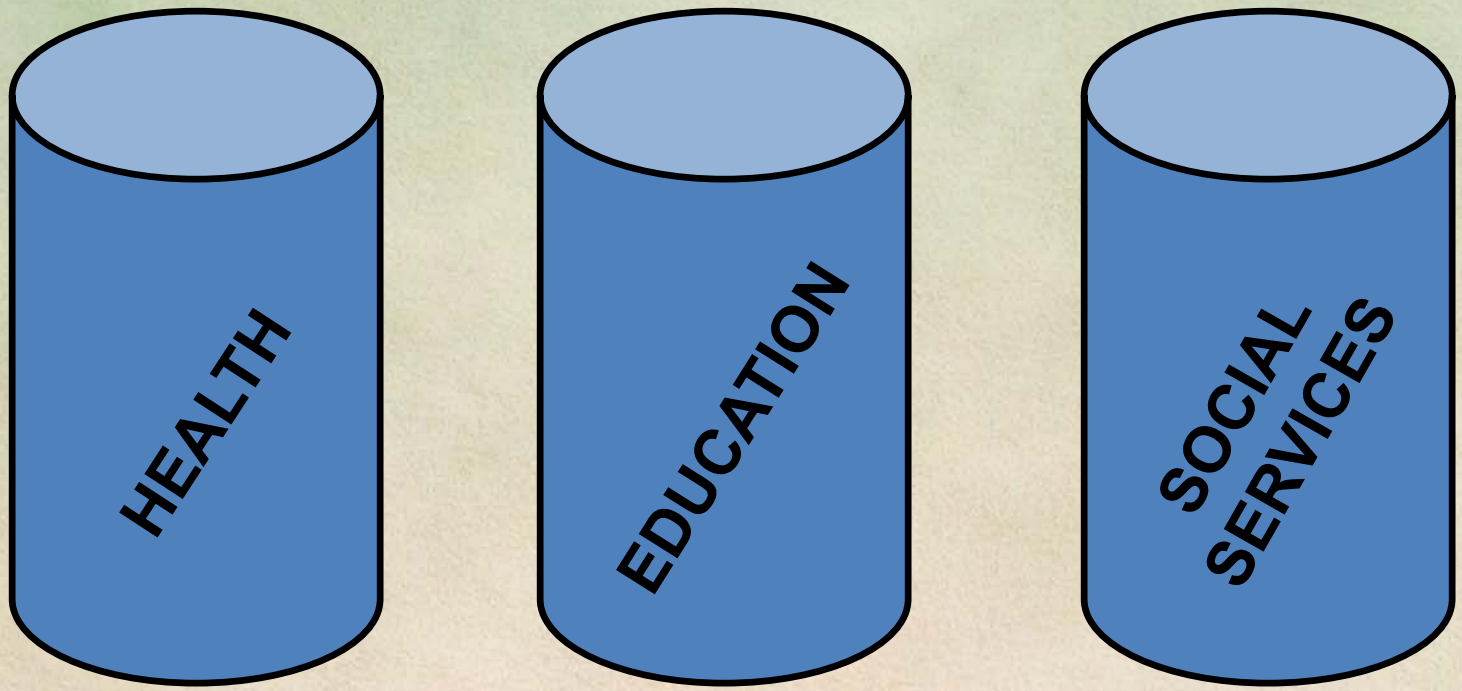


Effectively Coordinated

- School health coordinator
- School health council
- Community involvement and support
- Program integration
- Coordinated services for individual students

COMMUNITY
COMMUNITY
Health Education
Physical Education & Physical Activity
Nutrition Environment & Services
Health Services
Counseling, Psychological, & Social Services
Social & Emotional Climate
Physical Environment
Employee Wellness
Family Engagement
Community Involvement
COORDINATING POLICY, PROCESS, & PRACTICE
HEALTHY
SAFE
CHALLENGED
ENGAGED
SUPPORTED
IMPROVING LEARNING AND IMPROVING HEALTH

Our Children Are NOT Served Well by the Silo Approach



Data Dashboards – Breaking Down the Silos

- Schools need data to determine which students need which services at ongoing points in time
- Education and health data are currently maintained in different silos that are not integrated
- Creating dashboards that integrate key metrics will greatly assist with planning and evaluation

Schools Alone Can't Address Health Barriers to Learning

Schools need help from

- Families
- Health services providers
- Community organizations
- Philanthropies
- Government agencies
- Institutions of higher education

Examples of Efforts to Help Schools Reduce Health Barriers to Leaning

		Site of intervention				
	Strategic Priorities	In a school clinic	In a school program	In the classroom	In pediatrician's office	In community
Health Barriers to Learning						