



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



New Evidence-Based Findings about Asthma Management in Schools

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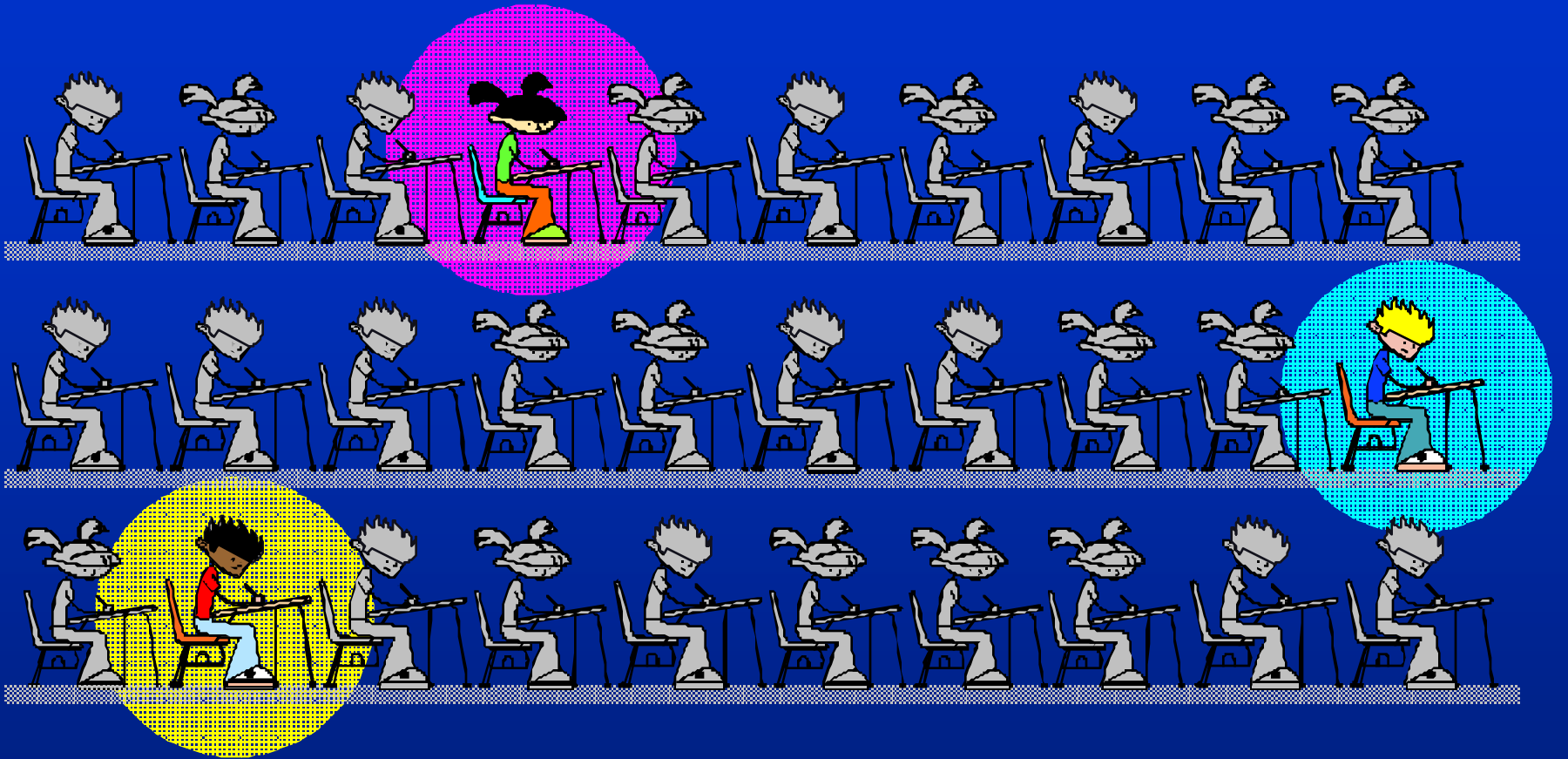
The findings and conclusions in this presentation are those of the authors
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How many children and youth in the U.S. have asthma?

5 million or nearly 10% of
school-aged children and youth
have asthma.

On average, 3 students in a classroom of 30



are likely to have asthma.

How does asthma affect their lives?

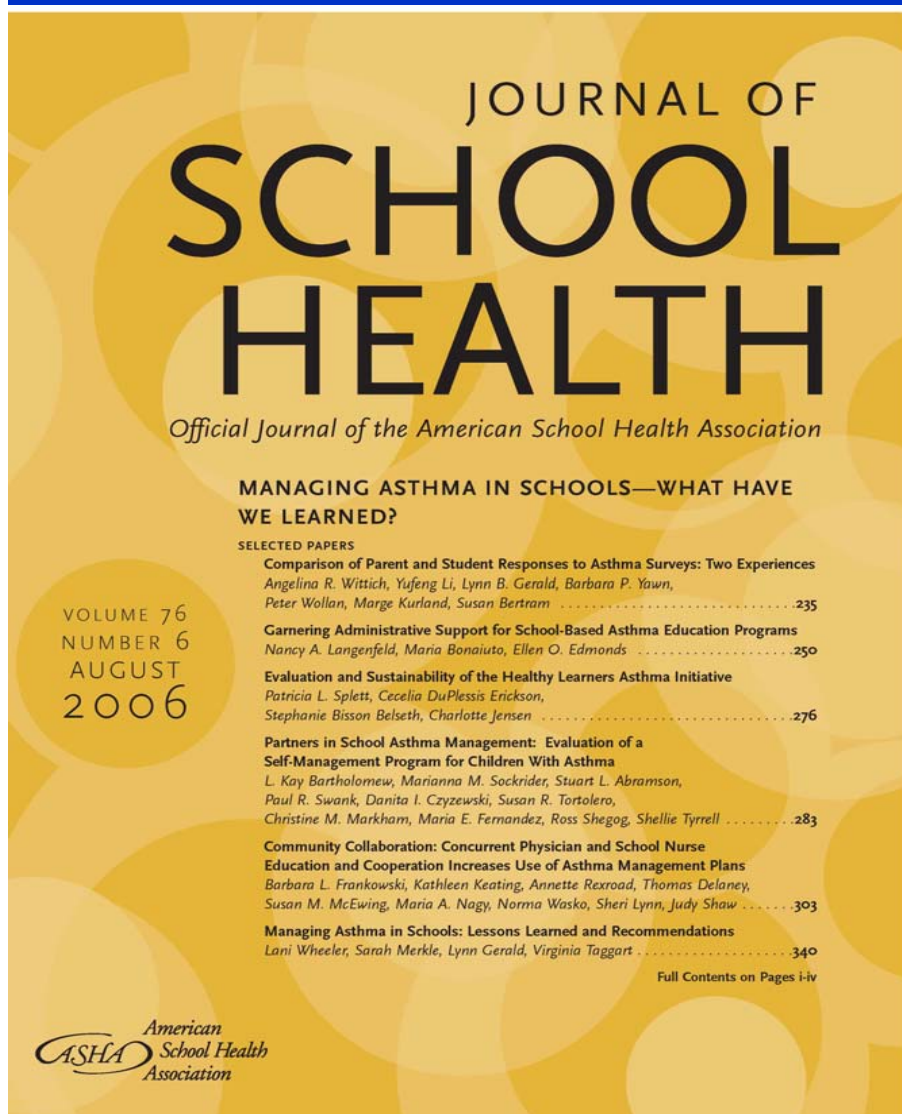
- Students miss almost 13 million school days each year due to asthma ⁽¹⁾
- Asthma is the 3rd-ranking cause of hospitalization among children under 15 ⁽²⁾
- People can die of asthma

1 CDC. *Asthma Prevalence, Health Care Use and Mortality, 2003-2005*. National Center for Health Statistics. Washington, DC.

2 Hall MJ & DeFrances CJ. 2001 National Hospital Discharge Survey. Advance data from vital and health statistics, Table 3; no 332. Hyattsville, MD: NCHS, 2003.



Science-Based Guidance for Addressing Asthma in Schools



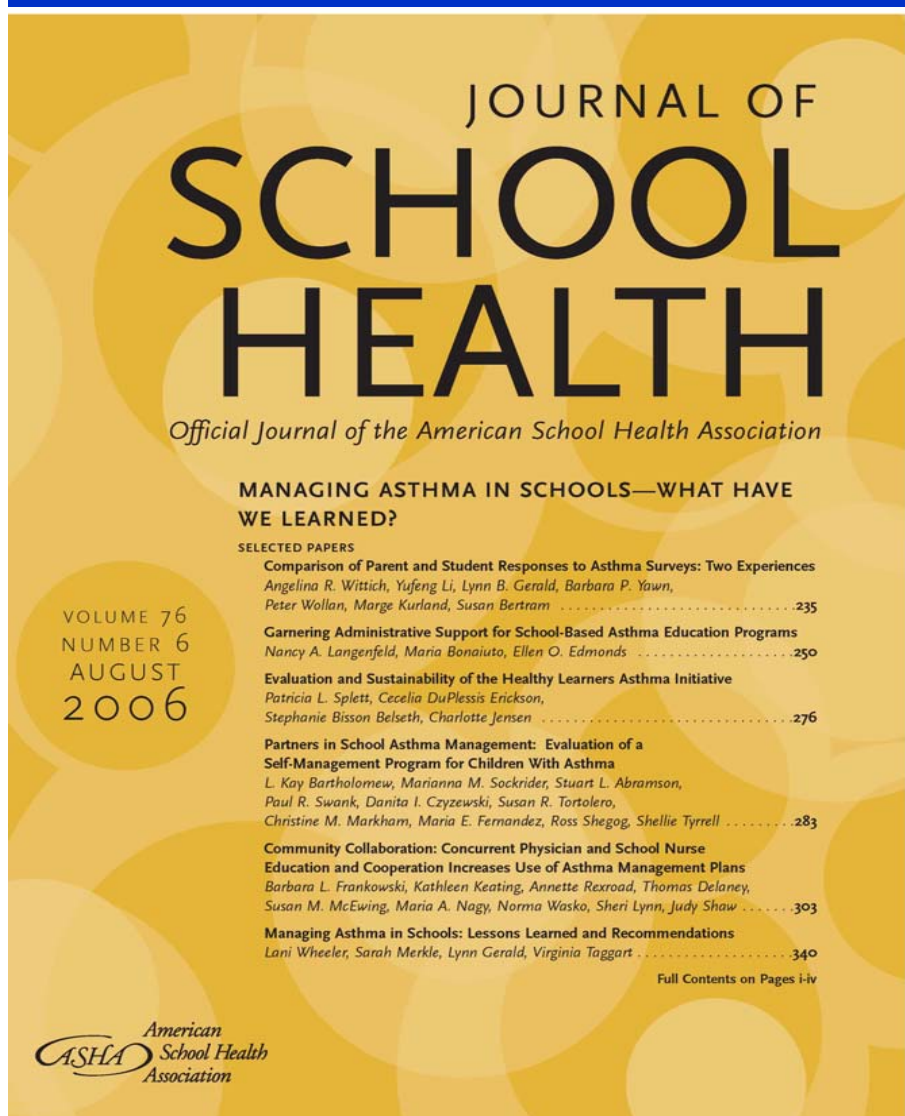
August 2006 Issue of the
Journal of School Health:

Managing Asthma in
Schools— What Have We
Learned



What's Included

- 150+ pages
- 28 articles
 - Research articles
 - Brief reports
 - Case studies
 - Introduction and Conclusion authored by co-editors
- School asthma resource list



Wide Range of Topics

- Identifying students with asthma
- Providing a healthy school environment
- Establishing appropriate management and support systems
- Educating school staff and students
- Implementing multi-component asthma management programs
- Linking children to proper medical care
- Providing asthma care at school



Five Key Lessons



1. Establish strong links with asthma care clinicians



2. Get administrative buy-in & build a team including a full-time school nurse



3. Target students who are most affected by asthma



4. Use a coordinated multi-component and collaborative approach



5. Support evaluation & use adequate and appropriate outcome measures



Key Lesson #1: Establish strong links with asthma care clinicians

**Students with asthma must
get medical care &
appropriate meds**

- Direct medical care at school
- Effective linking with community asthma care providers



Key Lesson #1: Establish strong links with asthma care clinicians

Liao et al. Breathmobile



**Richmond et al.
Consulting MD**



**Frankowski et al.
School Nurse &
Physician
Collaboration**

**Byrne et al.
Rescue meds
at school**



**Barbot et al.
Preprinted albuterol
order forms**

CDC



Liao et al. Breathmobile

- Comprehensive school-based mobile asthma care clinic in Orange Co., CA
- Regular complete asthma care from allergist, RN

Results

Among children in the program for
> 1 yr:

- ↓ Hospitalizations (19% to 3%)
- ↓ ER visits (38% to 16%)
- ↓ Multiple ER visits (23% to 6%)
- ↓ Absenteeism (60% to 25%)
- ↑ Use of controller meds
(24% to 78%)





Richmond et al. Consulting MD

- “Asthma 411” program in St. Louis, MO
- Consulting MD ½ day per week, plus on-call
 - Policies and procedures
 - Consultation for school nurses
 - Education: nurses, staff, students, parents
 - Standing orders

Results

- ↓ Students sent home from school (2666 to 2083)
- ↓ % absent among students with asthma, reduced to equal to % absent among students without asthma
- ↓ 911 calls due to asthma symptoms (7 to 2)





Barbot et al., Pre-printed albuterol order forms

- New York City Office of School Health
- Modified Medication Administration Form to include checkboxes for asthma diagnosis, severity, and order for MDI with spacer as needed for episodes and pre-exercise

Results

- ↑ Students receiving meds at school (6,000 to 13,000)
- ↑ 5 fold albuterol w/ spacer orders
- ↓ Orders for MDI w/o spacer by 95%
- ↓ Orders for nebulizers by 33%



CDC



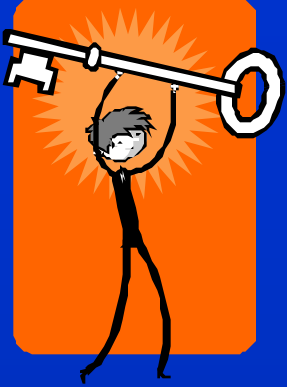
Byrne et al., Rescue Meds at School

- Yonkers, NY
- Provide nebulizers and albuterol for schools
- Orders obtained from student's primary care provider
- Over 7 years, expanded from 55 to 1255 schools

Results

- 95% of students returned to class
- 5% sent home
- 0.3% sent to an ED





Key Lesson #2: Target students who are most affected by asthma

- Target students with poorly controlled asthma
- Use (or improve) school records for case identification
- Avoid case detection surveys



Key Lesson #3: Get administrative buy-in & build a team including a full-time school nurse

- Administrative support is critical to gain entry into schools
- Use building-specific asthma data that connects health and learning
- Link programs to the existing school schedule.
- Site-based school health teams can support programs
- Having a full-time school nurse is often critical to the success of program implementation

School Nurses

- 6% of states and 20% of districts require each school to have a full-time school nurse
- 86% of schools have a school nurse
- 36% of all schools have a full-time school nurse

Source: CDC, School Health Policies and Programs Study 2006





Key Lesson #4: Use a coordinated, multi-component, and collaborative approach

Multi-component interventions are likely to be more successful.

Health services

Staff professional
development

Patient education

CDC



Strategies for
Addressing Asthma
Within a Coordinated School Health Program



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Key Lesson #5: Support evaluation & use adequate and appropriate outcome measures

- Evaluate programs
- Use appropriate measures
 - Examples from August 2006 JOSH
- Present and publish results

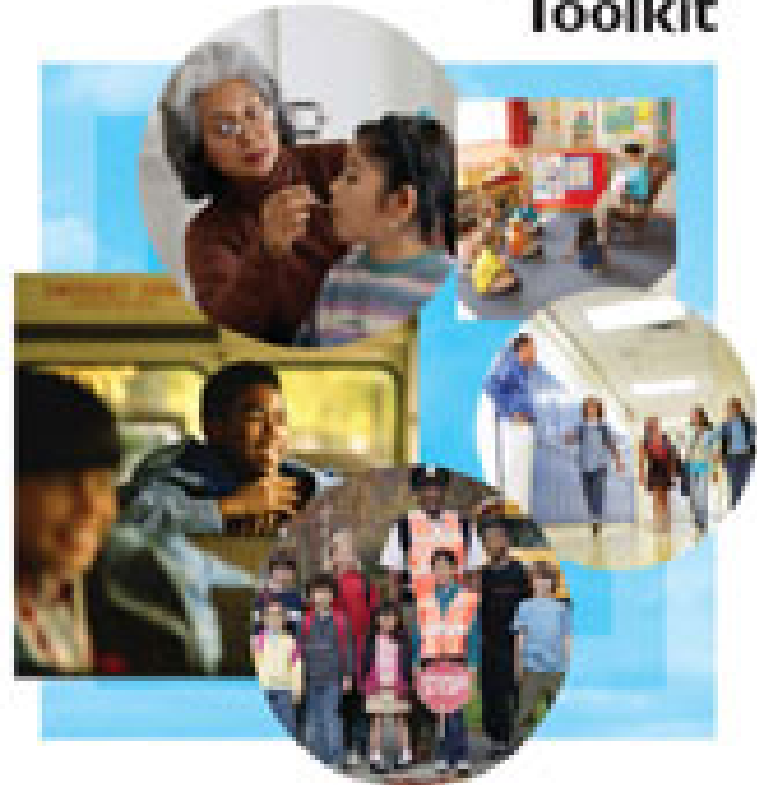


Where do we go from here?

- 1) Help schools establish and enforce asthma-friendly policies and procedures

 AMERICAN LUNG ASSOCIATION.
Asthma-Friendly Schools Initiative.

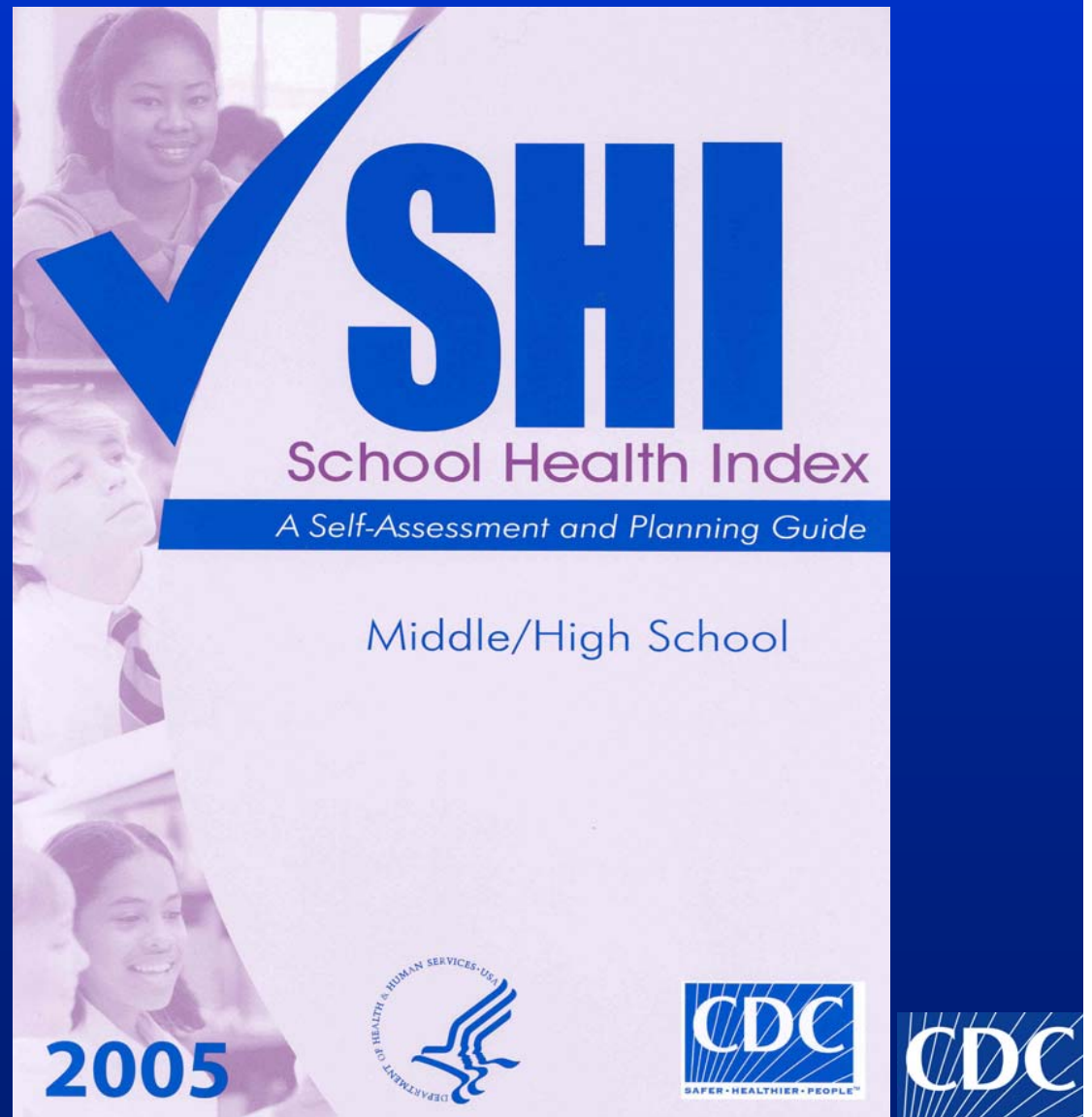
Toolkit





Where do we go from here?

2) Participate in school assessment of needs and resources.





Where do we go from here?

- 3) Use evidence-based materials
Use or adapt existing materials as much as possible

Resources for Addressing Asthma in Schools



National Center for Chronic Disease Prevention and Health Promotion
Division of Adolescent and School Health



CDC Publications

- **An Asthma Speaker's Kit for Healthcare Professionals.** This PowerPoint presentation is divided into seven parts: introduction, epidemiology, risk factors, prevention, clinical management, managing asthma, and the public health response. A resource section is also included. www.cdc.gov/asthma/speakit/default.htm
- **Asthma Fact Sheets.** These fact sheets on asthma in adult and child populations include information on morbidity, healthcare use, mortality, and other summary data. www.cdc.gov/nchs/fastats/asthma.htm

- **Strategies for Addressing Asthma Within a Coordinated School Health Program.** This 12-page document offers concrete suggestions for schools and school districts working to improve the health and school attendance of children with asthma. The six strategies identified by the CDC can be effective whether your program is for the entire school district or just one school. www.cdc.gov/HealthyYouth/asthma/pdf/strategies.pdf

Other Federal Publications

- **Asthma and the Environment: A Strategy to Protect**



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National Center for Chronic Disease Prevention and Health Promotion

Healthy Schools

Healthy Youth!



SPOTLIGHT ON...



[Managing Asthma in Schools: What Have We Learned?](#)



NEW DATA!
[Youth Risk Behaviors \(YRBSS\)](#)



[Flu Season—Stay Healthy!](#)



[PECAT: Physical Education Curriculum Analysis Tool](#)



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(including suicide)

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[State-by-State](#)

More questions? Email me at SMerkle@cdc.gov

Together we can:

- Support asthma-friendly schools.
- Help young people keep their asthma under good control.

